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## **Ordering Services for Earth Observation Products**

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## i. Preface

This best practices document describes a profile to order Earth Observation data products. This document expands on the work presented in “Best Practices for Earth Observation Products” OGC-05-057r4, separating the order services from the catalogue services which have been presented in 06-079 and in 06-131. The final goal being to agree to a coherent set of interfaces for ordering of EO products to support access to data from heterogeneous systems dealing with derived data products from satellite based measurements of the earth’s surface and environment.

## ii. Submitting organisations

The following organisations will submit the original document or its revisions to the OGC™ Ordering WG:

- **ESA – European Space Agency**
- **Spacebel s.a.**
- **EUSC**
- **Spot Image**

The editors would like to acknowledge that this work is the result of collaboration and review of many organizations and would like to thank for the comments and contributions from:

- **ASI**
- **CNES**
- **DLR**
- **Eumetsat**
- **MDA**

Note: this does not imply a complete endorsement from these organizations..

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## iv. Revision history

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| 21/06/2006  | 1.0.0 Draft             | D. Marchionni |                                 |                    |



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| 11/08/2006  | 1.0.2 Draft             | D. Marchionni |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Updated all sections. |
| 23/08/2006  | 1.0.3 Draft             | D. Marchionni |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Updated all sections. |
| 25/08/2006  | 1.0.4 Draft             | D. Marchionni |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Updated all sections. |
| 21/11/2006  | 1.1.0 Draft             | D. Marchionni | §7.1.3.1: updated definition adding scenePolygon and albumExtract fields                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | HMA CDR RID: CDR#02   |
| 21/11/2006  | 1.1.0 Draft             | D. Marchionni | Added Subscription scenario in §6.1, §6.2.1;<br>§7.1.1: Added optionType element to:<br>ProductServiceOptionType\productOrderOptions\option<br>§7.1.1: optionValueDefinition has been updated to optional<br>§7.1.2: priority made optional<br>§7.1.3: updated optionSelectedValues element adding time and polygon values;<br>ProductOrderItemType\productId\identifier has been made optional<br>§8.1.3, §8.1.3.1: updated description.<br>§8.1.5: updated description<br>§8.1.6.2: added optional priority element;<br>§8.1.6.2.1: removed OrderStatusItemType\sceneCentre because not needed;<br>OrderStatusItemType\productId\identifier has been made optional;<br>OrderStatusItemType\options updated with the new definition<br>§8.1.7: updated description of the operation. | HMA CDR RID: CDR#10   |
| 21/11/2006  | 1.1.0 Draft             | D. Marchionni | §8.1.6.2.1: clarified that the status can be left empty when no information are available.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | HMA CDR RID: CDR#14   |
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| 21/11/2006 | 1.1.0 Draft      | D. Marchionni | Updated §8.1.5, §8.1.5.1                                                                                                                                                                                                                    | HMA CDR Comment: quotationId (s) can be optionally provided in Submit                                |
| 21/11/2006 | 1.1.0 Draft      | D. Marchionni | §8.1.6                                                                                                                                                                                                                                      | Clarified the purpose of GetStatus operation.                                                        |
| 21/11/2006 | 1.1.0 Draft      | D. Marchionni | §8.1.6.2: status element references the global element                                                                                                                                                                                      | The status element of GetStatusResponse to refer the already defined global element.                 |

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| 21/11/2006  | 1.1.0 Draft             | D. Marchionni | Updated §7.1.3.1, Appendix A               | Defined type (xs:dateTime) for: orderItem\sceneSelection\TemporalSelection\startDateTime & endDateTime                     |
| 21/11/2006  | 1.1.0 Draft             | D. Marchionni | Updated §7.1.3, Appendix A                 | Defined type (xs:string) for: orderItem\qualityOfService                                                                   |
| 21/11/2006  | 1.1.0 Draft             | D. Marchionni | Updated §7.1.2.1, Appendix A               | Defined type (xs:string) for: orderSpecification\deliveryInformation\ftp-pull & ftp-push                                   |
| 21/11/2006  | 1.1.0 Draft             | D. Marchionni | Updated §8.1.6.2.1, Appendix A             | Defined type (xs:string) for OrderMonitorResponse \ orderSpecification \ orderItem \ deliveryMethod & qualityOfService     |
| 21/11/2006  | 1.1.0 Draft             | D. Marchionni | Updated §8.1.6.2, §8.1.6.2.1, Annex A      | Unified statuses of whole order and order items.<br>Removed order item status type<br>Removed EOLI specific status values. |
| 21/11/2006  | 1.1.0 Draft             | D. Marchionni | Appendix A                                 | Removed unused types                                                                                                       |
| 21/11/2006  | 1.1.0 Draft             | D. Marchionni | Appendix A                                 | Updated schema                                                                                                             |
| 21/11/2006  | 1.1.0 Draft             | D. Marchionni | Appendix B                                 | Updated WSDL<br>Updated also SOAP Action                                                                                   |
| 21/11/2006  | 1.1.0 Draft             | D. Marchionni | Appendix C                                 | Updated examples                                                                                                           |
| 19/02/2007  | 1.2.0 Draft             | D. Marchionni | Updated request message of all operations. | To add version in requests.                                                                                                |

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| 19/02/2007  | 1.2.0 Draft             | D. Marchionni | Added new operation for sending quotation.<br>Removed delivery of quotation by e-mail.<br>Added payments information, in order options and order submit<br>Moved orderAccount from order specification to order item.                                                                              | HMA AR RID: AR#14  |
| 19/02/2007  | 1.2.0 Draft             | D. Marchionni | Updated table 8-1                                                                                                                                                                                                                                                                                  | HMA AR RID: AR#15  |
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| 19/02/2007  | 1.2.0 Draft             | D. Marchionni | All strings have been bounded.                                                                                                                                                                                                                                                                     | HMA AR RID: AR#22  |
| 19/02/2007  | 1.2.0 Draft             | D. Marchionni | Added fax number (18 chars)                                                                                                                                                                                                                                                                        | HMA AR RID: AR#23  |
| 19/02/2007  | 1.2.0 Draft             | D. Marchionni | Added parameter in table 7-2.                                                                                                                                                                                                                                                                      | HMA AR RID: AR#24  |
| 19/02/2007  | 1.2.0 Draft             | D. Marchionni | Added parameter in table 7-2                                                                                                                                                                                                                                                                       | HMA AR RID: AR#25  |
| 19/02/2007  | 1.2.0 Draft             | D. Marchionni | Options definition performed via sps & swe types.<br>Updated example files including the band selection option for colour composition                                                                                                                                                              | HMA AR RID: AR#26  |

| <b>Date</b> | <b>Internal version</b> | <b>Editor</b> | <b>Primary clauses modified</b>                                                                                                 | <b>Description</b>       |
|-------------|-------------------------|---------------|---------------------------------------------------------------------------------------------------------------------------------|--------------------------|
| 19/02/2007  | 1.2.0 Draft             | D. Marchionni | Options definition performed via sps & swe types.<br>Updated example files including sub-band selection option.                 | HMA AR RID: AR#27        |
| 19/02/2007  | 1.2.0 Draft             | D. Marchionni | Added Rectangle for scene selection options, but used GML type.                                                                 | HMA AR RID: AR#28        |
| 19/02/2007  | 1.2.0 Draft             | D. Marchionni | None                                                                                                                            | HMA AR RID: AR#49        |
| 19/02/2007  | 1.2.0 Draft             | D. Marchionni | None                                                                                                                            | HMA AR RID: AR#50        |
| 19/02/2007  | 1.2.0 Draft             | D. Marchionni | Updated Order Id definition.                                                                                                    | HMA AR RID: AR#52        |
| 19/02/2007  | 1.2.0 Draft             | D. Marchionni | None                                                                                                                            | HMA AR RID: AR#53        |
| 19/02/2007  | 1.2.0 Draft             | D. Marchionni | Added “grouping” element to GenericOption type.                                                                                 | HMA AR RID: AR#72        |
| 19/02/2007  | 1.2.0 Draft             | D. Marchionni | None                                                                                                                            | HMA AR RID: AR#91        |
| 19/02/2007  | 1.2.0 Draft             | D. Marchionni | Order quotation improved.                                                                                                       | HMA AR RID: AR#92        |
| 19/02/2007  | 1.2.0 Draft             | D. Marchionni | Used gml:PolygonType, gml:RectangleType, gml:PointType to specify geographic elements                                           | HMA AR RID: AR#95        |
| 19/02/2007  | 1.2.0 Draft             | D. Marchionni | Removed duplicated element definitions; added new delivery methods                                                              | HMA AR RID: AR#96        |
| 19/02/2007  | 1.2.0 Draft             | D. Marchionni | Added number of copies in the orderItem element.                                                                                | HMA AR RID: AR#97        |
| 19/02/2007  | 1.2.0 Draft             | D. Marchionni | ftp-pull removed from DeliveryInformationType; ftp-pull put in DeliveryInformationTypeExt which inherits from the previous one. | HMA AR RID: AR#98        |
| 19/02/2007  | 1.2.0 Draft             | D. Marchionni | None                                                                                                                            | HMA AR RID: AR#99        |
| 19/02/2007  | 1.2.0 Draft             | D. Marchionni | Updated definition of orderId                                                                                                   | HMA AR RID: AR#100       |
| 09/02/2007  | 1.2.0 Draft             | D. Marchionni | Added itemId and packaging to the Submit operation.                                                                             | Inputs from E-OA project |
| 09/02/2007  | 1.2.0 Draft             | D. Marchionni | Added DescribeResultAccess operation                                                                                            | Inputs from E-OA project |

| <b>Date</b> | <b>Internal version</b> | <b>Editor</b> | <b>Primary clauses modified</b>                                                                                                                                                                                                                                                                                  | <b>Description</b>          |
|-------------|-------------------------|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|
| 09/02/2007  | 1.2.0 Draft             | D. Marchionni | Updated delivery options: <ul style="list-style-type: none"> <li>• deliveryMethod includes FTP, WCS;</li> <li>• packageMedium has been made an enumeration.</li> <li>• Removed FTP push / pull from DeliveryInformation because the on-line delivery is performed via DescribeResultAccess operation.</li> </ul> | Inputs from E-OA project    |
| 09/02/2007  | 1.2.0 Draft             | D. Marchionni | Call-back operation for asynchronous requests (UpdateStatus) has been replaced by SubmitResponse and CancelResponse.                                                                                                                                                                                             | Alignment to SPS EO Profile |
| 04/05/2007  | 1.2.1 Draft             | D. Marchionni | Updated OR7 to the latest available SWE Architecture document                                                                                                                                                                                                                                                    | HMA FP RID: FP#9            |
| 04/05/2007  | 1.2.1 Draft             | D. Marchionni | Updated figure reference at §7.1.2                                                                                                                                                                                                                                                                               | HMA FP RID: FP#11           |
| 04/05/2007  | 1.2.1 Draft             | D. Marchionni | Added sftp and ftps as delivery methods (table 7-1)                                                                                                                                                                                                                                                              | HMA FP RID: FP#12           |
| 04/05/2007  | 1.2.1 Draft             | D. Marchionni | Corrected definition of “use” attribute in §7.1.2                                                                                                                                                                                                                                                                | HMA FP RID: FP#13           |
| 04/05/2007  | 1.2.1 Draft             | D. Marchionni | Updated §7.1.2 and table 7-2 specifying the difference between the [OR6] and [NR11] definitions.                                                                                                                                                                                                                 | HMA FP RID: FP#14           |
| 04/05/2007  | 1.2.1 Draft             | D. Marchionni | Corrected table 7-4.                                                                                                                                                                                                                                                                                             | HMA FP RID: FP#16           |
| 04/05/2007  | 1.2.1 Draft             | D. Marchionni | Clarified albumExtract definition in Table 7-15                                                                                                                                                                                                                                                                  | HMA FP RID: FP#17           |
| 04/05/2007  | 1.2.1 Draft             | D. Marchionni | Updated §7.1.6, Figure 7-16, table 7-20, Figure 7-17, Figure- 7-18, Figure 7-19, Table 7-23, Figure 7-20, Figure 7-21<br><br>OrderStatusType renamed to StatusType<br>OrderStatusType/orderState renamed to StatusType/status                                                                                    | HMA FP RID: FP#18           |

| Date       | Internal version | Editor        | Primary clauses modified                                                                                                                                     | Description                                                                                                              |
|------------|------------------|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| 04/05/2007 | 1.2.1 Draft      | D. Marchionni | Updated table 8-1 explaining the sync / async usage of GetQuotation operation.                                                                               | HMA FP RID: FP#19                                                                                                        |
| 04/05/2007 | 1.2.1 Draft      | D. Marchionni | Table 8-7: clarified the meaning of "monitoring" attribute.                                                                                                  | HMA FP RID: FP#20                                                                                                        |
| 04/05/2007 | 1.2.1 Draft      | D. Marchionni | Updated Table 8-17, §6.1, §8.1.4                                                                                                                             | HMA FP RID: FP#21                                                                                                        |
| 04/05/2007 | 1.2.1 Draft      | D. Marchionni | Added expirationDate in Figure 8-18 and Table 8-21                                                                                                           | HMA FP RID: FP#22                                                                                                        |
| 04/05/2007 | 1.2.1 Draft      | D. Marchionni | Removed third bullet of §8.2.4                                                                                                                               | HMA FP RID: FP#24                                                                                                        |
| 04/05/2007 | 1.2.1 Draft      | D. Marchionni | Table 7-10                                                                                                                                                   | HMA FP RID: FP#26                                                                                                        |
| 04/05/2007 | 1.2.1 Draft      | D. Marchionni | Figure 7-2, Table 7-2, Figure 7-3, Table 7-3, Figure 7-11, Table 7-12,                                                                                       | Alignment with SWE Common 0.0.0 (going to be approved as 1.0.0) and with SPS EO 0.9.4                                    |
| 04/05/2007 | 1.2.1 Draft      | D. Marchionni | Figure 7-12, Table 7-13, Figure 7-14, Table 7-15, Figure 7-16, Table 7-19, Figure 7-21, Table 7-25, Figure 8-4, Table 8-7, Figure 8-5, Table 8-8, Figure 8-7 | Integration with SPS EO for future product ordering.                                                                     |
| 04/05/2007 | 1.2.1 Draft      | D. Marchionni | Figure 8-4, Table 8-7                                                                                                                                        | To return list of supported collections within the Capabilities document.                                                |
| 04/05/2007 | 1.2.1 Draft      | D. Marchionni | §8.1.1.1, Figure 8-2, Table 8-2                                                                                                                              | Removed password from userInfo element                                                                                   |
| 04/05/2007 | 1.2.1 Draft      | D. Marchionni | Figure 7-17, Table 7-21, Figure 7-18, Table 7-22, Figure 7-19, Table 7-23, Figure 8-15, Table 8-18, Figure 8-16, Figure 8-21                                 | Enhanced get order list functionality of GetStatus operation.                                                            |
| 14/08/07   | BP final         | Carl Reed     | Various to ready document for posting.                                                                                                                       |                                                                                                                          |
| 14/09/2007 | 1.3              | D.Marchionni  | IMPR#32                                                                                                                                                      | Updated description of sceneSelection element within ProductOrderItemType ( <b>Error! Reference source not found.</b> ). |

| <b>Date</b> | <b>Internal version</b> | <b>Editor</b> | <b>Primary clauses modified</b> | <b>Description</b>                                                                                                                                                                                                                                                                                                                                  |
|-------------|-------------------------|---------------|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 14/09/2007  | 1.3                     | D.Marchionni  | IMPR#37                         | Added regionOfInterest parameter at Table 7-4);<br>Added GetOptions & GetOptionResponse examples for subscriptions.                                                                                                                                                                                                                                 |
| 14/09/2007  | 1.3                     | D.Marchionni  | IMPR#67                         | §3.2 Removed references to ESA documents.                                                                                                                                                                                                                                                                                                           |
| 14/09/2007  | 1.3                     | D.Marchionni  | IMPR#72                         | Added reference to OGC 07-118 [OR8] for references to all Identity Management aspects.                                                                                                                                                                                                                                                              |
| 14/09/2007  | 1.3                     | D.Marchionni  | IMPR#73                         | Attributes have been aligned with the HMA User Identity Management ICD: <ul style="list-style-type: none"> <li>• telNumber fields replaced with telephoneNumber (DeliveryAddress Type)</li> <li>• faxNumber replaced with facsimileTelephoneNumber (DeliveryAddress Type)</li> <li>• country attributes shall be compliant with ISO 3166</li> </ul> |
| 14/09/2007  | 1.3                     | D.Marchionni  | IMPR#82                         | Updated priority definition (Table 7-8, 7-22);<br>Updated status definition (Table 7-21, 7-24)                                                                                                                                                                                                                                                      |
| 14/09/2007  | 1.3                     | D.Marchionni  | IMPR#83                         | Same as IMPR#37                                                                                                                                                                                                                                                                                                                                     |
| 14/09/2007  | 1.3                     | D.Marchionni  | IMPR#90                         | Same as IMPR#72                                                                                                                                                                                                                                                                                                                                     |
| 14/09/2007  | 1.3                     | D.Marchionni  |                                 | Updated examples and schema (Appendix A, B, C)                                                                                                                                                                                                                                                                                                      |
| 27/09/2007  | 0.9.1                   | D. Marchionni | Removed user identifier         | Updated schema, examples, picture.                                                                                                                                                                                                                                                                                                                  |



| Date       | Internal version | Editor        | Primary clauses modified                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Description         |
|------------|------------------|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| 26/05/2008 | 0.9.2            | D. Marchionni | <ul style="list-style-type: none"> <li>• Removed hierarchy for order options returned by GetOptions;</li> <li>• Removed hierarchy for orders specified in Order Quotation</li> <li>• Removed hierarchy for orders specified in Order Submission</li> <li>• Removed hierarchy for orders specified in Order Monitoring</li> <li>• Added ftp element within DeliveryInformation</li> <li>• <b>Order options at order level: not included in this issue.</b></li> <li>• Added OrderReference to the list of order search criteria</li> </ul> | DAIL-RD-ESA-EN-0001 |
| 26/05/2008 | 0.9.2            | D. Marchionni | <ul style="list-style-type: none"> <li>• Updated DescribeResultAccess Response for returning additional information about the resource to be accessed</li> </ul>                                                                                                                                                                                                                                                                                                                                                                          | DAIL-RD-ASU-EN-0006 |
| 26/05/2008 | 0.9.2            | D. Marchionni | <ul style="list-style-type: none"> <li>• Removed second sentence in nextReady field of table 8-19</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                              | DAIL-RD-ASU-EN-0007 |
| 26/05/2008 | 0.9.2            | D. Marchionni | Multiplicity of URL field of DescribeResultResponse updated to 0..N.                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | DAIL-RD-ASU-EN-0008 |
| 26/05/2008 | 0.9.2            | D. Marchionni | <ul style="list-style-type: none"> <li>• Added “description” element to CommonOrderOptionsType</li> <li>• Added “productOrderOptionsId” element to CommonOrderItemType</li> </ul>                                                                                                                                                                                                                                                                                                                                                         | DAIL-RD-SPB-EN-0011 |

| <b>Date</b> | <b>Internal version</b> | <b>Editor</b> | <b>Primary clauses modified</b>                                                                                 | <b>Description</b>   |
|-------------|-------------------------|---------------|-----------------------------------------------------------------------------------------------------------------|----------------------|
| 26/05/2008  | 0.9.2                   | D. Marchionni | Updated Definition of DescribeResultAccess: allReady and nextReady are now enumerative values.                  | DAIL-RD-SPB-EN-0015  |
| 26/05/2008  | 0.9.2                   | D. Marchionni | Table 7-6: qualityOfService is applicable also to Subscription orders.                                          | JM e-mail 23/04/2008 |
| 05/09/2008  | 0.9.3                   | D.Marchionni  | §8.1.3.1: collectionId, identifier and taskingRequestId are in a single choice.<br>Updated schema (Appendix A). | DAIL-RD-SPB-EN-0007  |
| 05/09/2008  | 0.9.3                   | D.Marchionni  | Added exception specification for all operations (added paragraphs §8.1.X.3).<br>Updated WSDL (Appendix B).     | DAIL-RD-SPB-EN-0014  |
| 05/09/2008  | 0.9.3                   | D.Marchionni  | Added FAILED and TERMINATED order statuses (updated tables 7-16, 7-17).<br>Updated schema (Appendix A).         | DAIL-RD-SPB-EN-0016  |

## **v. Changes to the OGC™® Abstract Specification**

To be confirmed as result of ongoing work.

## **vi. Future work**

None.

## **vii. Foreword**

*Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. The Open Geospatial Consortium Inc. shall not be held responsible for identifying any or all such patent rights.*

*Recipients of this document are requested to submit, with their comments, notification of any relevant patent claims or other intellectual property rights of which they may be aware that might be infringed by any implementation of the specification set forth in this document, and to provide supporting documentation.*

## **Introduction**

The service proposed in this implementation specification is intended to support the ordering of Earth Observation (EO) data products either from previously identified data set collections via a typical catalogue interaction or from future acquisitions specified via a Programming service [OR6]. The intent of this specification is to describe an interface that can be supported by many data providers (satellite operators, data distributors, etc.), most of whom have existing (and relatively complex) facilities for the management of these data.

## **1 Scope**

This proposed implementation specification describes the interfaces, bindings and encodings required to order Earth Observation (EO) products.

## **2 Conformance**

Conformance will be tested by the HMA-T project.

### 3 References

This document references several external standards and specifications as dependencies:

1. Unified Modeling Language (UML) Version 1.3, The Object Management Group (OMG):  
<http://www.omg.org/cgi-bin/doc?formal/00-03-01>
2. The Extensible Markup Language (XML), World Wide Web Consortium,  
<http://www.w3.org/TR/1998/REC-xml-19980210>
3. W3C Recommendation (24 June 2003): SOAP Version 1.2 Part 1, Messaging Framework,  
<http://www.w3.org/TR/2003/REC-soap12-part1-20030624/>
4. WSDL, Web Services Description Language (WSDL) 1.1, <http://www.w3.org/TR/2001/NOTE-wsdl-20010315>
5. W3C Recommendation (9 May 2006): Web Services Addressing 1.0 – Core,  
<http://www.w3.org/TR/2006/REC-ws-addr-core-20060509>

#### 3.1 Normative References

- [NR1] W3C Recommendation January 1999, Namespaces In XML, <http://www.w3.org/TR/2000/REC-xml-names>.
- [NR2] W3C Recommendation 6 October 2000, Extensible Markup Language (XML) 1.0 (Second Edition), <http://www.w3.org/TR/REC-xml>
- [NR3] W3C Recommendation 2 May 2001: XML Schema Part 0: Primer,  
<http://www.w3.org/TR/2001/REC-xmlschema-0-20010502/>
- [NR4] W3C Recommendation 2 May 2001: XML Schema Part 1: Structures,  
<http://www.w3.org/TR/2001/REC-xmlschema-1-20010502/>
- [NR5] W3C Recommendation 2 May 2001: XML Schema Part 2: Datatypes,  
<http://www.w3.org/TR/2001/REC-xmlschema-2-20010502/>
- [NR6] W3C Recommendation (24 June 2003): SOAP Version 1.2 Part 1: Messaging Framework,  
<http://www.w3.org/TR/SOAP/>
- [NR7] WSDL, Web Services Description Language (WSDL) 1.1. Available [online]:  
<http://www.w3.org/TR/wsdl>
- [NR9] OWS Common Implementation Specification, May 2005 OGC 05-008c1
- [NR10] W3C Recommendation (9 May 2006): Web Services Addressing 1.0 – Core,  
<http://www.w3.org/TR/2006/REC-ws-addr-core-20060509>
- [NR11] OpenGIS® Sensor Planning Service Implementation Specification OGC-05-089r3

#### 3.2 Other References

- [OR2] OpenGIS Catalogue Services – Best Practices for EO Products OGC-05-057r4

- [OR3] OGC™ Catalogue Services Specification 2.0 - Extension Package for ebRIM (ISO/TS 15000-3) Application Profile: Earth Observation Products - OGC 06-131r4
- [OR4] OGC™ CSW-ebRIM Registry Service – Part 2 : Basic extension package, version 1.0.0, 2008/02/29 -OGC 07-144r2
- [OR5] OGC™ CSW-ebRIM Registry Service - Part 1: ebRIM profile of CSW, version 1.0.0, 2008/02/29. OGC 07-110r2
- [OR6] OpenGIS® Sensor Planning Service - Application Profile for EO Sensors OGC 07-018 V0.9.4a
- [OR7] OpenGIS® Sensor Web Enablement Architecture Document OGC 06-021r1
- [OR8] OpenGIS® User Management Interfaces For Earth Observation Services OGC 07-118

## 4 Terms and definitions

For the purposes of this document, the following terms and definitions apply:

### 4.1.

#### **Application profile**

set of one or more base standards and - where applicable - the identification of chosen clauses, classes, subsets, options and parameters of those base standards that are necessary for accomplishing a particular function [ISO 19101, ISO 19106]

### 4.2.

#### **client**

software component that can invoke an **operation** from a **server**

### 4.3.

#### **data clearinghouse**

collection of institutions providing digital data, which can be searched through a single interface using a common metadata standard [ISO 19115]

### 4.4.

#### **data level**

stratum within a set of layered levels in which data is recorded that conforms to definitions of types found at the application model level [ISO 19101]

### 4.5.

#### **dataset series (dataset collection<sup>1</sup>)**

collection of datasets sharing the same product specification [ISO 19113, ISO 19114, ISO 19115]. In this context, a collection metadata record in the catalogue describes a collection of EO Products, typically a dataset collection corresponds to datasets (i.e. products) generated by a single sensor in a specific mode on a particular EO satellite.

### 4.6.

#### **geographic dataset**

dataset with a spatial aspect [ISO 19115]

### 4.7.

#### **geographic information**

information concerning phenomena implicitly or explicitly associated with a location relative to the Earth [ISO 19128 draft]

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<sup>1</sup> Due to historical reasons we'll mainly use the term 'dataset collection' in this document although the term 'dataset series' is used in the ISO/TC211 Terminology Maintenance Group.



**4.8.****georesource**

geographic information of a specific type (e.g. geographic dataset, geographic application, geographic service)

**4.9.****identifier**

a character string that may be composed of numbers and characters that is exchanged between the client and the server with respect to a specific identity of a resource

**4.10.****interface**

named set of operations that characterise the behaviour of an entity [ISO 19119]

**4.11.****metadata dataset (metadataset)**

metadata describing a specific dataset [ISO 19101]

**4.12.****metadata entity**

group of metadata elements and other metadata entities describing the same aspect of data

NOTE 1 A metadata entity may contain one or more metadata entities.

NOTE 2 A metadata entity is equivalent to a class in UML terminology [ISO 19115].

**4.13.****metadata schema**

conceptual schema describing metadata

NOTE ISO 19115 describes a standard for a metadata schema. [ISO 19101]

**4.14.****metadata section**

subset of metadata that defines a collection of related metadata entities and elements [ISO 19115]

**4.15.****operation**

specification of a transformation or query that an object may be called to execute [ISO 19119]

**4.16.****parameter**

variable whose name and value are included in an operation **request** or **response**

**4.17.****profile**

set of one or more base standards and - where applicable - the identification of chosen clauses, classes, subsets, options and parameters of those base standards that are necessary for accomplishing a particular function [ISO 19101, ISO 19106]

**4.18.****qualified name**

name that is prefixed with its naming context

EXAMPLE The qualified name for the road\_no attribute in class Road defined in the Roadmap schema is RoadMap.Road.road\_no. [ISO 19118].

**4.19.****request**

invocation of an **operation** by a **client**

**4.20.****response**

result of an **operation**, returned from a **server** to a **client**

**4.21.****schema**

formal description of a model [ISO 19101, ISO 19103, ISO 19109, ISO 19118]

**4.22.****server****service instance**

a particular instance of a **service** [ISO 19119]

**4.23.****service**

distinct part of the functionality that is provided by an entity through interfaces [ISO 19119]

capability which a service provider entity makes available to a service user entity at the interface between those entities [ISO 19104 terms repository]

**4.24.****service interface**

shared boundary between an automated system or human being and another automated system or human being [ISO 19101]

**4.25.****service metadata**

metadata describing the **operations** and **geographic information** available at a **server** [ISO 19128 draft]

**4.26.**

**state**

condition that persists for a period

NOTE The value of a particular feature attribute describes a condition of the feature [ISO 19108].

**4.27.**

**transfer protocol**

common set of rules for defining interactions between distributed systems [ISO 19118]

**4.28.**

**version**

version of an Implementation Specification (document) and XML Schemas to which the requested operation conforms

NOTE An OWS Implementation Specification version may specify XML Schemas against which an XML encoded operation request or response must conform and should be validated.

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## 5 Symbols and abbreviations

### 5.1 Symbols (and abbreviated terms)

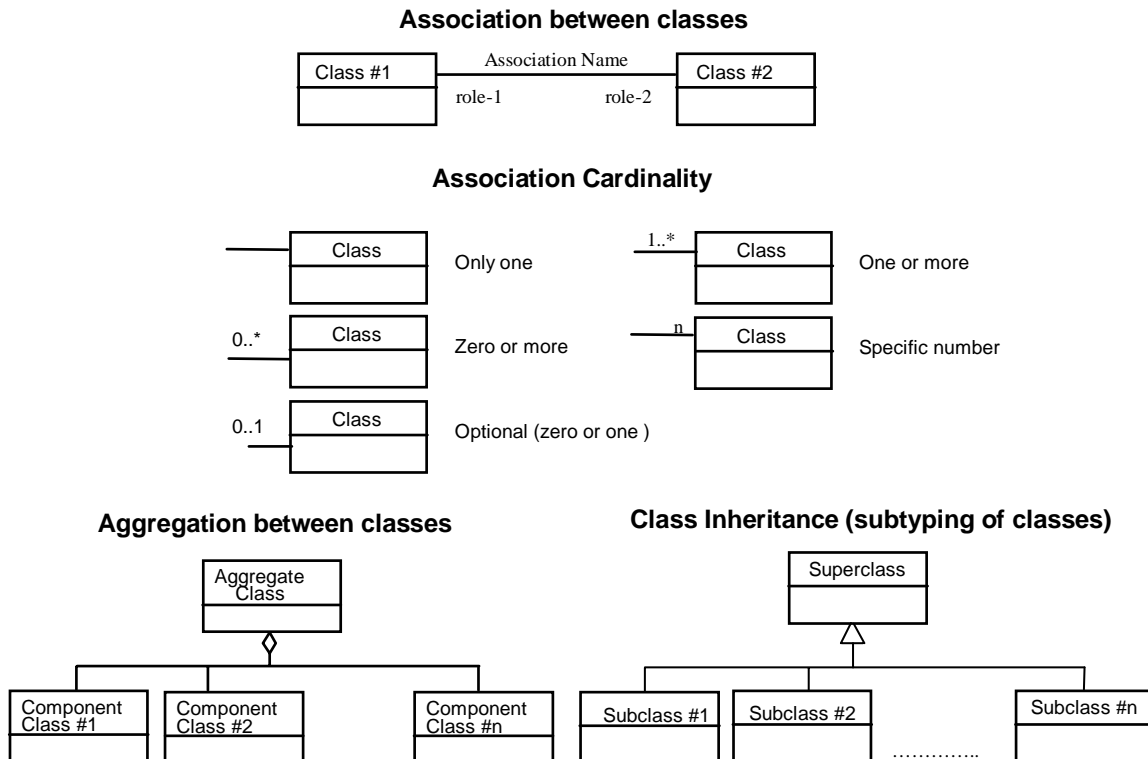
Some frequently used abbreviated terms:

|       |                                                |
|-------|------------------------------------------------|
| API   | Application Program Interface                  |
| COTS  | Commercial Off The Shelf                       |
| CQL   | Common Query Language                          |
| CRS   | Coordinate Reference System                    |
| CSW   | Catalogue Service-Web                          |
| DCE   | Distributed Computing Environment              |
| DC    | Dublin Core                                    |
| DCMI  | Dublin Core Metadata Initiative                |
| DCP   | Distributed Computing Platform                 |
| DDS   | Data Dissemination Service                     |
| EO    | Earth Observation                              |
| HMA   | Heterogeneous Missions Accessibility           |
| HTTP  | Hyper Text Transport Protocol                  |
| ISO   | International Organisation for Standardisation |
| OGC   | Open GIS Consortium                            |
| SOAP  | Simple Object Access Protocol                  |
| SQL   | Structured Query Language                      |
| UML   | Unified Modeling Language                      |
| URI   | Uniform Resource Identifier                    |
| URL   | Uniform Resource Locator                       |
| URN   | Uniform Resource Name                          |
| UTF-8 | Unicode Transformation Format-8                |
| WSDL  | Web Service Definition Language                |
| W3C   | World Wide Web Consortium                      |
| XML   | eXtensible Markup Language                     |

## 5.2 UML notation

### 5.2.1 UML Class Diagrams

Some of the diagrams in this document are presented using the Unified Modeling Language (UML) static structure diagram. The UML notations used in this document are described in Figure 5-1, below.



**Figure 5-1: UML Class Diagram notations.**

In these UML class diagrams, the class boxes with a light background are the primary classes being shown in this diagram, often the classes from one UML package. The class boxes with a gray background are other classes used by these primary classes, usually classes from other packages.

In this diagram, the following stereotypes of UML classes are used:

<<Interface>> A definition of a set of operations that is supported by objects having this interface. An Interface class cannot contain any attributes.

<<Type>> A stereotyped class used for specification of a domain of instances (objects), together with the operations applicable to the objects. A Type class may have attributes and associations.

<<DataType>> A descriptor of a set of values that lack identity (independent existence and the possibility of side effects). A DataType is a class with no operations whose primary purpose is to hold the information.

<<CodeList>> A flexible enumeration that uses string values for expressing a list of potential values. If the list alternatives are completely known, an enumeration shall be used; if the only likely alternatives are known, a code list shall be used.

<<Enumeration>> A data type whose instances form a list of alternative literal values. Enumeration means a short list of well-understood potential values within a class.

In this document, the following standard data types are used:

CharacterString – A sequence of characters

Boolean – A value specifying TRUE or FALSE

Integer – An integer number

Identifier – Unique identifier of an object

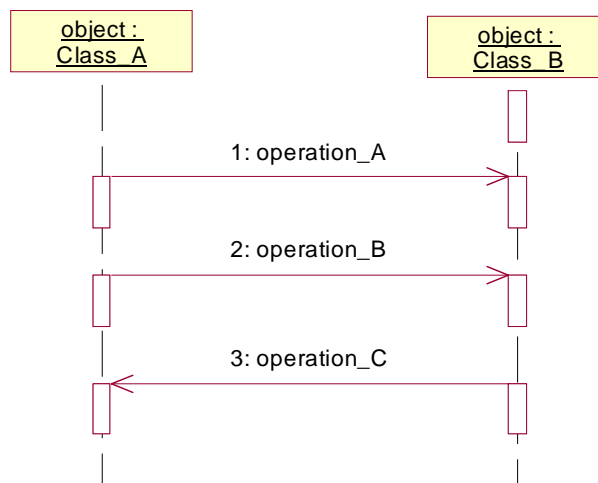
URI – An identifier of a resource that provides more information

URL – An identifier of an on-line resource that can be electronically accessed

### 5.2.2 UML Sequence Diagrams

Sequence diagrams are a representation of an interaction between objects. A sequence diagram traces the execution of an interaction in time.

The picture below illustrates a sequence diagram.



**Figure 5-2: UML Sequence Diagrams Notations.**

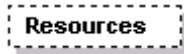
Each interaction between objects is the activation of an operation of an object, which includes input and output parameters.

### 5.3 XML notation

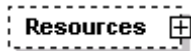
Most diagrams that appear in this specification are presented using an XML schema notation defined by the XMLSpy tool and described in this subclause.

Hereafter the symbols defined in the XML schema notation are described:

- Optional single element without child elements



- Optional single element with child elements



- Mandatory single element.



- Mandatory multiple element containing child elements. This element must occur at least once (Minimum Occurrence = 1) and may occur as often as desired (Maximum Occurrence = unbounded).



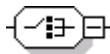
- Mandatory single element with containing simple content (e.g. text) or mixed complex content (e.g. text with xhtml markup).



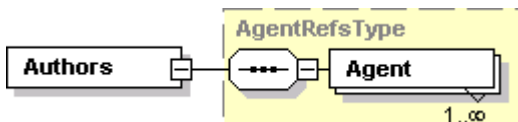
- A sequence of elements. The elements must appear exactly in the sequence in which they appear in the schema diagram.



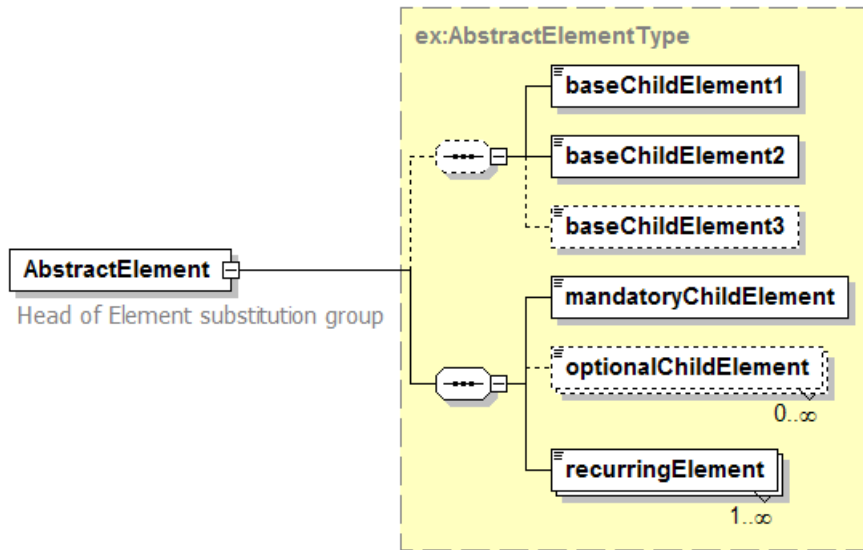
- A choice of elements. Only a single element from those in the choice may appear at this position.



- Types. If an element refers to a complex global type, the type is shown with a border and yellow background.



- Complex Type. The following figure illustrates the use of a complex type for defining an XML element



#### 5.4 Document terms and definitions

This document uses the specification terms defined in Subclause 5.3 of [NR9].



## 6 System context

This section focuses on the purpose, scope and policies of ordering services that comply with this specification. It documents special requirements and describes the context of use.

### 6.1 Application domain

The ordering service described in this specification has the objective of supporting the following types of orders of Earth Observation products:

- Order from catalogues of EO products.

This service allows the preparation and the submission of an order including products identified via a search in a catalogue of EO products ([OR3]).

- Order of products derived from a programming request.

This service allows the submission of an order including products which can be derived from a set of future acquisition segments specified via an external Programming Service ([OR6]).

- Subscription to EO products.

This service allows users the periodical reception of products of interest on the areas of interest.

For these purposes, the Ordering Service for Earth Observation Products specifies the following operations:

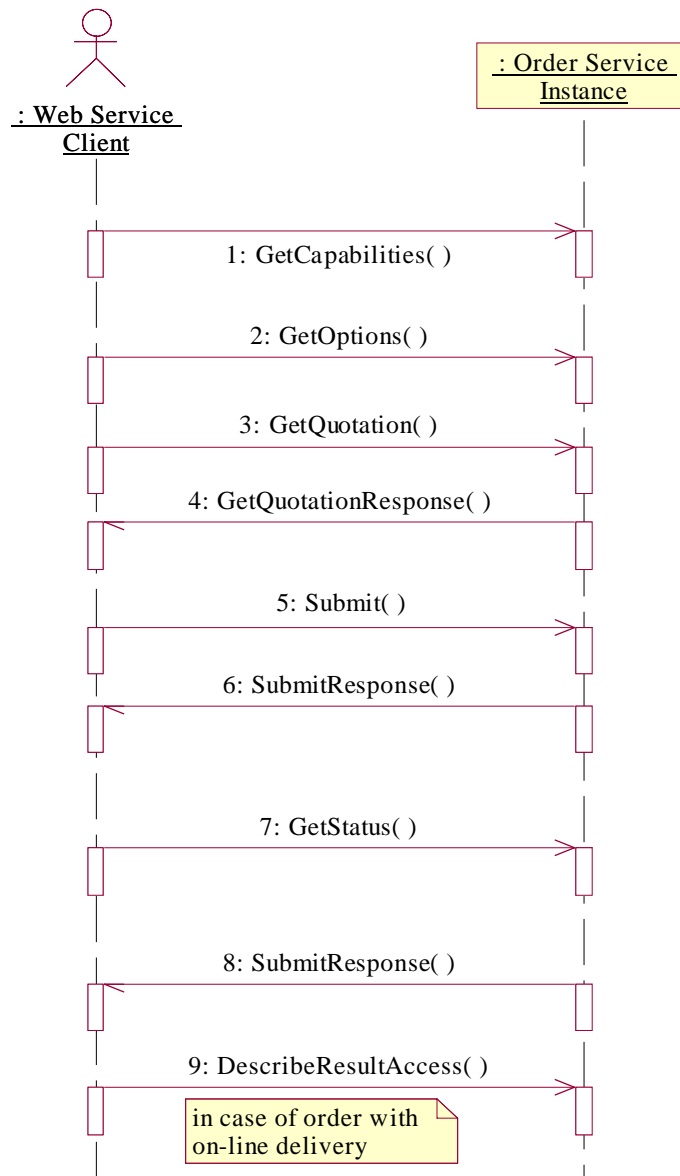
- **GetCapabilities**, allows a client to request and receive service metadata (or Capabilities) documents that describe the abilities of the specific server implementation.
- **GetOptions**, allows clients to retrieve the options for issuing an order: in case of product ordering it returns the options for ordering a specific type of product; in case of subscriptions it returns the possible parameters to set for specifying the scope of the subscription (e.g.: area of interest, expiration date, etc.).
- **GetQuotation**, which allows the client to get a quotation either of the order that is going to be submitted or of the subscription going to be subscribed. This operation, in order to support the wider set of clients and service providers, supports several interaction models:
  - Synchronous quotation;
  - Asynchronous via Notification: the client has to implement a call-back operation (**GetQuotationResponse**) which is called by the server when the quotation is available.
  - Asynchronous via Monitoring: after the first activation, in which the client specifies all order parameters, the client has to call it again (referencing the first call) until the server is able to return the quotation.
  - Off-line: the quotation is not provided by on-line interaction but via mail / e-mail.
- **Submit**, which allows either submitting an order of products (from EO catalogue or from a programming request) or for subscribing to a subscription. This operation is asynchronous and then the client has to implement a call-back operation (**SubmitResponse**) for receiving the result of the operation.
- **DescribeResultAccess**, which allows accessing the products ordered with on-line delivery.

- **GetStatus**, which allows to retrieve either the status of submitted orders or the status of subscribed subscriptions.
- **Cancel**, which allows either to ask the cancellation of an already submitted order or to unsubscribe a subscription. This operation is asynchronous and then the client has to implement a call-back operation (**CancelResponse**) for receiving the result of the operation.

## **6.2** *Essential Use-cases*

### **6.2.1** **Ordering from catalogue of EO Products**

The following figure shows the nominal usage of the Order Service operations for ordering products from EO Catalogues:



**Figure 6-1: Sequence of steps generally performed for ordering products from EO Catalogue.**

In the scenario the following entities are specified:

- Web Service Client, which represents the user submitting requests to the Order Service;
- Order Service Instance: it is the server providing the order service;

The typical scenario is:

- The list of products to be ordered has been prepared on client side by querying EO Catalogues.
- The client gets the list of supported operations from the Ordering Service instance (**GetCapabilities**).
- The list of ordering options is retrieved for each product to be ordered (**GetOptions**).
- Then the order is prepared on the client side choosing the requested options for each of the products to order.
- The quotation of the just prepared order can be asked by calling the **GetQuotation** operation. The quotation can be received either synchronously or via asynchronous notification depending on client and server capabilities.
- In case the quotation is accepted, the order can be submitted to the Order Service (**Submit**). The Order Service returns back an acknowledgement and start the execution of the order.
- After the order has been submitted the following events are possible:
  - The client asks the status of the order to verify the progress of the order (**GetStatus**);
  - The client is notified of possible status updates (**SubmitResponse**).
  - The client can ask the cancellation of the order (**Cancel**)
- When the order processing is completed, the ordered products are either delivered to the user or can be retrieved on-line by calling DescribeResultAccess operation depending on the selected delivery method.

### 6.2.2 Order of Future Products derived from tasking requests

For future products the scenario is very similar to the previous one: instead of getting the catalogue identifier of the products to order, the client has to identify the future acquisition segments needed for generate the products to order. This step is performed accessing an external programming service ([OR6] – Sensor Planning Service Earth Observation Application Profile). These future acquisition segments are identified within the products order via the identifier of the corresponding tasking request returned by the Programming service.

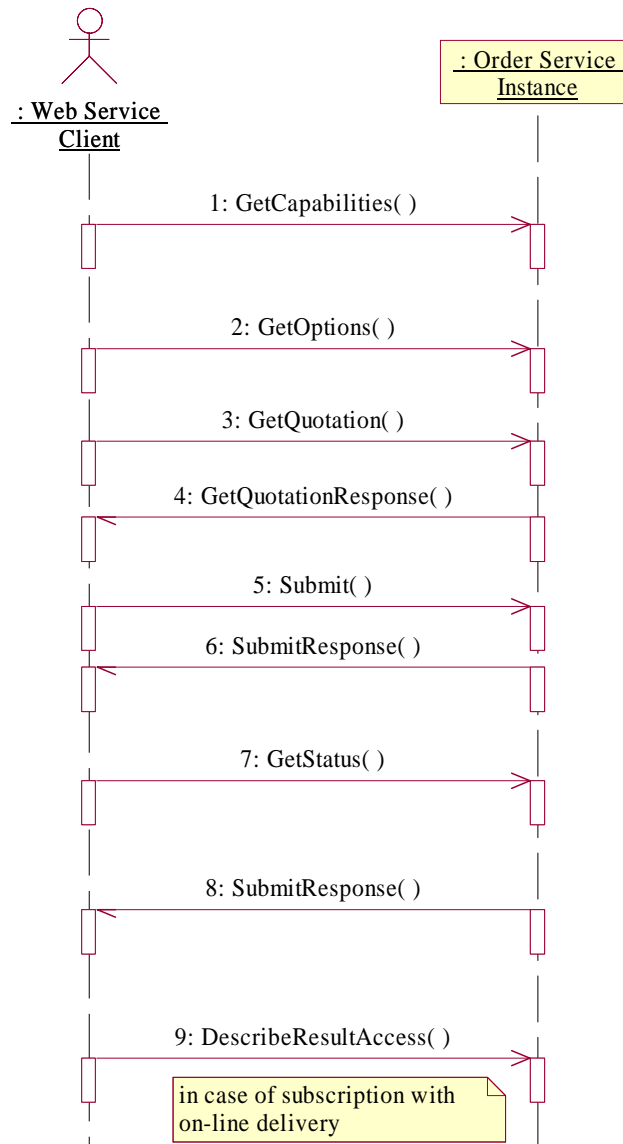
Then the submission of this type of order can be summarized with the following steps:

- Identification of the necessary future acquisition segments and require them to the external Programming Service ([OR6] - SPS EO). As a result the programming request identifiers of all needed acquisitions are available on client side.
- Get order options for the products that can be ordered from the identified acquisitions: call GetOptions specifying as input parameters the programming identifiers.
- The order is prepared on client side choosing the options necessary for getting the needed products from the identified acquisitions.
- The quotation of the just prepared order can be asked by calling the **GetQuotation** operation. The quotation can be received either synchronously or via asynchronous notification depending on client and server capabilities.

- In case the quotation is accepted, the order can be submitted to the Order Service (**Submit**). The Order Service returns back an acknowledgement and start the execution of the order.
- After the order has been submitted the following events are possible:
  - The client asks the status of the order to verify the progress of the order (**GetStatus**);
  - The client is notified of possible status updates (**SubmitResponse**).
- The client can ask the cancellation of the order (**Cancel**)
- When the order processing is completed, the ordered products are either delivered to the user or can be retrieved on-line by calling DescribeResultAccess operation depending on the selected delivery method.

### 6.2.3 Subscribe to EO Products

This section explains the steps to follow for subscribing to published EO products subscriptions.



**Figure 6-2: Sequence of steps generally performed for subscribing to EO products.**

In the scenario the following entities are specified:

- Web Service Client, which represents the user submitting requests to the Order Service;
- Order Service Instance: it is the server providing the order service;

The typical scenario is:

- The client gets the list of supported operations from the server (**GetCapabilities**).
- The list of subscriptions to subscribe has been prepared on client side querying a catalogue storing the advertised subscriptions, and then the next step is to retrieve the list of possible subscription options (**GetOptions**). Possible examples options are:
  - region of interest, which allows to receive of the whole available products only the one overlapping this area;
  - type of area coverage, specifying how the products to be returned are spatially related to the specified area (e.g. overlap, inclusion, etc.)
  - expiration date, which specifies the limit date & time of validity of the subscription;
  - repetition, which specify the number of time the base observation period is repeated.
  - the number of products per observation.
- The subscription order is prepared on the client side setting the available subscription options.
- The quotation of the just prepared order can be asked by calling the **GetQuotation** operation. The quotation can be received either synchronously or via asynchronous notification depending on client and server capabilities.
- In case the quotation is accepted, the subscriptions are subscribed to the Order Service by calling **Submit** operation. The Order Service returns back an acknowledge confirming the activation of the subscription.
- After the order has been submitted the following events are possible:
  - The client asks the status of his / her subscriptions (**GetStatus**).
  - The progress of the subscriptions are directly notified to the client (**SubmitResponse**)
  - The client is allowed to unsubscribe the subscriptions (**Cancel**).
- When some products are ready, they can be retrieved by **DescribeResultAccess** operation if ordered with on-line delivery.

## 7 Information models

As previously anticipated, this specification supports different type of orders:

- Product Orders
  - Order from EO Catalogue ([OR3]): the products to be ordered are identified from catalogue performing a catalogue search. The retrieved identifiers are used for building the items within the order.
  - Future product orders via programming service ([OR6] SPS EO)

For building a future product order 2 steps are necessary:

- A programming request has to be defined in order to specify the needed acquisition segments. This step is performed via the SPS EO instance linked to the Ordering service which support future products ordering.

The tasking request deals only with the parameters needed for the acquisition e.g.: start & stop time / orbit or area to cover, polarization, incidence angles, sensor mode, etc. At this stage the level of product, the format, the delivery options are not specified.

- A product order has to be specified, referencing the tasking request, for setting all parameters needed to deliver products to the user e.g.: required product type, product format, media, delivery address, accounting and billing information.
- Subscription

For subscribing a subscription it is sufficient specifying the appropriate collection identifier, the area and the temporal extension of the subscription.

In the following sub-sections the data structures for modelling these three type of orders are described.

### 7.1 Information model for EO product ordering

The information models section deals with the information item managed through the Order Service operations, which are:

- Order options (§7.1.2)
- Order Specification (§7.1.3)
- Order Item (§7.1.4)
- Order Quotation (§7.1.5)
- Order Monitoring (§7.1.6)
- Order Item Monitoring (§7.1.7)



### 7.1.1 XML schema approach

This specification deals mainly with 2 different types of requests: product orders and subscription orders. These requests share several common parameters and have some differences, and then to model them in a XML schema we envisaged the following options:

- Put all parameters together making optional the specific ones;
- Put all parameters together putting choice elements for the specific ones;
- Define a hierarchy with an abstract type grouping the common parameters and use type substitution.

The first approach is the most simple one, but does not allow strict schema checks, because all the specific parameters are optional and cannot be verified whether the parameters needed to a specific type of order are provided or not.

The second approach implies the usage of lot of choices in the schema and if a new request has to be managed, all these choices have to be updated.

The third approach allows schema checks for the different type of requests and is more extensible than the previous one because it is sufficient to add the new request to the substitution group and all places where the substitution group was used don't have to be updated. However it adds complexity to the schema due to substitution groups, which are often source of problems for XML data binding tools, and to the hierarchy of types, which is needed to regroup common elements without replicating the definitions in several places.

The third approach was the one chosen until the release 0.9.2; starting from 0.9.3 the schema has been simplified adopting instead the first approach.

### 7.1.2 Order Options

Order options specify all possible valid combinations of options for ordering products of a specified dataset collection or for subscribing to a subscription.

#### 7.1.2.1 CommonOrderOptionsType

The following figure represents the common order options.

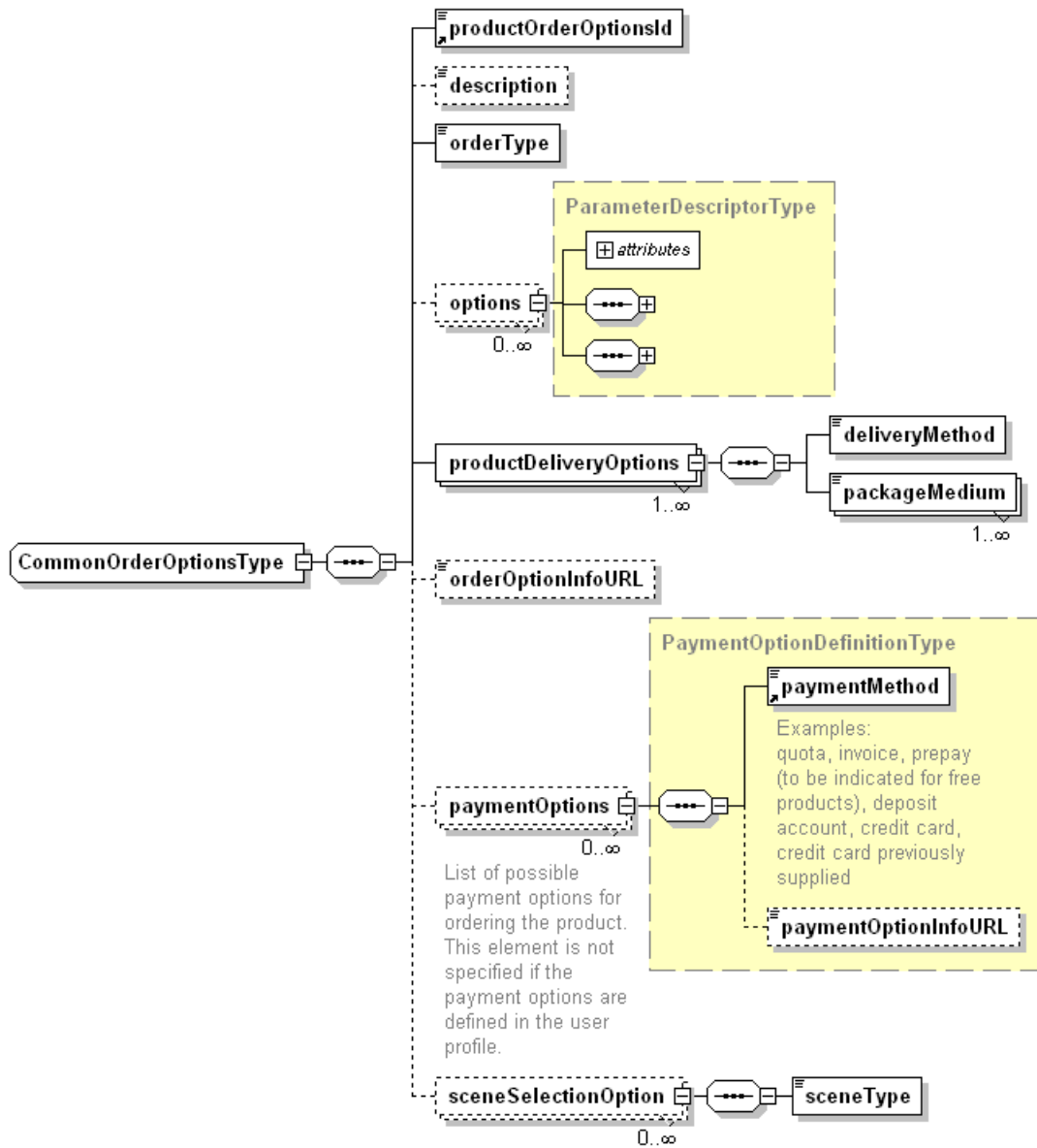


Figure 7-1: CommonOrderOptionsType diagram.

| Tag Name               | Tag Description                                                                                                                      | Product Ordering | Subscription |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------|------------------|--------------|
| CommonOrderOptionsType | It contains the common information about the different order options available for the order.                                        |                  |              |
| productOrderOptionsId  | Identifier of the specific order option group.<br><b>Type:</b> Not empty string (max 40 char)<br><b>Example:</b> “on-line retrieval” | X                | X            |

| Tag Name               | Tag Description                                                                                                                                                                                                                                                  | Product Ordering | Subscription |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|--------------|
| Description            | Free text description of the order option group.<br>Type: string (max 255 char)                                                                                                                                                                                  | X                | X            |
| orderType              | This tag specifies whether the order option is related to a subscription order or to a product order.<br>Type: string<br>Permitted Values: PRODUCT_ORDER, SUBSCRIPTION_ORDER                                                                                     | X                | X            |
| option                 | Extensible list of ordering options (see Table 7-2)                                                                                                                                                                                                              | X                | X            |
| productDeliveryOptions | Delivery Options for the order item.                                                                                                                                                                                                                             |                  |              |
| deliveryMethod         | Delivery methods valid for the delivery medium.<br><b>Type:</b> String<br><b>Permitted Values:</b> mail, ftp, sftp (SSH File Transfer Protocol), ftps (FTP over SSL), P2P, wcs, wms, e-mail, dds                                                                 | X                | X            |
| packageMedium          | Identification of a delivery Medium and a Medium Formatting Option.<br><b>Type:</b> Not empty string (max 40 chars)<br><b>Permitted Values:</b> NTP, DAT, Exabyte, CD-ROM, DLT, D1, DVD, file (for ftp, sftp, ftps, wcs, P2P, DDS delivery), HDDVD, BD (Blu-ray) | X                | X            |
| orderOptionInfoURL     | Pointer to external information about the current order option.<br><b>Type:</b> xs:anyURI                                                                                                                                                                        | X                | X            |
| paymentOptions         | Payment options                                                                                                                                                                                                                                                  | X                | X            |
| paymentMethod          | Payment methods.<br><b>Type:</b> string (max 40 char)<br><b>Example:</b> quota, invoice, prepay (to be indicated for free products), deposit account, credit card, credit card previously supplied                                                               | X                | X            |
| paymentOptionInfoURL   | Pointer to external information about the current payment option.<br><b>Type:</b> xs:anyURI                                                                                                                                                                      | X                | X            |
| sceneSelectionOption   | Identifies a scene selection option available for an order option group.                                                                                                                                                                                         | X                |              |
| sceneType              | Identifier for the scene type specific to the selected product. Detailed characteristics of the scene type are expected to be specified under link "orderOptionsInfoURL"<br><b>Type:</b> Not empty string (max 20 chars)                                         | X                |              |

Table 7-1: CommonOrderOptionsType description.

### 7.1.2.2 ParameterDescriptorType

The ParameterDescriptorType ([NR11] §11.2.1, [OR6] §8.1) defines the input a client has to provide for setting ordering options. One instance of this type represents one order option to be set for the specified order item.

The ParameterDescriptorType contains the mandatory attributes:

- “parameterID” which will be used to reference a specific parameter in other requests, e.g. Submit / GetQuotation.
- The “use” attribute defines if the parameter can or shall be provided by the client. It enumerates the strings “optional” and “required”. If required, a Submit or GetQuotation request will not be validated as true if this parameter is missing.
- The third attribute “updateable” is defined in the SPS specification, but in this context has to be set always true because update operation is not supported in ordering service.

The `sps:ParameterDescriptorType` defines four elements: three optional elements and one mandatory. The three optional elements can be used to provide further description about the order option (`gml:description`), to allow the presetting of possible values (restriction) (e.g. “yes, no” or “day, night” or “1, 2, 3”), and for defining the cardinality of possible input elements (`cardinality`). Cardinality is restricted to positive integers (excluding zero) and the string value “unbounded”.

The data structure of the input elements that shall be provided by the client is defined in the mandatory and unbounded “`sps:definition`” element. This element serves as an entry point to parsers to find the data block definition that has to be matched by the input data. It is followed by either a `sps:commonData` element (see SWECCommon for further information), a “`sps:taskMessageDefinition`” element which is a link to an external definition of the data block or a “`sps:GeometryDefinition`” or multiple `sps:ParameterDescriptor`.

The “`sps:definition`” element has been made unbounded in [OR6] with respect the [NR11] base specification in order to allow the definition of the same parameters more times e.g.: a `regionOfInterest` may be a `gml:Polygon` OR a `Circle`.

“`sps:GeometryDefinition`” is of type `QName` and is restricted to the GML elements `gml:Point`, `gml:Line`, `gml:Polygon`. It is assumed that clients “know” how to encode those basic elements.

The `sps:ParameterDescriptorType` has been enhanced in [OR6] w.r.t [NR11] adding recursion in order to allow the definition of complex parameters as list, aggregates, list of aggregates, etc.

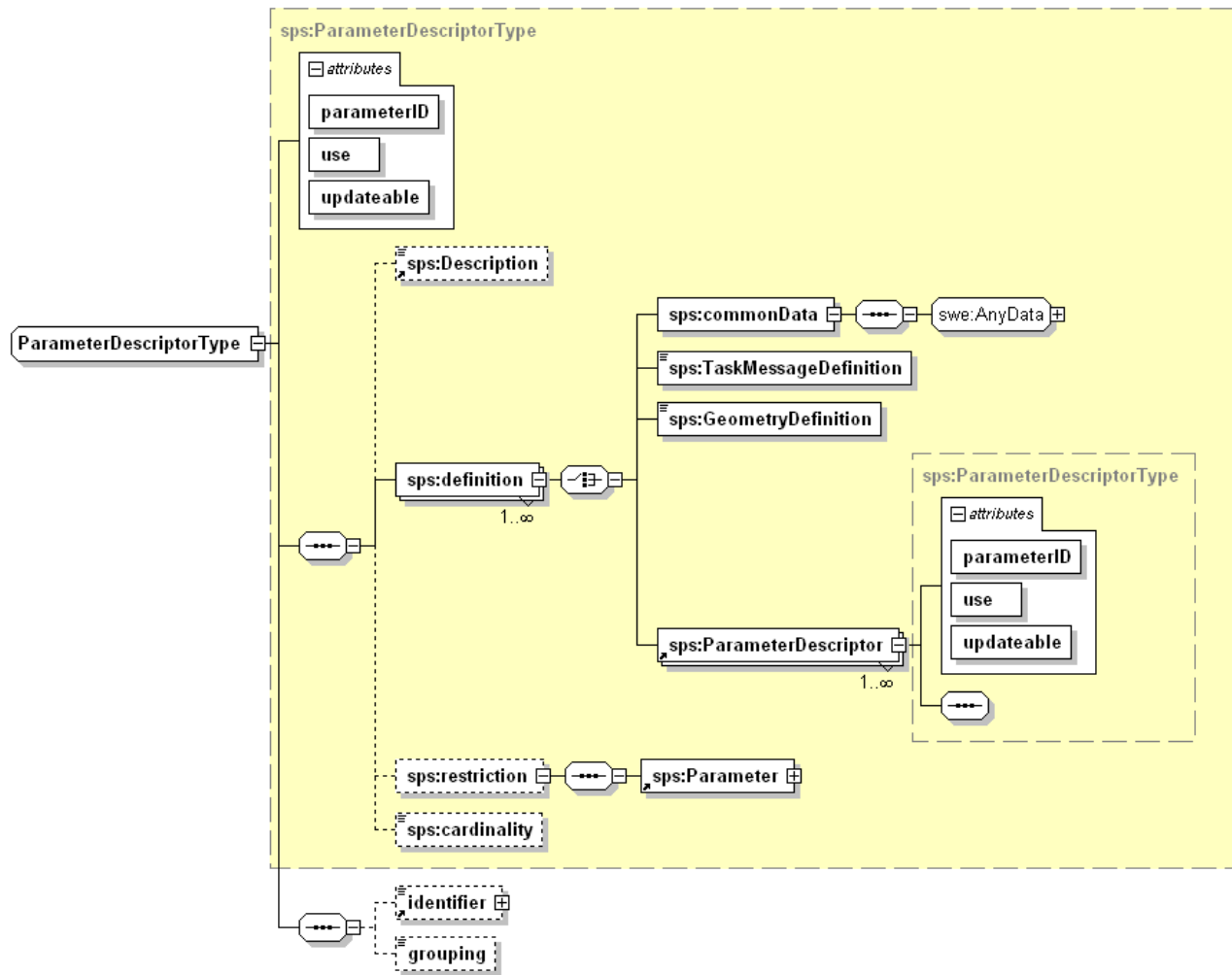


Figure 7-2: ParameterDescriptorType diagram.

| Tag Name                | Tag Description                                                                                                                                                                                                                                                                          | Product Ordering | Subscription |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|--------------|
| ParameterDescriptorType | See [NR11] §11.2.1, [OR6]§8.1                                                                                                                                                                                                                                                            |                  |              |
| parameterID             | It is the identifier of the order option to use when the order is submitted.<br><br>Type: xs:ID                                                                                                                                                                                          | X                | X            |
| use                     | Defines if the parameter shall be provided by the client or not. It enumerates the strings “optional” and “required”. If required, a Submit or GetQuotation request will not be validated as true if this parameter is missing<br><br>Type: String<br>Allowed values: required, optional | X                | X            |

| Tag Name                  | Tag Description                                                                                                                                                                                                                                                                                                                                                                                         | Product Ordering | Subscription   |
|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|----------------|
| updateable                | It is optional and defines if a parameter can be updated (defined in SPS, but not supported in Ordering Service).<br>Type: Boolean                                                                                                                                                                                                                                                                      |                  |                |
| sps:Description           | Additional textual description of the order option.<br>Type: String                                                                                                                                                                                                                                                                                                                                     | X                | X              |
| sps:definition            | This element describes the structure of the order option.                                                                                                                                                                                                                                                                                                                                               |                  |                |
| swe:commonData            | see SWECommon [OR7]                                                                                                                                                                                                                                                                                                                                                                                     | X                | X              |
| sps:TaskMessageDefinition | It is a link to an external definition of the data block                                                                                                                                                                                                                                                                                                                                                | X                | X              |
| sps:GeometryDefinition    | Enumerative value: gml:Point, gml:Line, gml:Polygon                                                                                                                                                                                                                                                                                                                                                     | X                | X              |
| sps:ParameterDescriptor   | Recursive parameter description definition in charge of representing parameters having complex nested structure.<br>Type: ParameterDescriptorType                                                                                                                                                                                                                                                       | X                | X              |
| sps:restriction           | It specifies a set of predefined values the client has to specify for the ordering parameter.<br>Type: sps:Parameter                                                                                                                                                                                                                                                                                    | X                | X              |
| sps:cardinality           | Cardinality of parameter to insert                                                                                                                                                                                                                                                                                                                                                                      | X                | X              |
| identifier                | Product identifier element.<br>Type Value: string<br>Permitted Values: Not empty string<br><br>This field is optional: <ul style="list-style-type: none"> <li>if present it means that the option is applicable only to this product.</li> <li>If not present it means that the option is applicable to the whole collection.</li> </ul> This identifier, if present, shall be owned by the collection. | X                | Not Applicable |
| grouping                  | Additional identifier for grouping correlated order options.<br>Type: string (max 40)                                                                                                                                                                                                                                                                                                                   | X                | X              |

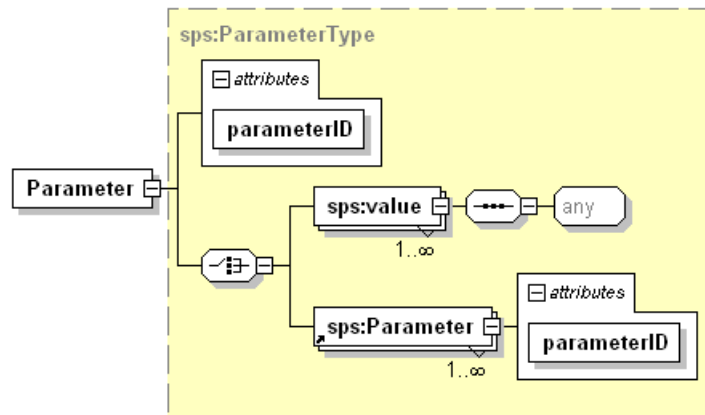
**Table 7-2: ParameterDescriptorType description.**

### 7.1.2.3 sps:Parameter

The Parameter Element is used to provide the value for a specific order option. The encoding follows the description that is part of the definition element of an sps:ParameterDescriptor Element. The Parameter

Element is therefore rather simple in its definition. It just has to provide the mandatory parameterID attribute to link the values to the specific order option. The values itself are replacing the any-Element.

In case of order option with nested definition, the value has to be set by setting appropriately the nested sps:Parameter element.



**Figure 7-3: sps:Parameter diagram**

| Tag Name      | Tag Description                                                                                 | Product Ordering | Subscription |
|---------------|-------------------------------------------------------------------------------------------------|------------------|--------------|
| Parameter     | See [NR11] §11.2.1, [OR6]§8.1                                                                   | X                | X            |
| parameterID   | It is the identifier of the order option to use when the order is submitted.<br><br>Type: xs:ID |                  |              |
| sps:value     | It is the value of the order option in case of non-nested definitions.<br><br>Type: any         |                  |              |
| sps:Parameter | Recursive declaration of the sps:Parameter.<br><br>Type: sps:ParameterType                      |                  |              |

**Table 7-3: sps:Parameter description.**

7.1.2.4 Preliminary and extensible list of ordering options

The ordering parameters include all parameters to be specified for generating the product needed to the user.

The first column specifies the name of the parameter to put in the parameterID attribute of ParameterDescriptorType; the second column describes it; the “Product Orders” column specifies whether the parameter is applicable for product orders; the last column specifies whether the parameter is applicable for Subscriptions.

| Tasking Parameter Name | Description                                                                                                                                             | Product Orders | Subscription Orders |
|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|---------------------|
| processingLevel        | Level of processing required on the data to acquire.<br>E.g.: ASA_IMM_1P, MER_RR__2P, etc.<br><br>Type: ENUMERATED_STRING                               | X              |                     |
| format                 | Product format<br>e.g.: CEOS, ESA, etc.<br><br>Type: ENUMERATED_STRING                                                                                  | X              | X                   |
| regionOfInterest       | This parameter is meaningful only for subscriptions allowing users restricting the scope of the subscription.<br><br>Type: GeometryDefinition (polygon) |                | X                   |
| startDate              | UTC time of the starting visiting period.<br><br>Type: TIME                                                                                             |                | X                   |
| completionDate         | UTC time of the finishing visiting period.<br><br>Type: TIME                                                                                            |                | X                   |
| numberOfObservations   | It specifies how many times the revisiting has to be performed.<br><br>Type: NUMERIC                                                                    |                | X                   |
| observationGap         | Number of days between 2 successive observations.<br><br>Type: NUMERIC                                                                                  |                | X                   |
| compression            | Type of compression applied to the delivered products.<br>E.g.: none, zip, gzip, bzip2,<br><br>Type ENUMERATED_STRING                                   | X              | X                   |
| qualityOfService       | Quality of service available<br>Examples: Standard, Rush, NRT<br><br>Type: ENUMERATED_STRING                                                            | X              | X                   |

**Table 7-4: Order options extensible list.**

### 7.1.3 Order Specification

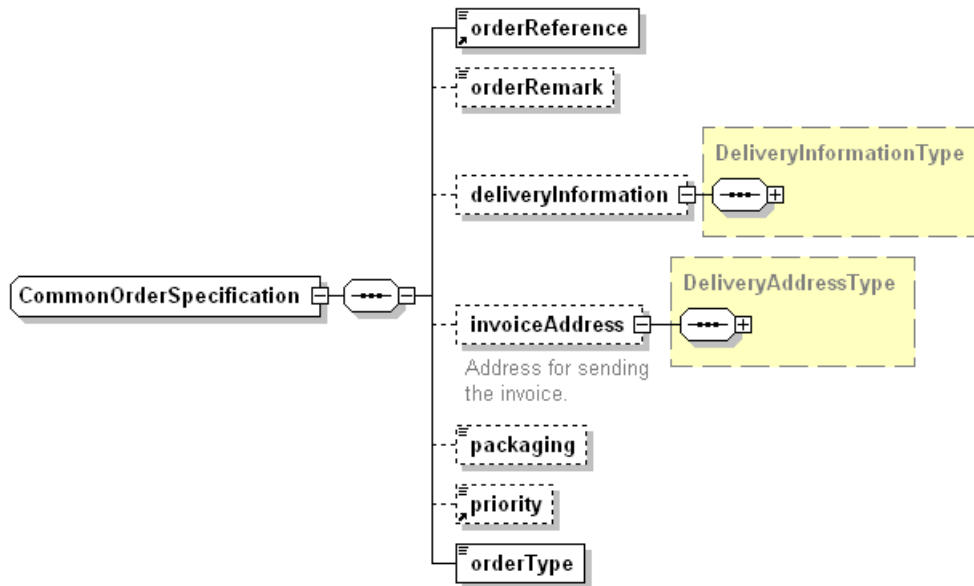
This section defines all parameters a client has to specify for submitting an order (products / subscription).

For the definition of orders the following hierarchy of complex types has been declared:

- CommonOrderSpecification, which is the root of the hierarchy and includes all parameters common to order specification and order monitoring;
- OrderSpecification, inherited from CommonOrderSpecification and add the parameters specific for submitting orders;



These types are described in the following figures and tables:

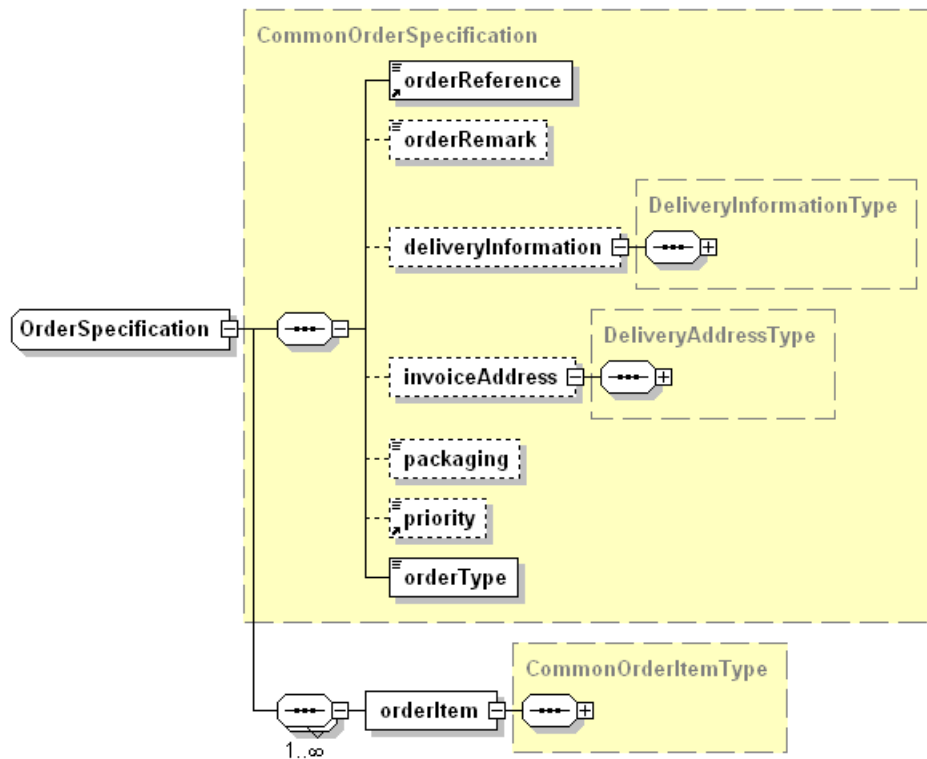


**Figure 7-4: CommonOrderSpecification diagram.**

| Tag Name                 | Tag Description                                                                                                                | Product Ordering | Subscription |
|--------------------------|--------------------------------------------------------------------------------------------------------------------------------|------------------|--------------|
| CommonOrderSpecification |                                                                                                                                | X                | X            |
| orderReference           | User defined name assigned to that order.<br><b>Type:</b> Not empty string (max 30 chars)                                      |                  |              |
| orderRemark              | Textual remark on the order.<br><b>Type:</b> Not empty string (max 255 chars)                                                  |                  |              |
| deliveryInformation      | Delivery Information element.<br><b>Type:</b> DeliveryInformationType (§7.1.3.1)                                               |                  |              |
| invoiceAddress           | Invoice Address element.<br><b>Type:</b> DeliveryAddressType (§7.1.3.3)                                                        |                  |              |
| packaging                | This element allows packing all ordered items in the same file.<br><b>Type:</b> string<br><b>Allowed values:</b> zip, tar, tgz |                  |              |
| priority                 | Priority of the order<br><br><b>Type:</b> string<br><b>Allowed Values:</b> STANDARD, FAST_TRACK                                |                  |              |

| Tag Name  | Tag Description                                                                                                                                                                  | Product Ordering | Subscription |
|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|--------------|
| orderType | This tag specifies whether the order option is related to a subscription order or to a product order.<br><br>Type: string<br>Permitted Values: PRODUCT_ORDER, SUBSCRIPTION_ORDER | X                | X            |

**Table 7-5: CommonOrderSpecification description.**



**Figure 7-5: OrderSpecification diagram.**

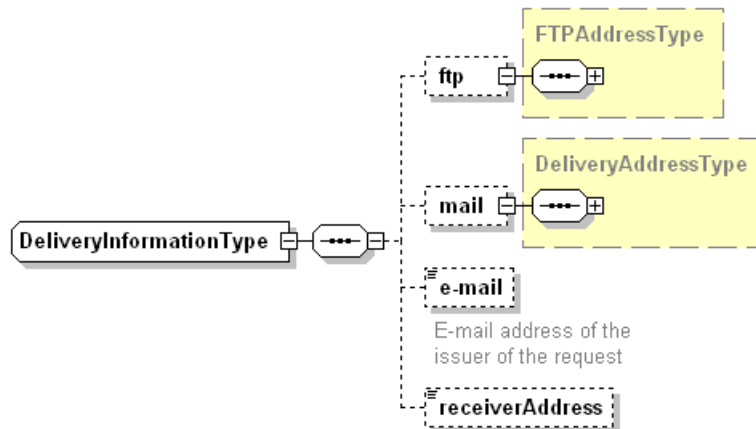
| Tag Name           | Tag Description                                                                            | Product Ordering | Subscription |
|--------------------|--------------------------------------------------------------------------------------------|------------------|--------------|
| OrderSpecification | Specific parameters for submitting orders.<br><br>Inherited from CommonOrderSpecification. |                  |              |

| Tag Name  | Tag Description                                                                                     | Product Ordering | Subscription |
|-----------|-----------------------------------------------------------------------------------------------------|------------------|--------------|
| orderItem | Order Item element.<br><b>Type:</b> ProductOrderItemType (Its type is described in paragraph 7.1.4) | X                | X            |
| priority  | Priority of the order<br><br>Type: string<br>Allowed Values: STANDARD, FAST_TRACK                   | X                |              |

**Table 7-6: OrderSpecification description.**

7.1.3.1 DeliveryInformationType

The following figure gives a graphical representation of DeliveryInformationType:



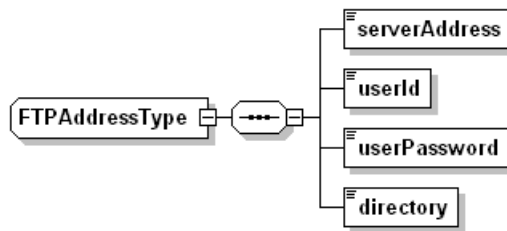
**Figure 7-6: DeliveryInformationType diagram.**

| Tag Name | Tag Description                                               |
|----------|---------------------------------------------------------------|
| ftp      | FTP address<br><br>Type: FTPAddressType (§7.1.3.2)            |
| mail     | Mail element.<br><br>Type: DeliveryAddressType (§7.1.3.3).    |
| e-mail   | E-mail address of the user.<br><br>Type: String (max 40 char) |

| Tag Name        | Tag Description                                                                                                                                                                                                                                                    |
|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| receiverAddress | <p>DDS address.<br/>                     Syntax: [channel] ”.” &lt;receiving station address max 10 char&gt;</p> <p>The receiving station is provided to the user during registration to the DDS service (outside this ICD).</p> <p>Type: String (max 20 char)</p> |

**Table 7-7: DeliveryInformationType description.**

7.1.3.2 FTPAddressType

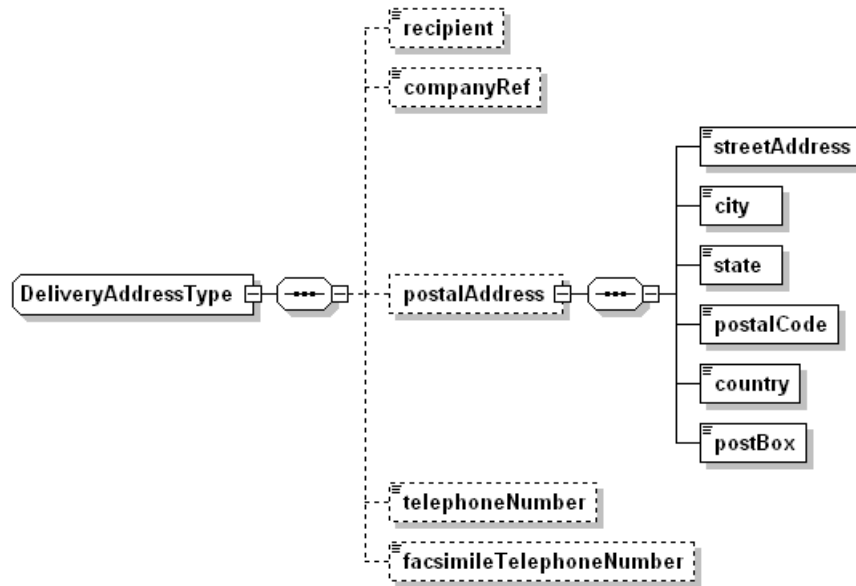


**Figure 7-7: FTPAddressType diagram.**

| Tag Name       | Tag Description                                                                                                                           |
|----------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| FTPAddressType |                                                                                                                                           |
| serverAddress  | <p>Address of the user FTP server the ordering service has to put the data.</p> <p><b>Type:</b> Not empty string</p>                      |
| userId         | <p>Identifier of the user for accessing the FTP server.</p> <p><b>Type:</b> Not empty string (max 8 chars)</p>                            |
| userPassword   | <p>User password for accessing the FTP server.</p> <p><b>Type:</b> Not empty string</p>                                                   |
| directory      | <p>Directory file path name where the ordering service has to put the products.</p> <p><b>Type:</b> Not empty string (max 1024 chars)</p> |

**Table 7-8: FTPAddressType description.**

7.1.3.3 DeliveryAddressType



**Figure 7-8: DeliveryAddressType diagram.**

| Tag Name            | Tag Description                                                                         |
|---------------------|-----------------------------------------------------------------------------------------|
| DeliveryAddressType |                                                                                         |
| recipient           | Identification of the receiving person.<br><b>Type:</b> Not empty string (max 40 chars) |
| companyRef          | Identification of the receiving entity.<br><b>Type:</b> Not empty string (max 40 chars) |
| postalAddress       | Postal Address of the user.                                                             |
| streetAddress       | Street Address element.<br><b>Type:</b> String (max 40 chars)                           |
| city                | City element.<br><b>Type:</b> String (max 40 chars)                                     |
| state               | State element.<br><b>Type:</b> String (max 40 chars)                                    |
| postalCode          | Postal Code element.<br><b>Type:</b> String (max 12 chars)                              |

| Tag Name                 | Tag Description                                                                                                                                                                                                                                                                    |
|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| country                  | Country element.<br>Compliant with ISO3166 ( <a href="http://www.iso.org/iso/en/prods-services/iso3166ma/02iso-3166-code-lists/listen1.html">http://www.iso.org/iso/en/prods-services/iso3166ma/02iso-3166-code-lists/listen1.html</a> )<br><br><b>Type:</b> String (max 40 chars) |
| postalBox                | Postal Box element.<br>Only number part, only digits allowed<br><br><b>Type:</b> String (max 12 chars)                                                                                                                                                                             |
| telephoneNumber          | Telephone number of the receiving person.<br><br><b>Type:</b> Not empty string (max 18 chars) matching the following regular expression: “\+?[0-9\(\)\-\s]+” (An optional “+” sign followed by a series of (at least one) digit, “(”, “)”, “-“ and blank chars)                    |
| facsimileTelephoneNumber | FAX number of the receiving person.<br><br><b>Type:</b> Not empty string (max 18 chars) matching the following regular expression: “\+?[0-9\(\)\-\s]+” (An optional “+” sign followed by a series of (at least one) digit, “(”, “)”, “-“ and blank chars)                          |

**Table 7-9: DeliveryAddressType description.**

#### 7.1.4 Order Item

This section defines all parameters a client has to specify for one item within an order (products / subscription).

##### 7.1.4.1 CommonOrderItemType

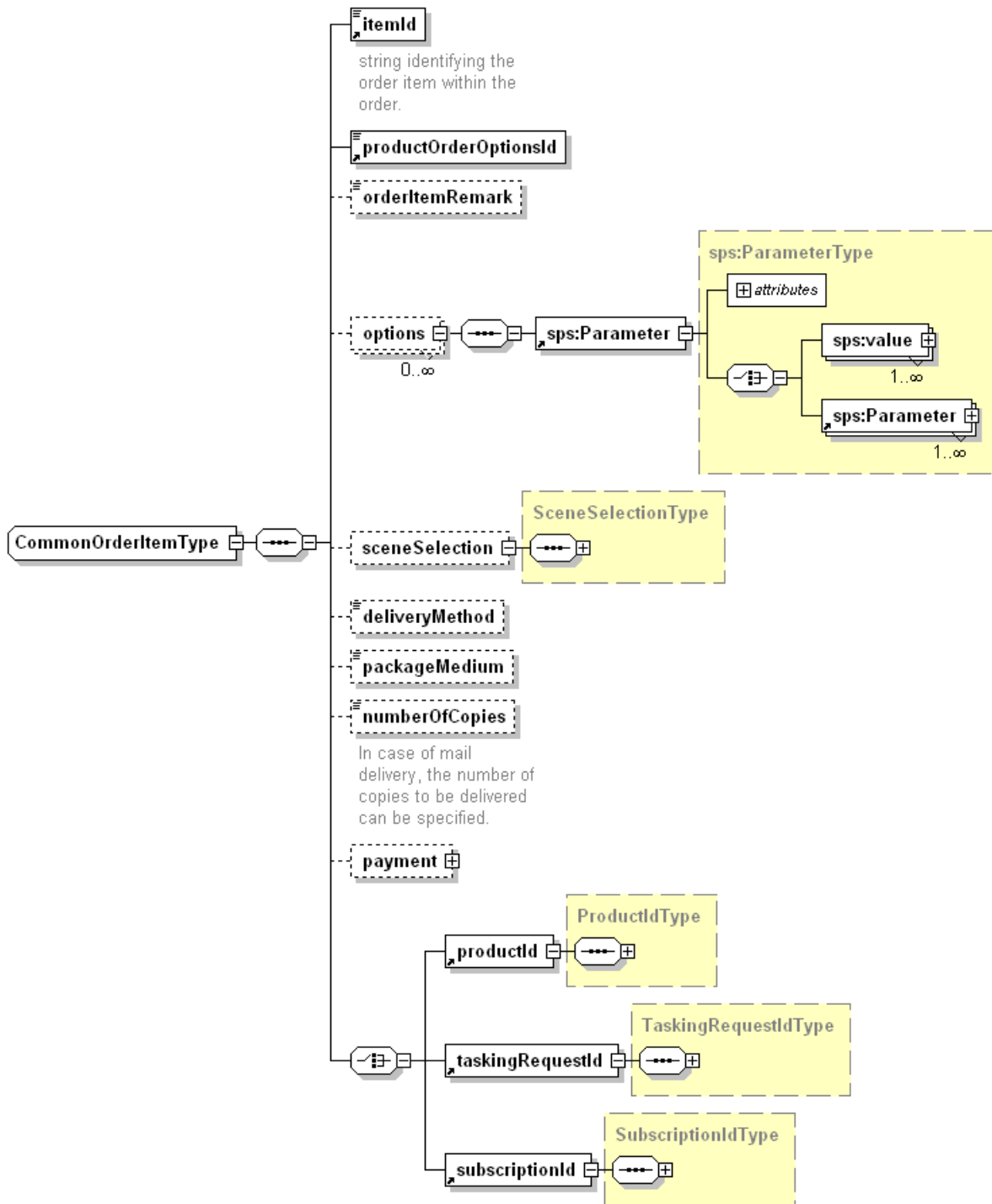


Figure 7-9: CommonOrderItemType diagram.

| Tag Name              | Tag Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Product Ordering | Subscription |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|--------------|
| CommonOrderItemType   | Common parameters of an ordered item.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                  |              |
| itemId                | Unique identifier of the item within the order.<br>Type: non empty string (max 80 char)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | X                | X            |
| productOrderOptionsId | Identifier of chosen order option group                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | X                | X            |
| orderItemRemark       | Textual remark on the order item put by the XML issuer.<br>Type: Not empty string (max 255 chars).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | X                | X            |
| options               | It specifies the options to be applied to the ordered item.<br>The list of values specified in this element shall comply with the one returned by GetOptionsResponse.                                                                                                                                                                                                                                                                                                                                                                                                                             | X                | X            |
| sps:Parameter         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | X                | X            |
| parameterID           | Name of order option.<br>Type: xs:QName                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | X                | X            |
| value                 | Value of the order option.<br>Type:any                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | X                | X            |
| sps:Parameter         | Value of order option in case of recursive definitions.<br>Type: sps:ParameterType                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | X                | X            |
| sceneSelection        | This field has two purposes: <ul style="list-style-type: none"> <li>- It specifies the selection of the scene from the product that is to be delivered. Then it is used from the processing chain for extracting the scene from the parent product.</li> <li>- It is the footprint of the product that has to be delivered. Then this value is used along the ordering chain for e.g.: rendering on map, checking spatial restrictions, etc.</li> </ul> This field has to be <b>always</b> provided unless the product has not a spatial coverage.<br>Its type is described in paragraph 7.1.4.2. | X                |              |
| deliveryMethod        | Delivery methods valid for the delivery medium.<br>Type: String<br>Permitted Values: mail, ftp, P2P, wcs, e-mail, dds                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | X                | X            |
| packageMedium         | Identification of a delivery Medium and a Medium Formatting Option.<br>Type: String<br>Permitted values: NTP, DAT, Exabyte, CD-ROM, DLT, D1, DVD, file, HDDVD, BD (Blu-ray)                                                                                                                                                                                                                                                                                                                                                                                                                       | X                | X            |
| numberOfCopies        | Specifies how many copies of the same order item have to be delivered.<br>Type: integer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | X                | X            |
| payment               | User selected payment information.<br>If specified, it overrides the possible payment method and payment info stored in the user profile.                                                                                                                                                                                                                                                                                                                                                                                                                                                         | X                | X            |
| paymentMethod         | Selected payment method: quota, credit card, etc.<br>Type: non empty string (max 40 char)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | X                | X            |

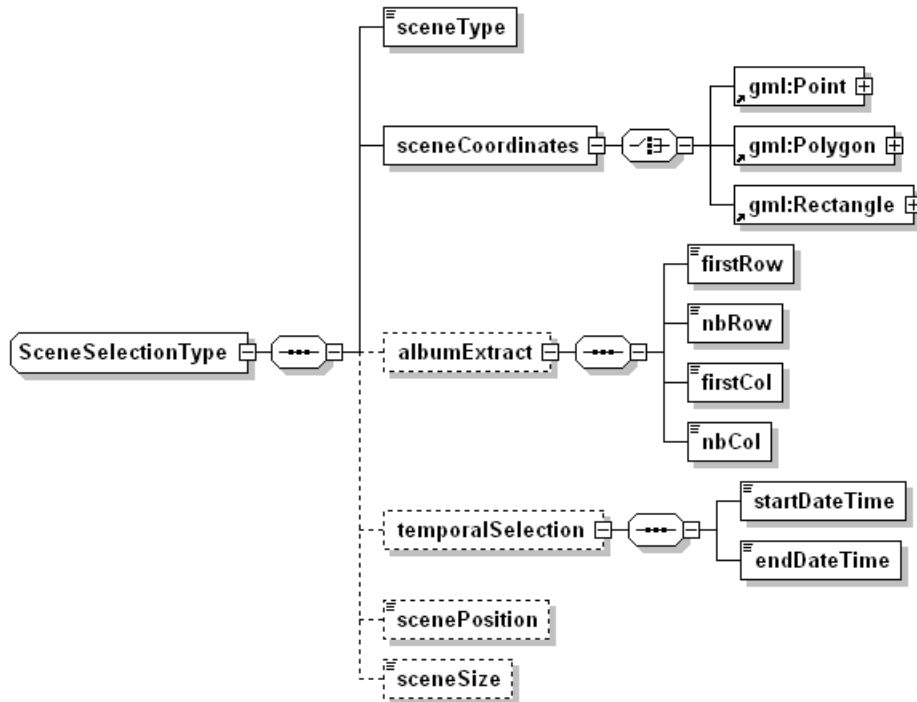


| Tag Name         | Tag Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Product Ordering | Subscription |
|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|--------------|
| orderAccount     | In case of payment by quota, this field specifies the account under which the user is authorised to order from the specific provider e.g. a project or service name.<br><br>Type: non empty string (max 20 chars)                                                                                                                                                                                                                                                                 | X                | X            |
| creditCardInfo   | In case of payment by credit card it specifies the credit card information.<br>TBD encoding of credit card information within the message.<br><br>Type: String                                                                                                                                                                                                                                                                                                                    | X                | X            |
| productId        | This field is set for ordering items from Catalogue.<br>It identifies the target product on which the order item is based.<br><br>Type: ProductIdType                                                                                                                                                                                                                                                                                                                             | X                |              |
| identifier       | Product identifier element.<br>Depending on the selected options, this item is either: <ul style="list-style-type: none"> <li>the ordered product</li> <li>the parent product from which the product required by the client has to be prepared by applying the selected <b>options</b>.</li> </ul> Type Value: string<br>Permitted Values: Not empty string<br>Syntax: The identifier format is not mandated by the specification, but is expected to be a persistent identifier. | X                |              |
| collectionId     | Search space for the product requested.<br>It is referenced as parentIdentifier in the [OR3].<br><br><b>Type:</b> Not empty string<br><b>Syntax:</b> Provider.Facility.Collection identifying a pre-defined TargetService (e.g. ESA.EECF.ERSE_SER for the ESA ERS SAR raw data catalogue).                                                                                                                                                                                        | X                |              |
| taskingRequestId | This element is set for ordering products coming from a tasking request issued to SPS instance linked to the Ordering Service.                                                                                                                                                                                                                                                                                                                                                    | X                |              |
| sps:ID           | Identifier for the feasibility study / tasking request.<br><br>Type: xs:token                                                                                                                                                                                                                                                                                                                                                                                                     | X                |              |
| subscriptionId   | It identifies the target subscription on which the order item is based.<br><br>Type: SubscriptionIdType                                                                                                                                                                                                                                                                                                                                                                           |                  | X            |
| collectionId     | Search space for the product requested.<br>It is referenced as parentIdentifier in the [OR3].<br><br><b>Type:</b> Not empty string<br><b>Syntax:</b> Provider.Facility.Collection identifying a pre-defined TargetService (e.g. ESA.EECF.ERSE_SER for the ESA ERS SAR raw data catalogue).                                                                                                                                                                                        |                  | X            |

Table 7-10: CommonOrderItemType description.

7.1.4.2 SceneSelection Type

The following figure gives a graphical representation of the SceneSelectionType:



**Figure 7-10: SceneSelectionType diagram**

| Tag Name           | Tag Description                                                                                                 | Product Ordering | Subscription   |
|--------------------|-----------------------------------------------------------------------------------------------------------------|------------------|----------------|
| SceneSelectionType |                                                                                                                 | X                | Not applicable |
| sceneType          | Identifier for the scene type specific to the selected product.<br><b>Type:</b> Not empty string (max 20 chars) |                  |                |
| sceneCoordinates   |                                                                                                                 |                  |                |
| gml:Point          | Scene center element.<br><br>Type: gml:PointType                                                                |                  |                |
| gml:Polygon        | Bounding polygon of the selected scene.<br><br>Type: gml:PolygonType                                            |                  |                |
| gml:Rectangle      | Bounding rectangle of the selected scene.<br><br>Type: gml:RectangleType                                        |                  |                |

| Tag Name          | Tag Description                                                                                                                                                                                                                                                                                                                                                                                                                                              | Product Ordering | Subscription |
|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|--------------|
| albumExtract      | <p>Source data extract defined by its bounding box with album catalogue coordinates (impossible for mosaic or cropping)</p> <p>Album catalogue is a low resolution image of the acquired datastrip stored within the catalogue.</p> <p>In Pleiades case, it corresponds to a 4-bands 22.4m resolution raw image (i.e. un-projected).</p> <p>On these images it is possible to select a sub-image by specifying its row / column range within the parent.</p> |                  |              |
| firstRow          | <p>First row</p> <p>Type: Integer</p>                                                                                                                                                                                                                                                                                                                                                                                                                        |                  |              |
| nbRow             | <p>Number of rows</p> <p>Type: Integer</p>                                                                                                                                                                                                                                                                                                                                                                                                                   |                  |              |
| firstCol          | <p>First column</p> <p>Type: Integer</p>                                                                                                                                                                                                                                                                                                                                                                                                                     |                  |              |
| nbCol             | <p>Number of columns</p> <p>Type: Integer</p>                                                                                                                                                                                                                                                                                                                                                                                                                |                  |              |
| temporalSelection | Temporal selection element                                                                                                                                                                                                                                                                                                                                                                                                                                   |                  |              |
| startDateTime     | <p>Start time for the temporal selection in the following format:<br/>CCYY-MM-DDThh:mm:ss.ccZ</p> <p>Type: xs:DateTime</p>                                                                                                                                                                                                                                                                                                                                   |                  |              |
| endDateTime       | <p>Stop time for the temporal selection in the following format<br/>CCYY-MM-DDThh:mm:ss.ccZ</p> <p>Type: xs:DateTime</p>                                                                                                                                                                                                                                                                                                                                     |                  |              |
| scenePosition     | <p>Provider specific system to define the position of the scene.<br/>Examples: "frame 1234"</p> <p>Type: Not empty string (max 40 chars)</p>                                                                                                                                                                                                                                                                                                                 |                  |              |
| sceneSize         | <p>Provider specific system to define the size of the scene.<br/>Examples: "frames: 3", "40x50 km", "26 seconds"</p> <p>Type: Not empty string (max 40 chars)</p>                                                                                                                                                                                                                                                                                            |                  |              |

**Table 7-11: SceneSelectionType description.**

### 7.1.5 Order Quotation

This section describes the information provided into the order quotation.

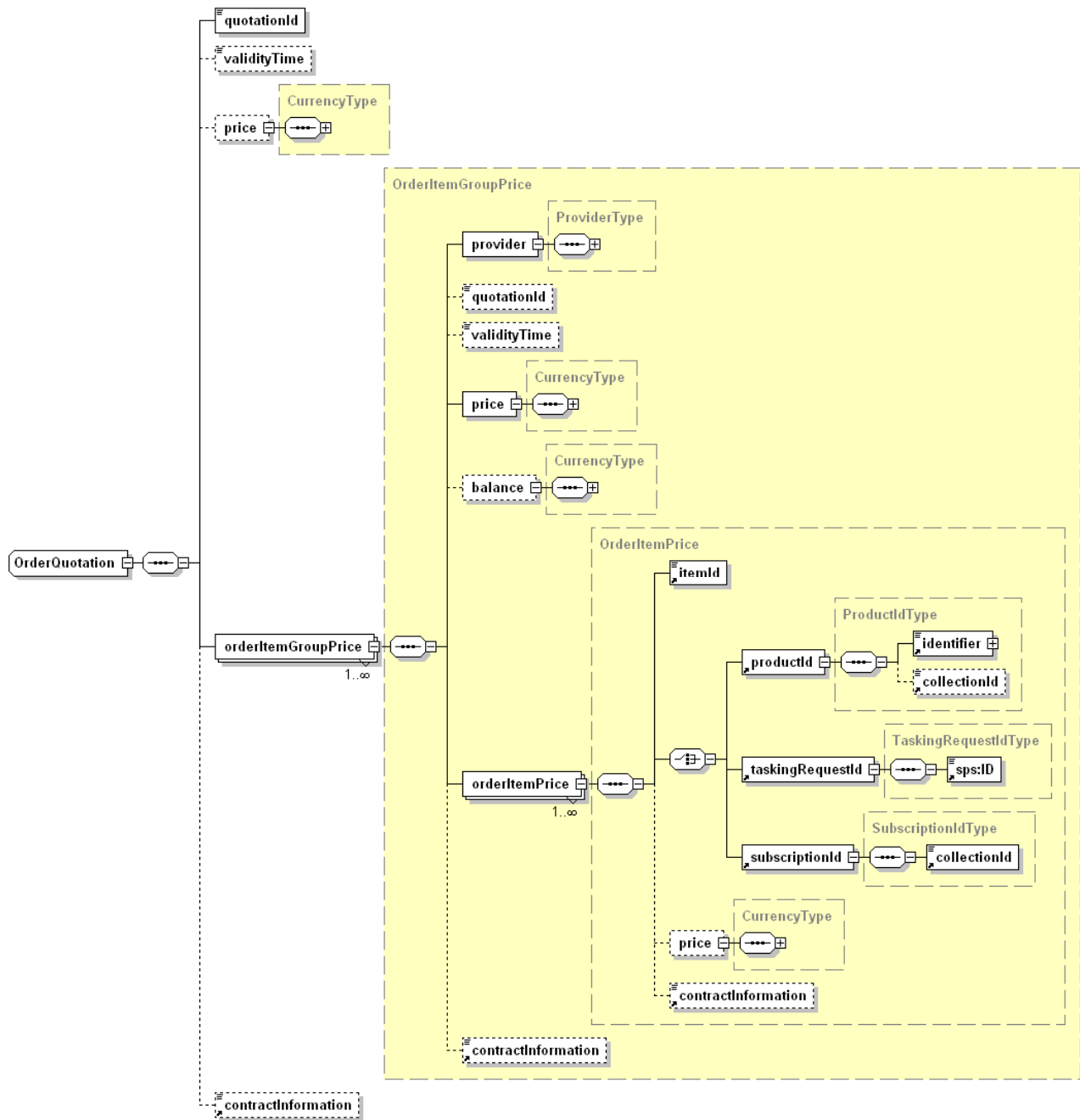


Figure 7-11: OrderQuotation diagram.

| Tag Name       | Tag Description | Product Ordering | Subscription |
|----------------|-----------------|------------------|--------------|
| OrderQuotation |                 | X                | X            |

| Tag Name            | Tag Description                                                                                                                                                                                                                                                                                                                                                                                       | Product Ordering | Subscription |
|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|--------------|
| quotationId         | Identifier of the whole order quotation.<br>URI conventions are followed for encoding this identifier.<br><br>Type: anyURI                                                                                                                                                                                                                                                                            |                  |              |
| validityTime        | Time until the quotation of the whole order is valid.<br>It is the minimum of the validity time of all orderItem groups.<br><br>Type: xs:dateTime                                                                                                                                                                                                                                                     |                  |              |
| price               | Total price of the order.<br>Is not provided when the different orderItem groups have different payment methods (e.g. quota and credit card (USD))<br><br>Type: CurrencyType (Table 7-15)                                                                                                                                                                                                             |                  |              |
| orderItemGroupPrice | Price information of order items groups.<br>The ordered items are grouped because: <ul style="list-style-type: none"> <li>• All items managed by the same provider have the same quotation rules;</li> <li>• Discounts can be applied when several items are ordered together;</li> <li>• Different provider can support different payment methods.</li> </ul> Type: OrderItemGroupPrice (Table 7-13) |                  |              |
| contractInformation | Textual description of rights and conditions applied to the whole order.<br><br>Type: string (max 1024 chars)                                                                                                                                                                                                                                                                                         |                  |              |

**Table 7-12: OrderQuotation description.**

| Tag Name            | Tag Description                                                           | Product Ordering | Subscription |
|---------------------|---------------------------------------------------------------------------|------------------|--------------|
| OrderItemGroupPrice | Price information related to a group of ordered items.                    | X                | X            |
| provider            | Provider which accepted the request for quotation for this group of items |                  |              |
| serviceName         | Service Name<br><br>Type: String (max 40 chars)                           |                  |              |
| organization        | Provider's organization name.<br><br>Type: string (max 40 chars)          |                  |              |

| Tag Name            | Tag Description                                                                                                                                                                                                                                                                                                               | Product Ordering | Subscription |
|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|--------------|
| quotationId         | Identifier of the order group quotation.<br>This identifier is optional because can be returned when the quotation of the ordered items group is performed by an organization different from the one providing the Ordering service itself.<br>URI conventions are followed for encoding this identifier.<br><br>Type: anyURI |                  |              |
| validityTime        | Time until the quotation of the order item group is valid.<br><br>Type: xs:dateTime                                                                                                                                                                                                                                           |                  |              |
| price               | Price of the orderItemGroup.<br><br>Type: CurrencyType (Table 7-15)                                                                                                                                                                                                                                                           |                  |              |
| balance             | In case of providers supporting payment by quota, this field returns the balance of the quota considering the price of this orderItemGroup.<br><br>Type: CurrencyType (Table 7-15)                                                                                                                                            |                  |              |
| orderItemPrice      | Price of the each item of the group.<br><br>Type: OrderItemPrice.                                                                                                                                                                                                                                                             |                  |              |
| contractInformation | Textual description of rights and conditions applied to the ordered items.<br><br>Type: string (max 1024 chars)                                                                                                                                                                                                               |                  |              |

**Table 7-13: OrderItemGroupPrice description.**

| Tag Name         | Tag Description                                                                                                                                       | Product Ordering | Subscription   |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|----------------|
| OrderItemPrice   | Price information of a single order item.                                                                                                             | X                | X              |
| itemId           | Unique identifier of the order item within the order.<br>It is the same identifier specified in the order.<br><br>Type: string (max 80 chars)         |                  |                |
| productId        | This field is set for ordering items from Catalogue.<br>It identifies the target product on which the order item is based.<br><br>Type: ProductIdType | X                | Not Applicable |
| taskingRequestId | This element is set for ordering products coming from a tasking request issued to SPS instance linked to the Ordering Service.                        | X                | Not Applicable |
| subscriptionId   | It identifies the target subscription on which the order item is based.<br><br>Type: SubscriptionIdType                                               | Not Applicable   | X              |

| Tag Name            | Tag Description                                                                                                  | Product Ordering | Subscription |
|---------------------|------------------------------------------------------------------------------------------------------------------|------------------|--------------|
| price               | List price of the order item. Optional because the actual price is the one at group level.<br>Type: CurrencyType |                  |              |
| contractInformation | Textual description of rights and conditions applied to the ordered item.<br>Type: string (max 1024 chars)       |                  |              |

**Table 7-14: OrderItemPrice description.**

| Tag Name     | Tag Description                                                                                                                                                                                                                                           | Product Ordering | Subscription |
|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|--------------|
| CurrencyType |                                                                                                                                                                                                                                                           | X                | X            |
| value        | value<br>Type: double                                                                                                                                                                                                                                     |                  |              |
| currency     | Currency including ISO 4217 (e.g.: EUR, USD (US Dollar), CAD (Canada Dollar), AUD (Australia Dollar), GBP (United Kingdom Pounds), etc.) and also special values not conflicting with the ISO ones for representing quota.<br>Type: string (max 10 chars) |                  |              |

**Table 7-15: CurrencyType description.**

### 7.1.6 Order Monitoring Specification

This section defines all parameters returned to the client when getting the status of submitted orders.

For the definition of orders the following hierarchy of complex types has been declared:

- CommonOrderSpecification, which is the root of the hierarchy and includes all parameters common to order specification and order monitoring;
- CommonOrderMonitorSpecification, which includes all order monitoring parameters;

These types are described in the following sub-sections.

7.1.6.1 CommonOrderMonitorSpecification

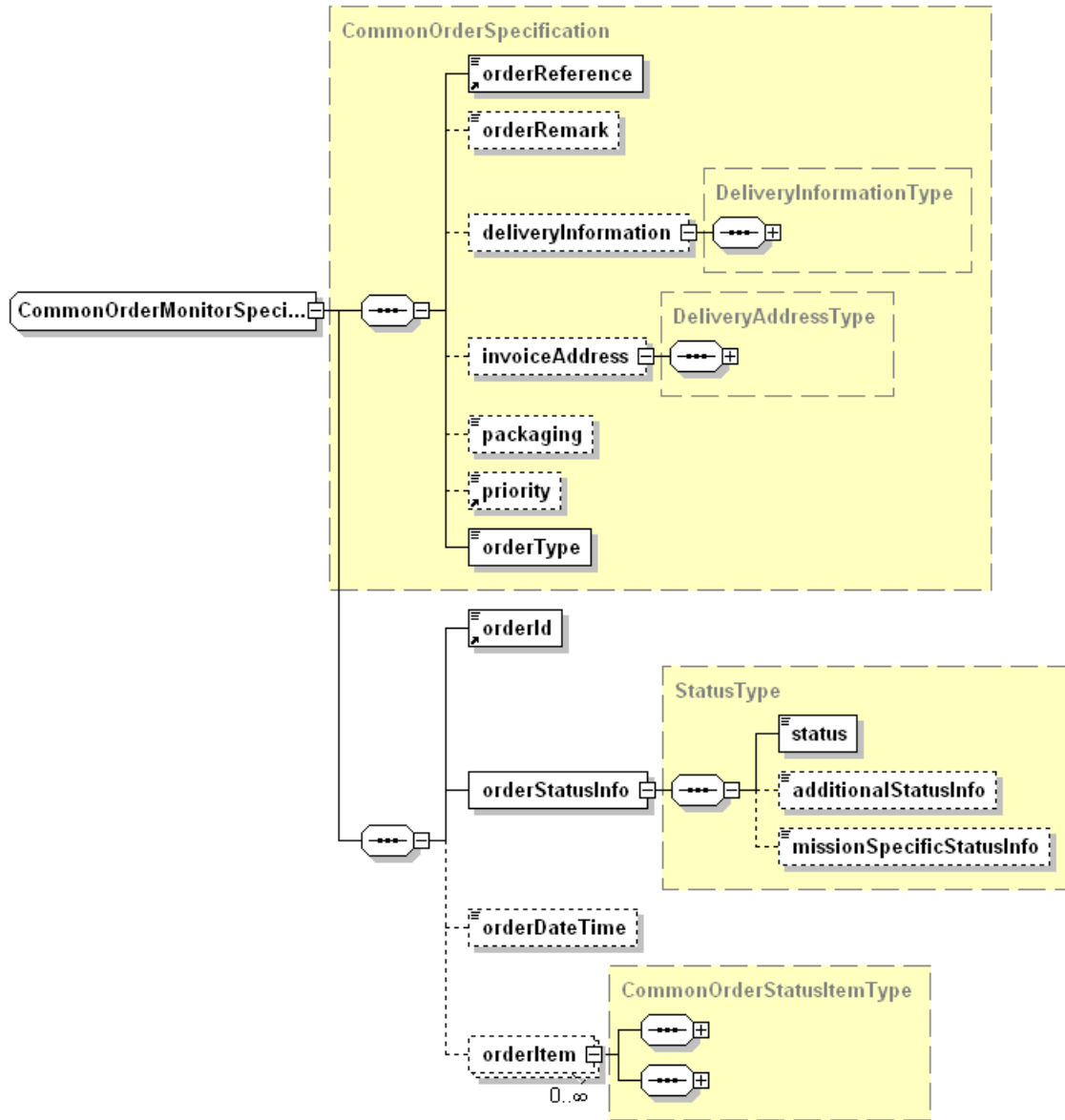


Figure 7-12: CommonOrderMonitorSpecification diagram.

| Tag Name | Tag Description | Product Ordering | Subscription | Presentation |
|----------|-----------------|------------------|--------------|--------------|
|----------|-----------------|------------------|--------------|--------------|



| Tag Name                        | Tag Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Product Ordering | Subscription | Presentation                                                                     |
|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|--------------|----------------------------------------------------------------------------------|
| CommonOrderMonitorSpecification | It specifies the common parameters returned into an order monitor XML document.<br><br>Inherited from CommonOrderSpecification (Table 7-5)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                  |              | The CommonOrderSpecification attributes are returned regardless the presentation |
| orderId                         | Unique identifier of the order for this service.<br><br>Type: xs:anyURI                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | X                | X            | Brief & full                                                                     |
| orderStatusInfo                 | Contains the Order status information.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                  |              | Brief & full                                                                     |
| status                          | Status of a product Order.<br><br><b>Type:</b> String<br><b>Current List of Valid Values:</b> <ul style="list-style-type: none"> <li>• Submitted (INTERMEDIATE status)</li> <li>• Accepted (INTERMEDIATE status)</li> <li>• InProduction (INTERMEDIATE status)</li> <li>• Suspended (INTERMEDIATE status)</li> <li>• Cancelled (previously accepted item cancelled at request of the customer). FINAL status.</li> <li>• Completed (made available to the user as per defined DeliveryMethod). FINAL status.</li> <li>• Failed, when an error occurred during the processing of the order. FINAL status.</li> <li>• Terminated, when a subscription has been completed. FINAL status.</li> </ul> | X                | X            | Brief & full                                                                     |
| additionalStatusInfo            | Description associated with the Order status.<br><br><b>Type:</b> Not empty string (max 255 chars)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | X                | X            | Brief & full                                                                     |
| missionSpecificStatusInfo       | Additional text description where mission specific information can be put.<br><br>Type: String (max 255 chars)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | X                | X            | Brief & full                                                                     |
| orderDateTime                   | Date and Time of the order submission/update<br><br>Type: xs:dateTime                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | X                | X            | Brief & full                                                                     |
| orderItem                       | This element reports the status information of the order item.<br><br>Type: CommonOrderStatusItemType.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | X                | X            | full                                                                             |

**Table 7-16: CommonOrderMonitorSpecification description.**

### **7.1.7 Order Item Monitoring Specification**

This section specifies the status information returned for product and subscription order items.

For the definition of order item monitoring info, the following complex types have been defined:

- `CommonOrderItemType`, which regroups all attributes common to order submission and order monitoring;
- `CommonOrderStatusItemType`, which regroups the order status attributes;

These elements are described in the following sub-sections.

7.1.7.1 CommonOrderStatusItemType

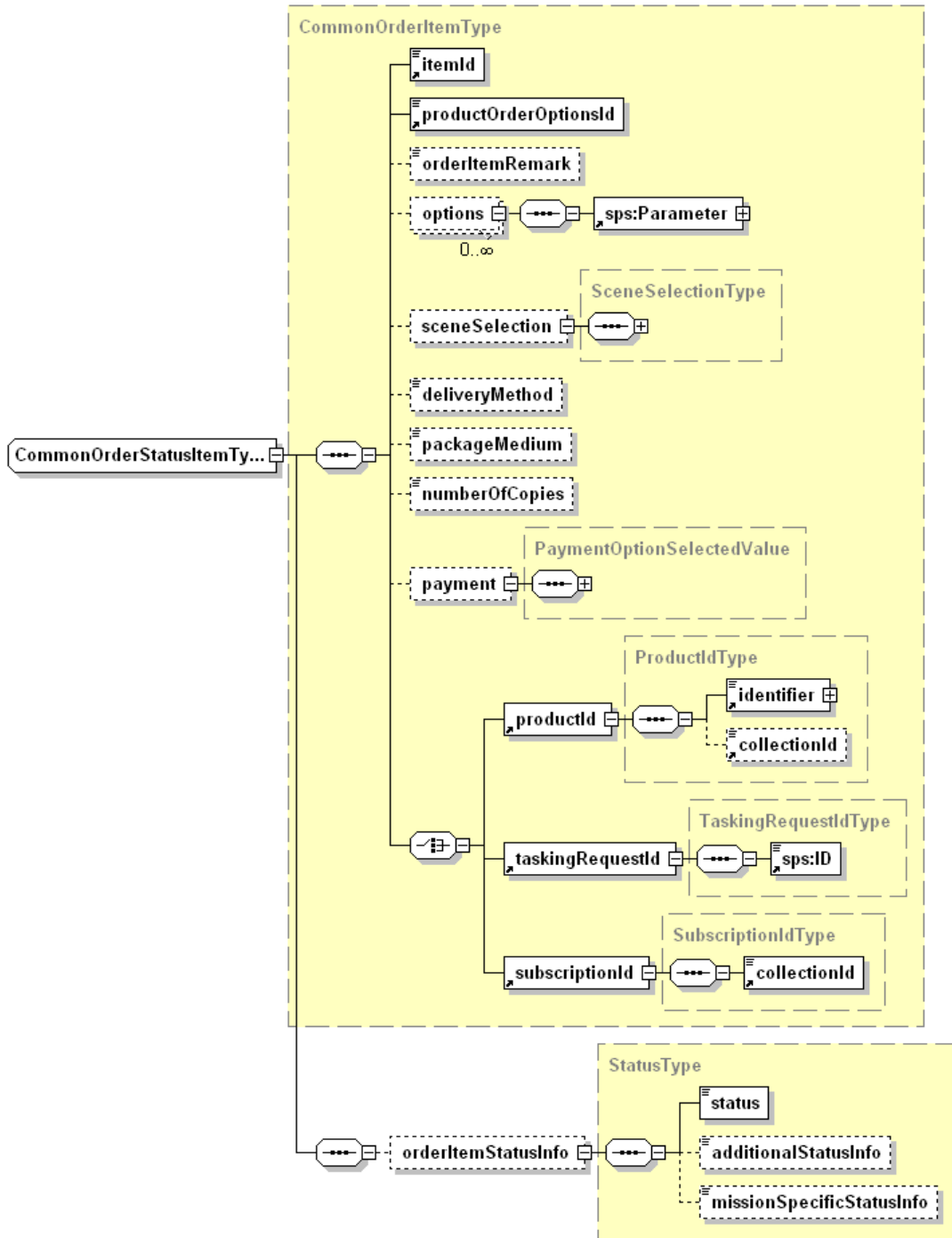


Figure 7-13: CommonOrderStatusItemType diagram.

| Tag Name                  | Tag Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Product Ordering | Subscription                                                                                                                       |
|---------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|------------------------------------------------------------------------------------------------------------------------------------|
| CommonOrderStatusItemType | It regroups the common status attributes.<br>Inherited from CommonOrderItemType (Table 7-10)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | X                | X                                                                                                                                  |
| orderItemStatusInfo       | Status information at item level.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                  |                                                                                                                                    |
| status                    | Status of order item.<br><b>Type:</b> String<br><b>Current List of Valid Values:</b> <ul style="list-style-type: none"> <li>• Submitted (INTERMEDIATE status)</li> <li>• Accepted (INTERMEDIATE status)</li> <li>• InProduction (INTERMEDIATE status)</li> <li>• Suspended (INTERMEDIATE status)</li> <li>• Cancelled (previously accepted item cancelled at request of the customer). FINAL status.</li> <li>• Completed (made available to the user as per defined DeliveryMethod). FINAL status.</li> <li>• Failed, when an error occurred during the processing of the order item. FINAL status.</li> <li>• Terminated, when a subscription has been completed. FINAL status.</li> </ul> |                  |                                                                                                                                    |
| additionalStatusInfo      | Description associated with the Order status.<br><b>Type:</b> Not empty string (max 255 chars)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                  | This free text field can be used for specifying subscription specific info e.g. delivered items, items going to be delivered, etc. |
| missionSpecificStatusInfo | Additional text description where mission specific information can be put.<br><b>Type:</b> String (max 255 chars)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                  |                                                                                                                                    |

**Table 7-17: CommonOrderStatusItemType description.**

## 8 External interfaces

This view describes the externally visible behaviour of the system, including the interfaces provided by its components and the supported protocol bindings. It defines the request and response message structures as part of the operation signatures.

All operations must support the embedding of requests and responses in SOAP messages. Only SOAP messaging (via HTTP/POST) with document/literal style has to be used. Messages must conform to SOAP 1.2 (<http://www.w3.org/TR/SOAP/>). The message payload will be in the body of the SOAP envelope.

Table 8-1 summarises the Ordering operations and their encoding methods that are applied in this document. The mandatory method bindings and data encodings are printed in bold.

**Table 8-1: Operation request encoding**

| Ordering Operation | Request encoding | Sync / Async                              | Comment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|--------------------|------------------|-------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| GetCapabilities    | <b>XML/SOAP</b>  | <b>Synchronous request</b>                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| GetOptions         | <b>XML/SOAP</b>  | <b>Synchronous request</b>                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| GetQuotation       | <b>XML/SOAP</b>  | <b>Synchronous / Asynchronous request</b> | <p>This operation can be used in different ways depending on the client and server ability:</p> <ul style="list-style-type: none"> <li>○ Synchronous, when the server is able to provide a real time response;</li> <li>○ Asynchronous via Notification, when the client is able to work as a server for getting the asynchronous notification</li> <li>○ Asynchronous via Monitoring: the client has to ask the server until it returns the quotation.</li> </ul> <p>In case of Asynchronous via Notification usage, after the reception of this request, the order service calls the GetQuotationResponse operation provided by the client for sending the quotation.</p> |

|                      |                 |                                           |                                                                                                                                                                         |
|----------------------|-----------------|-------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| GetQuotationResponse | <b>XML/SOAP</b> | <b>Call-back for asynchronous request</b> | This operation is called by the order service for sending the quotation in case of Asynchronous via Notification usage.                                                 |
| Submit               | <b>XML/SOAP</b> | <b>Asynchronous request</b>               | This operation is asynchronous and then, after the reception of this request, the order service calls (optionally) the SubmitResponse operation provided by the client. |
| SubmitResponse       | <b>XML/SOAP</b> | <b>Call-back for asynchronous request</b> | This operation is called by the order service after the reception of Submit operations.                                                                                 |
| GetStatus            | <b>XML/SOAP</b> | <b>Synchronous request</b>                |                                                                                                                                                                         |
| Cancel               | <b>XML/SOAP</b> | <b>Asynchronous request</b>               | This operation is asynchronous and then, after the reception of this request, the order service calls (optionally) the CancelResponse operation provided by the client. |
| CancelResponse       | <b>XML/SOAP</b> | <b>Call-back for asynchronous request</b> | This operation is called by the order service after the reception of Cancel operations.                                                                                 |
| DescribeResultAccess | <b>XML/SOAP</b> | <b>Synchronous request</b>                |                                                                                                                                                                         |

Regarding the asynchronous request and replies the WS-addressing ([NR10]) SOAP header extensions have been used:

- In the SOAP header of GetQuotation, Submit and Cancel operations request messages the following tags have to be included (**wsa** is the namespace of WS-addressing definitions):

```
<wsa:ReplyTo>
  <wsa:Address> order service URI of the client </wsa:Address>
</wsa:ReplyTo>
<wsa:MessageID> unique identifier of the request </wsa:MessageID>
```

In case the reply address is set to:

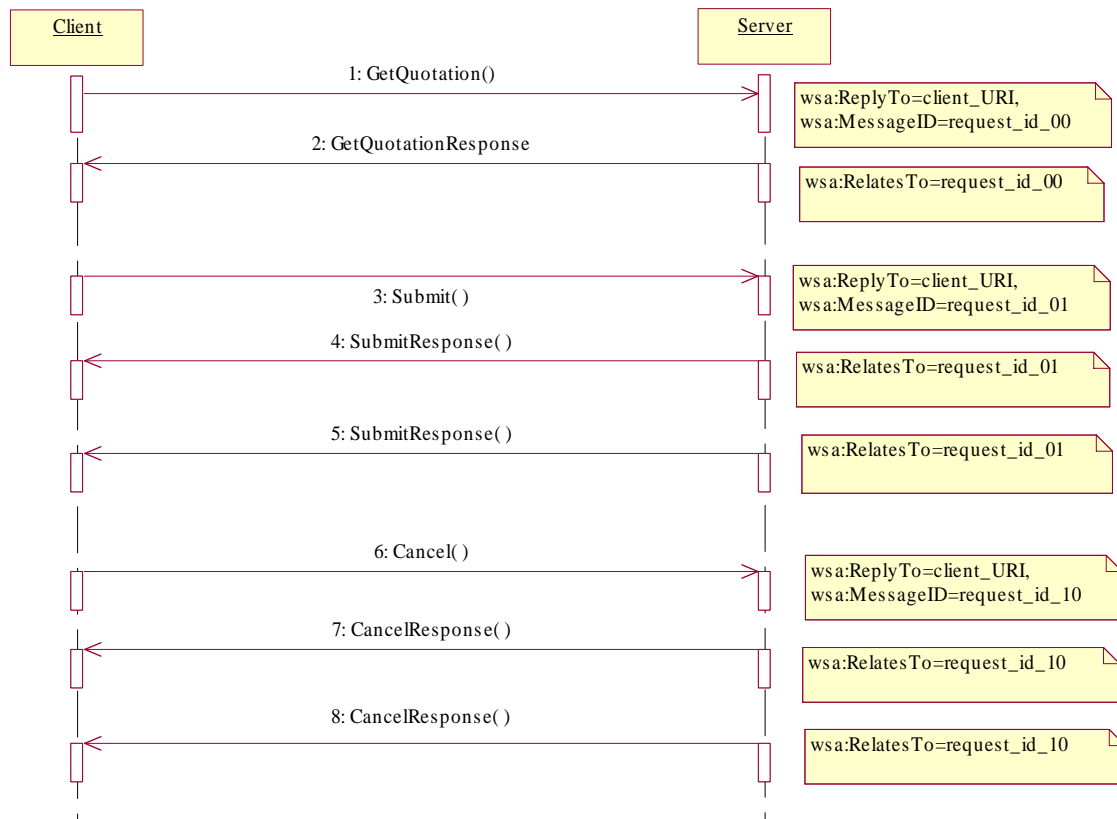
<http://schemas.xmlsoap.org/ws/2003/03/addressing/role/anonymous>

it means that the client does not have to be notified. It is useful for standard clients not having server capabilities. In this case the client has to ask the status of asynchronous requests calling dedicated operations (e.g. GetStatus for checking the status Submit and Cancel operations).

- In the SOAP header of GetQuotationResponse / SubmitResponse / CancelResponse operations request messages the following tags have to be included (**wsa** is the namespace of WS-addressing definitions):

```
<wsa:RelatesTo RelationshipType="wsa:Response">
  Identifier of the GetQuotation, Submit or Cancel previously submitted requests
</wsa:RelatesTo>
```

The following sequence diagram explains the usage scenario of Submit, Cancel and GetQuotation operations:



**Figure 8-1: Asynchronous requests scenario.**

### User Identity Information

Regarding the format and protocol of user information, which are needed for authenticating and authorizing ordering service requests, it is not covered by this ICD, but it is objective of [OR8] document.

## 8.1 *Interface specifications*

It gives formal, language-independent interface specifications that admit multiple programming language bindings and shows error conditions that can occur.

### 8.1.1 Shared parameters

#### 8.1.1.1 statusNotification element

This element is used in asynchronous requests for specifying whether the client has to be notified and in which way:

- no notifications
- all status changes to be notified
- just the completion of the order submission to be notified

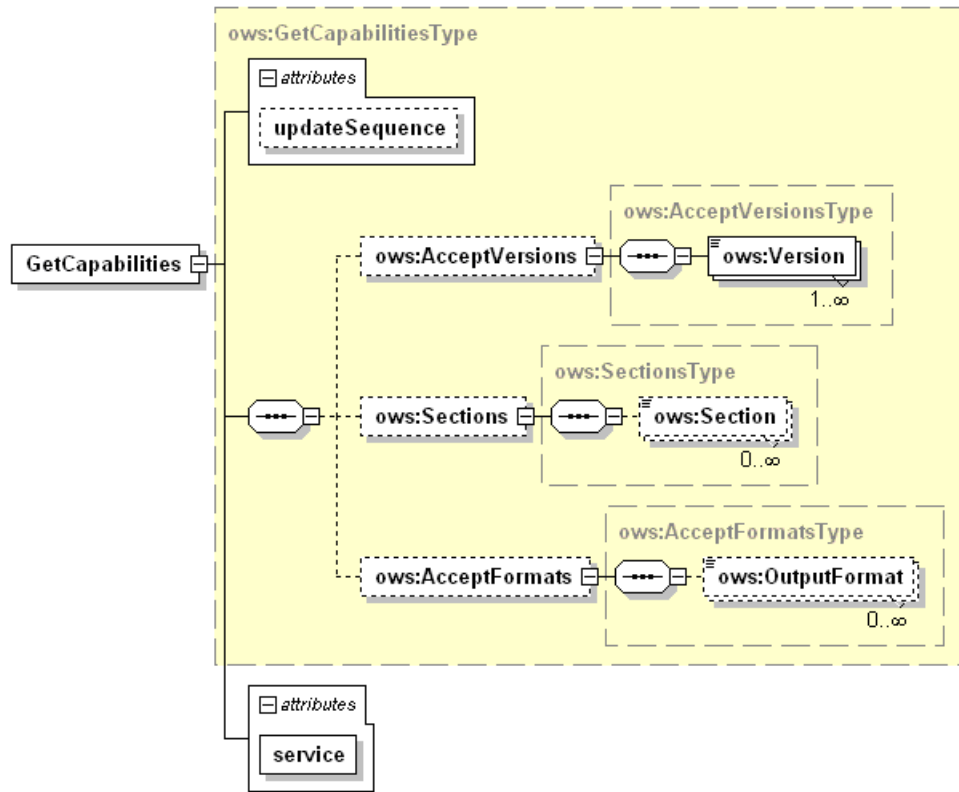
| Tag Name           | Tag Description                                                                                                                                                                                                                                                                                                                     |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| statusNotification | This element specifies how many status notifications are sent back to the client.<br>Type: String<br>Permitted Values: <ul style="list-style-type: none"> <li>• None (no status notification sent back)</li> <li>• All (all status changes are notified)</li> <li>• Final (only the completion of the order is notified)</li> </ul> |

### 8.1.2 GetCapabilities Operation

The mandatory GetCapabilities operation allows clients to retrieve service metadata from a server. The response to a GetCapabilities request shall be an XML document containing service metadata about the server, including specific information about an Order Service. This section specifies the XML document that an Order Service server must return to describe its capabilities.



8.1.2.1 GetCapabilities input message: GetCapabilities element



**Figure 8-2: GetCapabilities request diagram.**

The GetCapabilities operation request shall be as specified in Subclauses 7.2 and 7.3 of [NR9]. The value of the “service” parameter shall be “OS”. The allowed set of service metadata (or Capabilities) XML document section names and meanings shall be as specified in Tables 3 and 7 of [NR9].

The “Multiplicity and use” column in Table 1 of [NR9] specifies the optionality of each listed parameter in the GetCapabilities operation request. The following table specifies the implementation of those parameters by Order Service clients and servers.

| Name           | Multiplicity           | Client implementation                                                        | Server implementation                                                                                            |
|----------------|------------------------|------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| service        | One (mandatory)        | The parameter shall be implemented by all clients, using the specified value | The parameter shall be implemented by all servers, checking that each parameter is received with specified value |
| AcceptVersions | Zero or one (optional) | Should be implemented by all software clients, using specified values        | Shall be implemented by all servers, checking if parameter is received with specified value(s)                   |

|                |                        |                                                                  |                                                                              |
|----------------|------------------------|------------------------------------------------------------------|------------------------------------------------------------------------------|
| Sections       | Zero or one (optional) | Each parameter may be implemented by each client                 | Each parameter may be implemented by each server                             |
| updateSequence | Zero or one (optional) | If parameter not provided, shall expect default response         | If parameter not implemented or not received, shall provide default response |
| AcceptFormats  | Zero or one (optional) | If parameter provided, shall allow default or specified response | If parameter implemented and received, shall provide specified response      |

**Table 8-2: Implementation of parameters in GetCapabilities operation request**

#### 8.1.2.2 GetCapabilities output message: Capabilities element

The following figure provides a graphical representation of the Capabilities XML document.

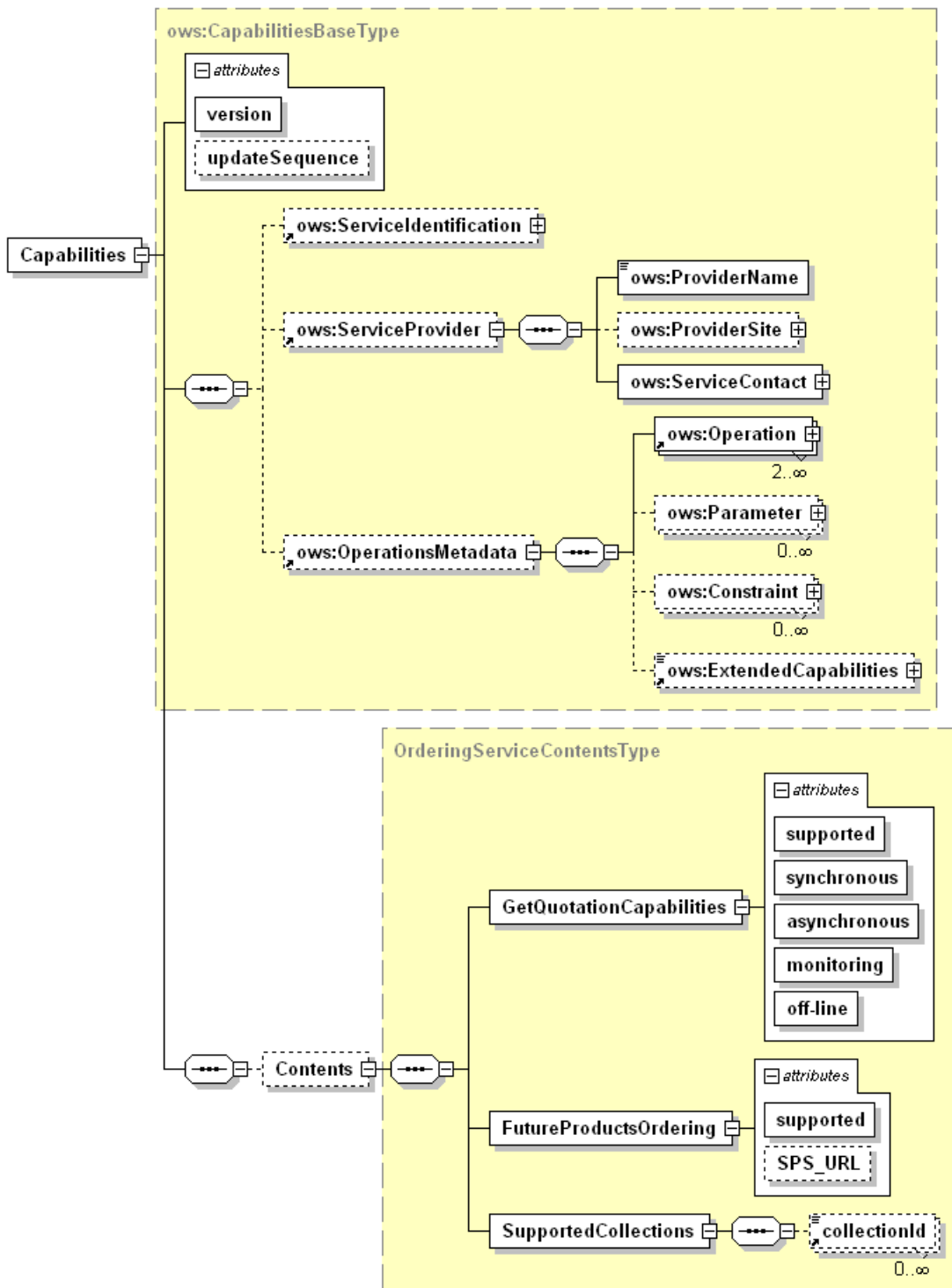


Figure 8-3: Capabilities diagram.

The GetCapabilities response shall contain the Order Service sections specified in the following table. Depending on the values in the Sections parameter of the GetCapabilities operation request, any combination of these sections can be requested and shall be returned when requested.

| Section name          | Contents                                                                                                                                                                                                                                                                                          |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ServiceIdentification | Metadata about this specific server. The schema of this section shall be the same as for all OWSs, as specified in Subclause 7.4.3 and owsServiceIdentification.xsd of [NR9].                                                                                                                     |
| ServiceProvider       | Metadata about the organization operating this server. The schema of this section shall be the same for all OWSs, as specified in Subclause 7.4.4 and owsServiceProvider.xsd of [NR9].                                                                                                            |
| OperationsMetadata    | Metadata about the operations specified by this service and implemented by this server, including the URLs for operation requests. The basic contents and organization of this section shall be the same as for all OWSs, as specified in Subclause 7.4.5 and owsOperationsMetadata.xsd of [NR9]. |

**Table 8-3: Section name values and content.**

In addition to these sections, each service metadata document shall include the mandatory “version” and optional updateSequence parameters specified in Table 6 in Subclause 7.4.1 of [NR9].

#### 8.1.2.2.1 *OperationsMetadata section standard contents*

For the Order Service, the OperationsMetadata section shall be the same as for all OGC Web Services, as specified in Subclause 7.4.5 and owsOperationsMetadata.xsd of [NR9]. The mandatory values of various (XML) attributes shall be as specified in Table 8-4. Similarly, the optional attribute values listed in Table 8-5 shall be included or not depending on whether that operation is implemented by that server. In these tables the “Attribute name” column uses dot-separator notation to identify parts of a parent item. The “Attribute value” column references an operation parameter, in this case an operation name, and the meaning of including that value is listed in the right column.

| Attribute name | Attribute value | Meaning of attribute value |
|----------------|-----------------|----------------------------|
| Operation.name | GetCapabilities | Implemented by the server  |
| Operation.name | GetOptions      | Implemented by the server  |
| Operation.name | Submit          | Implemented by the server  |

**Table 8-4: Mandatory Order Service operations.**

| Attribute name | Attribute value      | Meaning of attribute value |
|----------------|----------------------|----------------------------|
| Operation.name | GetQuotation         | Implemented by the server  |
| Operation.name | GetStatus            | Implemented by the server  |
| Operation.name | Cancel               | Implemented by the server  |
| Operation.name | DescribeResultAccess | Implemented by the server  |

**Table 8-5: Optional Order Service operations.**

8.1.2.2.2 *Contents section*

This section provides additional information about the order quotation.

| Tag Name                 | Tag Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Product Ordering | Subscription |
|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|--------------|
| Contents                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                  |              |
| GetQuotationCapabilities | <p>This element specifies how the quotation is supported by the Ordering service. In fact, depending on client and service capabilities different options are considered in this specification:</p> <ul style="list-style-type: none"> <li>○ Quotation can be supported or not;</li> <li>○ Quotation can be provided either synchronously or asynchronously;</li> <li>○ Quotation can be provided via operation interaction;</li> <li>○ In case of asynchronous quotation, the client can get it either via asynchronous notification or asking the quotation again until the service actually returns it.</li> </ul> <p>The different attributes of GetQuotationCapabilities element specify which of these possibilities are supported by the service.</p> | X                | X            |
| supported                | <p>Set to true whether the quotation is supported.</p> <p>Type: xs:boolean</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                  |              |
| synchronous              | <p>Set to true if the service is able to provide synchronous answer to GetQuotation.</p> <p>Type: xs:boolean</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                  |              |
| asynchronous             | <p>Set to true if the service is able to provide an asynchronous answer to GetQuotation.</p> <p>Type: xs:boolean</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                  |              |

| Tag Name               | Tag Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Product Ordering | Subscription |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|--------------|
| monitoring             | <p>This attribute is set to true when the client has to call GetQuotation several times until the server provides the quotation.</p> <p>Then in this case the quotation process works in this way:</p> <ul style="list-style-type: none"> <li>○ at the first call of GetQuotation the client specifies all order parameters;</li> <li>○ the server replies with the quotationId;</li> <li>○ then the client calls GetQuotation specifying the quotationId received at the previous call;</li> <li>○ if the quotation is available, then the server returns it, otherwise the quotationId is returned again.</li> <li>○ This process continues until the server returns the quotation.</li> </ul> <p>Type: xs:boolean</p> |                  |              |
| off-line               | <p>Set to true if the service is able to provide answer to quotation via mail / e-mail notification.</p> <p>Type: xs:boolean</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                  |              |
| FutureProductsOrdering | <p>This element specifies whether the ordering service supports also future product ordering and, if it is the case, the URL of the SPS instance to use with it.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | X                |              |
| supported              | <p>Set to true when the Ordering Service supports future products ordering.</p> <p>Type: xs:boolean</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                  |              |
| SPS_URL                | <p>It is the SPS instance URL for submitting tasking requests for future products orders.</p> <p>This element shall be specified in case the “supported” flag is true.</p> <p>Type: anyURI</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                  |              |
| SupportedCollections   | <p>This element specifies the list of collections supported by this Ordering service.</p> <p>This list includes collections for products ordering and for subscriptions.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | X                | X            |
| collectionId           | <p>Collection identifier</p> <p>Type: non empty string max 62 chars</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                  |              |

**Table 8-6: Description of Contents section of Capabilities document.**

### 8.1.2.3 Exceptions

In case of errors during the processing of the request the service shall return an ows: ExceptionReport according to the clause 8 of [NR9].

### 8.1.3 GetOptions Operation

This operation allows getting the possible options for preparing an EO products order or for subscribing to EO products.

Depending on the input parameters, this operation works in different ways:

- Options by collection identifier

Because the collection identifier can refer either a product collection or a subscription then there are 2 cases:

- Product collection:

In this case the operation returns options for ordering products from that collection. All products shall have the same options otherwise an exception is thrown.

- Subscription:

Subscription options returned.

- Options by collection and product identifier

In this case the collection shall support product ordering and all options available for the specified product are returned.

- Options by tasking identifier

When the tasking identifier is specified (i.e. SPS:ID), which can refer to either a feasibility study or task submitted to SPS instance linked to this Ordering service, the operation returns the options available for ordering products starting from the acquisitions corresponding to the provided SPS:ID.

The SPS:ID can refer different type of requests:

- Precisely identifier acquisitions, i.e. acquisitions are identified by their key attributes e.g.: orbit and start and stop equator crossing times OR UTC start and stop times etc.
- Coverage request, i.e. acquisitions are specified via the definition of the area to cover and the related time frame.
- Standing request, similar to the previous one, but the coverage is performed several times with a defined periodicity.

Returned options are structured in array of groups, each identified by the **productOrderOptionsId** and representing a valid combination of options (e.g. one group can specify the options for getting a level 1 product, another group specifies options for getting another level 1 product, another for level 2 product, etc.). Each group includes mainly the following attributes:

- Delivery options
- Payment options
- Scene selection options (not applicable for subscriptions)
- Extensible list of options e.g.: processing level, product format. This list can be product specific and then the identifier of the product can be optionally specified.

8.1.3.1 GetOptions input message: GetOptions

The type of GetOptions is OrderOptionsRequestType.

The following figure provides a graphical representation of this type.

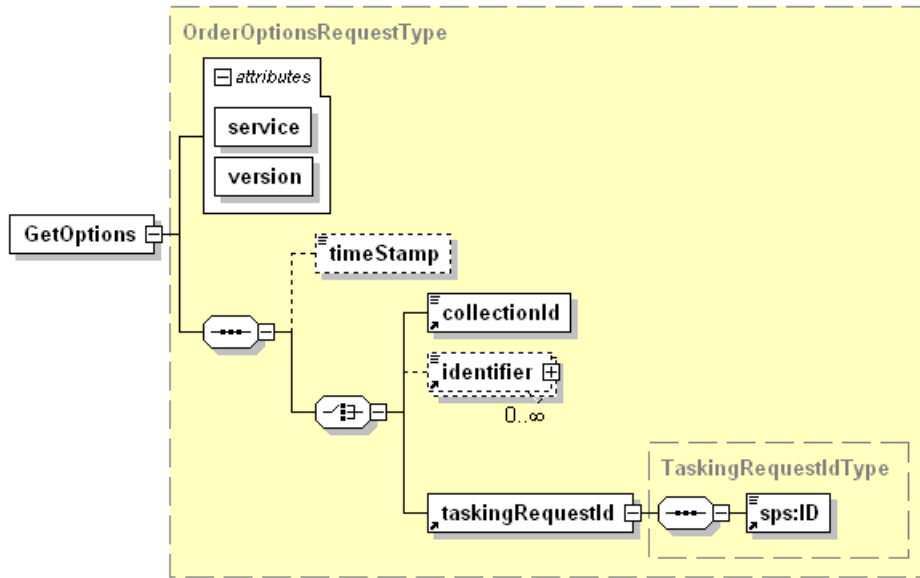


Figure 8-4: GetOptions element diagram.

| Tag Name     | Tag Description                                                                                                                                                                                                                                                                                        | Product Ordering                                                        | Subscription                              |
|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|-------------------------------------------|
| GetOptions   |                                                                                                                                                                                                                                                                                                        |                                                                         |                                           |
| service      | Service type identifier<br>Type: non-empty string<br>Allowed values: OS                                                                                                                                                                                                                                | X                                                                       | X                                         |
| version      | Specification version for operation<br>Type: non-empty string. Format: <x>.<y>.<z>                                                                                                                                                                                                                     | X                                                                       | X                                         |
| timeStamp    | It is the time when the request has been issued.<br>Type: xs:DateTime                                                                                                                                                                                                                                  | X                                                                       | X                                         |
| collectionId | It is the identifier of the dataset collection to get ordering options.<br>It is referenced as parentIdentifier in the [OR3].<br>Type Value: string<br>Permitted Values: Not empty string<br>Syntax: The identifier format is not mandated by the specification.<br>Source: [OpenGIS], CG_QueryRequest | It is the identifier of the collection storing the EO product to order. | It is the identifier of the subscription. |



| Tag Name       | Tag Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Product Ordering | Subscription |
|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|--------------|
| identifier     | <p>Product identifier element.<br/>Type Value: string<br/>Permitted Values: Not empty string</p> <p>This field is optional and multiple:</p> <ul style="list-style-type: none"> <li>• if present then only the options related these products shall be returned.</li> <li>• If not present all options applicable to the collection shall be returned.</li> </ul> <p>This identifier, if present, shall be owned by the collection.<br/>If the identifier is <b>not</b> present and the options depend always on it, the operation returns error.</p> | X                |              |
| taskingRequest | <p>This field is alternative to collectionId and identifier.<br/>This field has to be used in case of future product orders issued via both Ordering ICD and Programming ICD [OR6].</p>                                                                                                                                                                                                                                                                                                                                                               |                  |              |
| sps:ID         | <p>Identifier for the feasibility study / tasking request.</p> <p>Type: xs:token</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | X                |              |

**Table 8-7: GetOptions element description.**

#### 8.1.3.2 GetOptions output message: GetOptionsResponse

The following figure provides a graphical representation of this element.

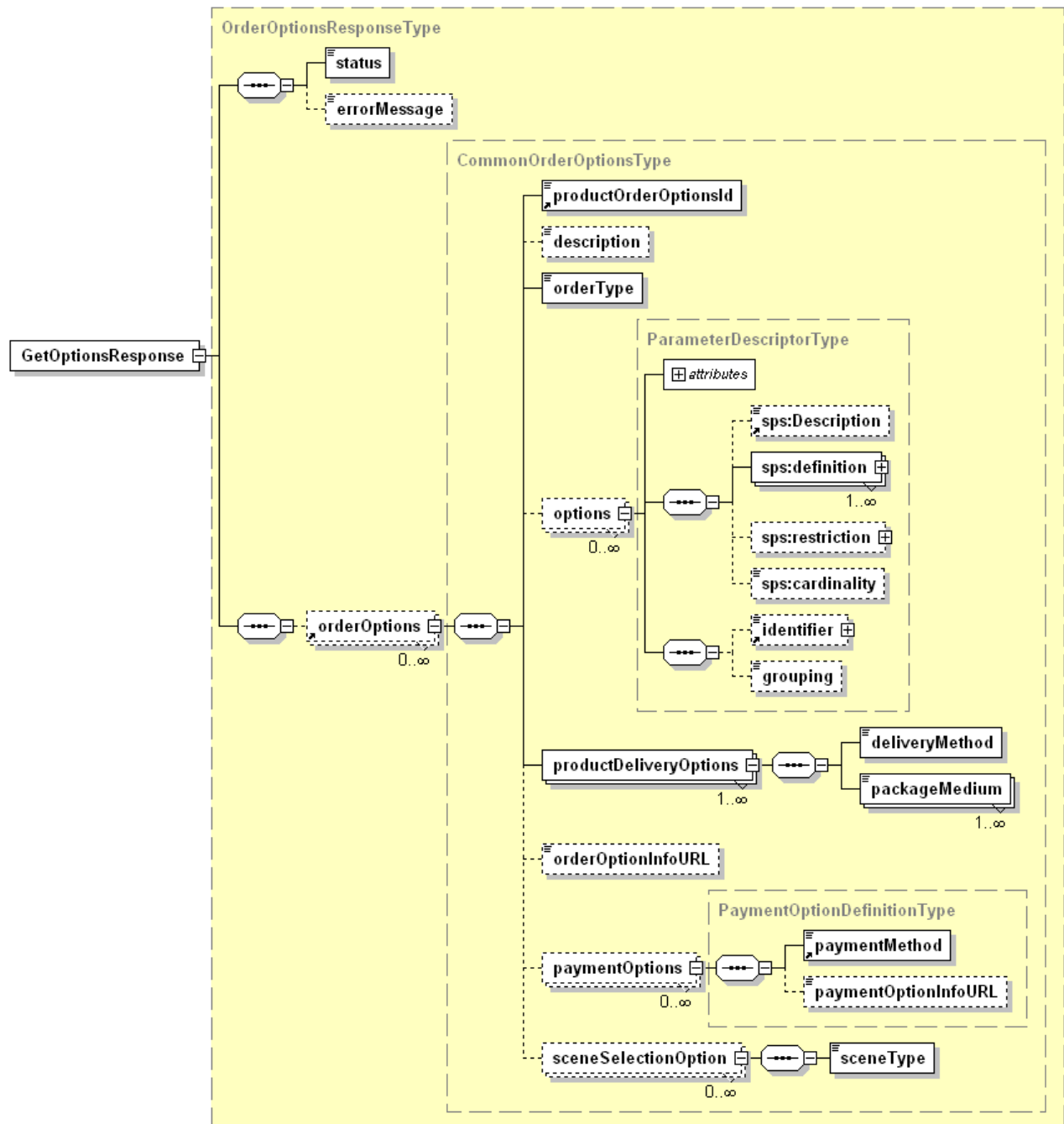


Figure 8-5: GetOptionsResponse diagram

| Tag Name           | Tag Description              |
|--------------------|------------------------------|
| GetOptionsResponse | GetOptions Response element. |

| Tag Name     | Tag Description                                                                                                                                                                                                                                                                                                                                                                                                                 |
|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| status       | Completion result of the operation: <ul style="list-style-type: none"> <li>○ success: operation successfully executed;</li> <li>○ partial: some error occurred during the processing of the request which lead to an incomplete response.</li> <li>○ failure: severe error occurred during the processing of the request. Request aborted.</li> </ul> <b>Type:</b> String<br><b>Permitted Values:</b> success, partial, failure |
| errorMessage | Error Message element. Set if status different from success.<br><br><b>Type:</b> Not empty string (max 255 chars).                                                                                                                                                                                                                                                                                                              |
| orderOptions | Order Options<br>Set if status different from failure.<br><br>Type: either CommonOrderOptionsType<br>(7.1.2.1 <b>Error! Reference source not found.</b> )                                                                                                                                                                                                                                                                       |

**Table 8-8: GetOptionsResponse description.**

### 8.1.3.3 Exceptions

In case of errors during the processing of the request the service shall return an ows: ExceptionReport according to the clause 8 of [NR9].

## 8.1.4 GetQuotation Operation

This operation allows getting the quotation of the order specified as input parameter.

Order quotation can be performed in different ways depending on client and server capabilities:

- Synchronous quotation

The server is able to provide the quotation in real time and then it is returned in the acknowledge message of GetQuotation operation.

Synchronous quotation is performed when:

- Capabilities/Content/GetQuotationCapabilities/synchronous is set to true;
- Asynchronous quotation with notification

The server supports asynchronous quotation and the client is able to work as a server for getting the notification carrying on the quotation.

The asynchronous quotation with notification is performed:

- Capabilities/Content/GetQuotationCapabilities/asynchronous is set to true;

- <wsa:ReplyTo> of GetQuotation message is set with the address where the client is listening to the notification and <wsa:MessageID> shall include a unique identifier of the request.

Then the quotation process is composed of the following interactions:

- The client calls GetQuotation of the server specifying its address in <wsa:ReplyTo> element;
  - The server will call GetQuotationResponse operation of the client for sending the produced quotation.
- Asynchronous quotation with monitoring

It is a variation of the previous one: the server support asynchronous quotation, but the client cannot work as a server. In this case the client will receive an id at the first call and then it has to call again GetQuotation providing the previously received id until the server will return the quotation in the acknowledge message of the operation.

The mechanism is performed when:

- Capabilities/Content/GetQuotationCapabilities/asynchronous is set to true;
  - <wsa:ReplyTo> of GetQuotation message is set with the anonymous address:  
<http://schemas.xmlsoap.org/ws/2003/03/addressing/role/anonymous>
- Off-line quotation

In this case the quotation is sent to the user via fax / mail to the address specified in the **invoiceAddress** element of the order specification.

Off line quotation is performed when:

- Capabilities/Content/GetQuotationCapabilities/off-line is set to true;
- <wsa:ReplyTo> is set with the anonymous address.
- No other mechanisms are possible.

#### 8.1.4.1 GetQuotation input message: GetQuotation

The type of GetQuotation is GetQuotationRequestType.

The following figure provides a graphical representation of this type.

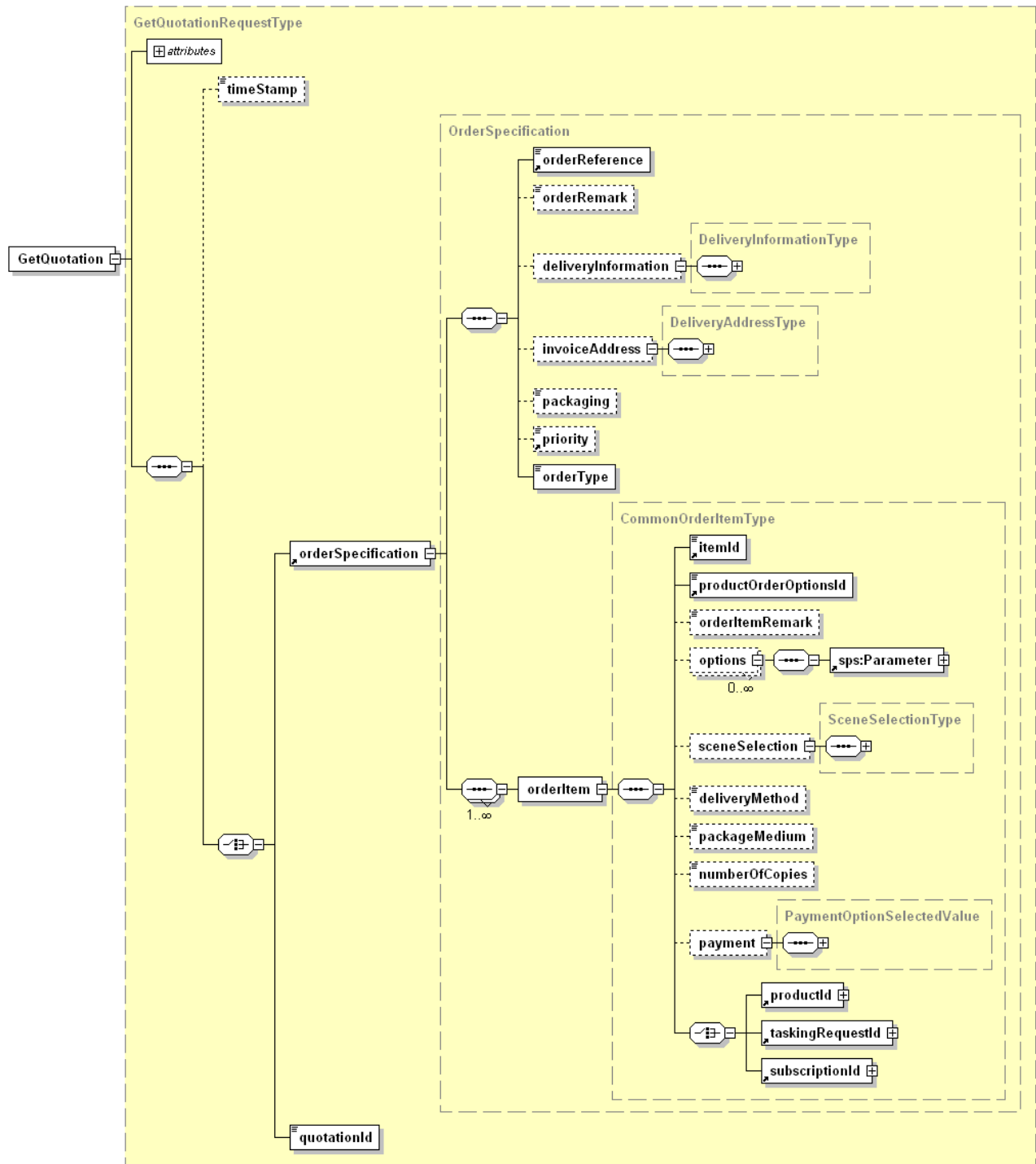


Figure 8-6: GetQuotation diagram.

| Tag Name           | Tag Description                                                                                                                                                                                                                                                                                                                                                              | Product Ordering | Subscription |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|--------------|
| GetQuotation       |                                                                                                                                                                                                                                                                                                                                                                              | X                | X            |
| service            | Service type identifier<br>Type: non-empty string<br>Allowed values: OS                                                                                                                                                                                                                                                                                                      |                  |              |
| version            | Specification version for operation<br>Type: non-empty string. Format: <x>.<y>.<z>                                                                                                                                                                                                                                                                                           |                  |              |
| timeStamp          | It is the time when the request has been issued.<br>Type: xs:DateTime                                                                                                                                                                                                                                                                                                        |                  |              |
| orderSpecification | Order Specification (§7.1.3):                                                                                                                                                                                                                                                                                                                                                |                  |              |
| quotationId        | This field is alternative to the previous one.<br>It is a quotation identifier returned by a previous call to GetQuotation operation.<br>In this case GetQuotation will return either the quotation of the order or again the same identifier.<br>This behaviour is supported when Capabilities/Content/GetQuotationCapabilities/monitoring is true.<br>Type QuotationIdType |                  |              |

**Table 8-9: GetQuotation description.**

#### 8.1.4.2 GetQuotation output message: GetQuotationAck

The following figure provides a graphical representation of this element.

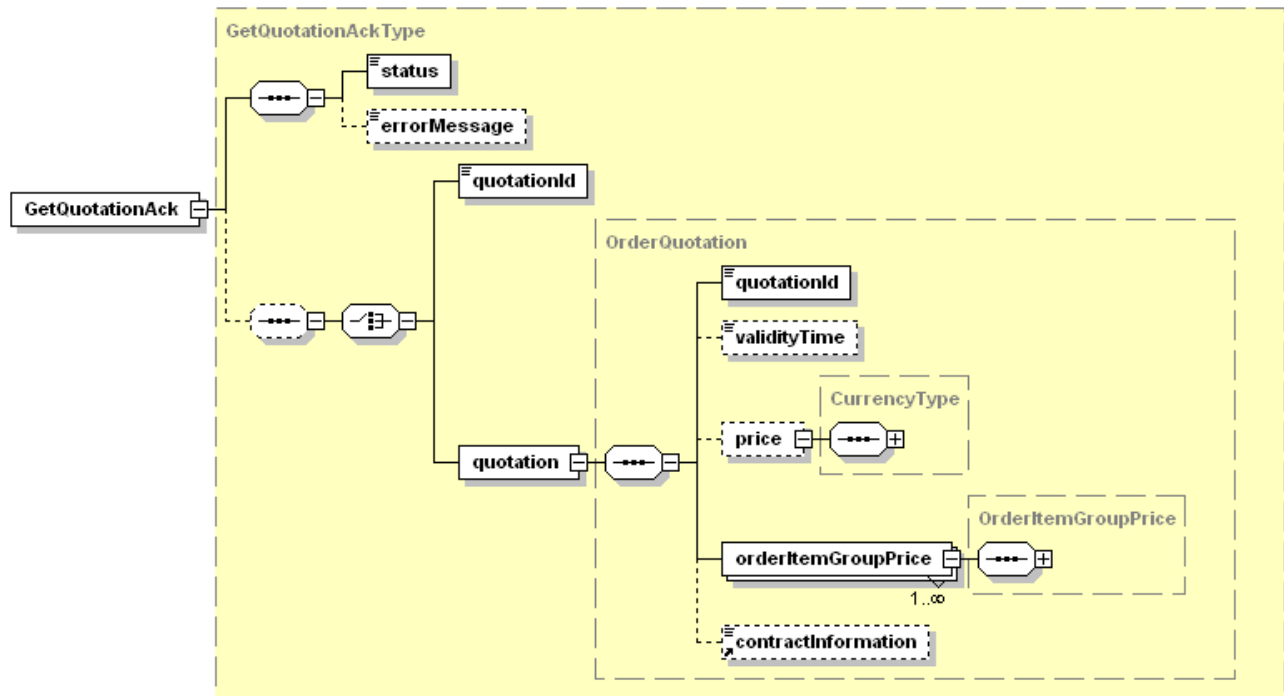


Figure 8-7: GetQuotationAck element diagram.

| Tag Name        | Tag Description                                                                                                                                                                                                                                                                                                                                                                                          |
|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| GetQuotationAck | Acknowledge to GetQuotation.                                                                                                                                                                                                                                                                                                                                                                             |
| status          | Completion result of the operation: <ul style="list-style-type: none"> <li>○ success: operation successfully executed;</li> <li>○ partial: non blocking errors occurred during processing of the request.</li> <li>○ failure: severe error occurred during the processing of the request. Request aborted.</li> </ul> <p><b>Type:</b> String<br/> <b>Permitted Values:</b> success, partial, failure</p> |
| errorMessage    | Error Message element. Set if status different from success. <p><b>Type:</b> Not empty string (max 255 chars).</p>                                                                                                                                                                                                                                                                                       |
| quotationId     | Identifier of the requested quotation. This field is set in case of asynchronous quotation. Set if status different from failure. <p><b>Type:</b> QuotationIdType</p>                                                                                                                                                                                                                                    |

| Tag Name  | Tag Description                                                                                                                                                                                                                                                 |
|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| quotation | This field is alternative to the previous one.<br>It specifies the quotation of the order.<br>It is set only in case of synchronous / asynchronous<br>with Monitoring quotation requests.<br>Set if status different from failure.<br><br>Type: OrderQuotation. |

**Table 8-10: GetQuotationAck description.**

#### 8.1.4.3 Exceptions

In case of errors during the processing of the request the service shall return an ows: ExceptionReport according to the clause 8 of [NR9].

#### **8.1.5 GetQuotationResponse: call-back for GetQuotation operation.**

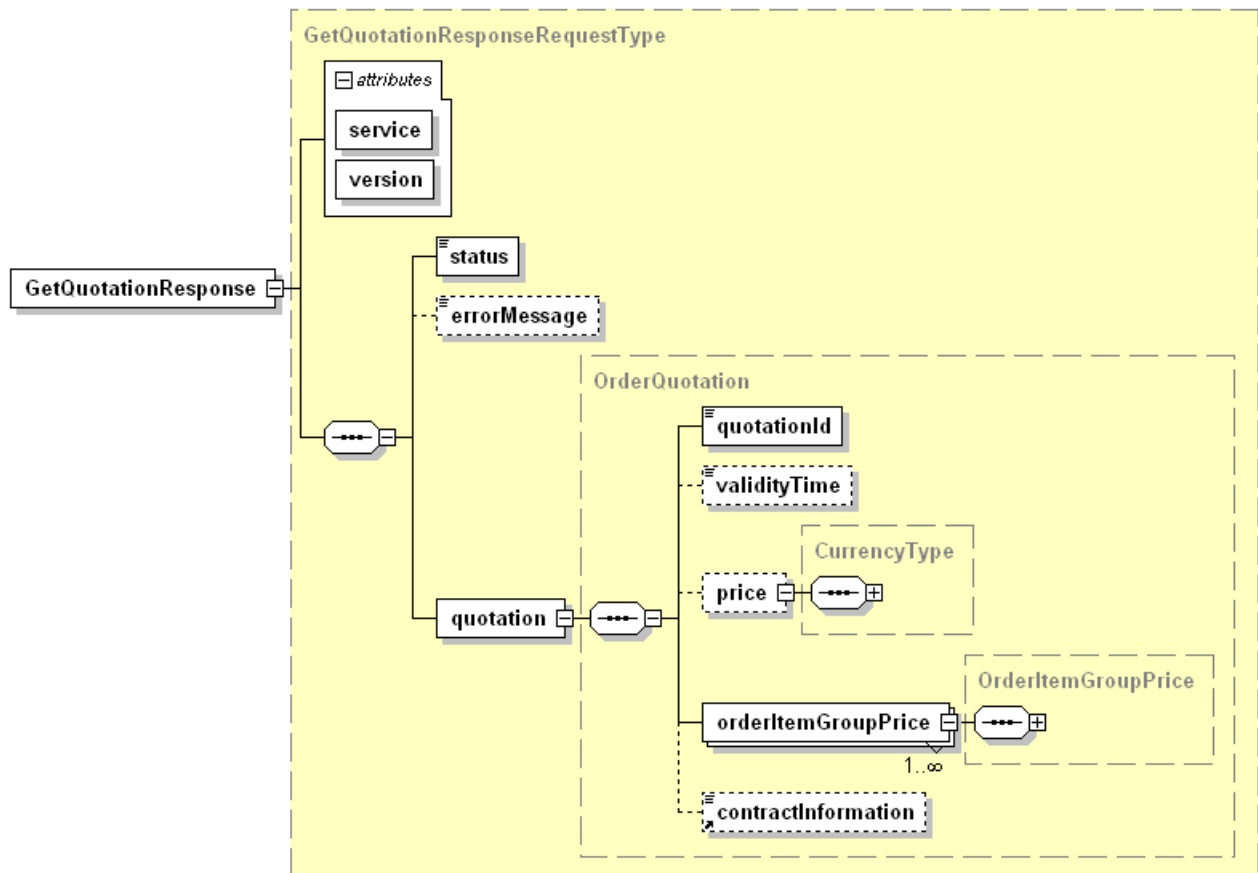
This operation has to be implemented by a client of Ordering service supporting asynchronous operations.

This operation allows the Ordering Service to send to the client the quotation of a specified order (8.1.4).

##### 8.1.5.1 GetQuotationResponse input message: GetQuotationResponse

The following figure provides a graphical representation of this element.





**Figure 8-8: GetQuotationResponse diagram.**

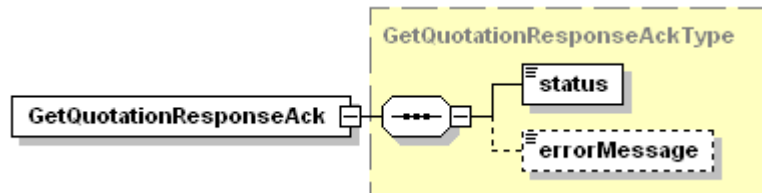
| Tag Name             | Tag Description                                                                                                                                                                                                                                                                                                                                               |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| GetQuotationResponse | Message sending the order quotation to the client.                                                                                                                                                                                                                                                                                                            |
| service              | Service type identifier<br>Type: non-empty string<br>Allowed values: OS                                                                                                                                                                                                                                                                                       |
| version              | Specification version for operation<br>Type: non-empty string. Format: <x>.<y>.<z>                                                                                                                                                                                                                                                                            |
| status               | Completion result of the quotation process: <ul style="list-style-type: none"> <li>○ success: operation successfully executed;</li> <li>○ partial: some items have not been quoted.</li> <li>○ failure: severe error occurred during the processing of the request. Quotation aborted.</li> </ul> Type: String<br>Permitted Values: success, partial, failure |

| Tag Name     | Tag Description                                                                                                             |
|--------------|-----------------------------------------------------------------------------------------------------------------------------|
| errorMessage | Error Message element. Set if status different from success.<br><br><b>Type:</b> Not empty string (max 255 chars).          |
| quotation    | It specifies the quotation of the order.<br>It is set if status different from failure.<br><br><b>Type:</b> OrderQuotation. |

**Table 8-11: GetQuotationResponse description.**

8.1.5.2 GetQuotationResponse output message: GetQuotationResponseAck

The following figure provides a graphical representation of this element.



**Figure 8-9: GetQuotationResponseAck diagram.**

| Tag Name                | Tag Description                                                                                                                                                                                                                                                                                                                                  |
|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| GetQuotationResponseAck | Acknowledge to GetQuotationResponse.                                                                                                                                                                                                                                                                                                             |
| status                  | Completion result of the operation: <ul style="list-style-type: none"> <li>○ success: operation successfully executed;</li> <li>○ partial: not applicable.</li> <li>○ failure: severe error occurred during the processing of the request. Request aborted.</li> </ul> <b>Type:</b> String<br><b>Permitted Values:</b> success, partial, failure |
| errorMessage            | Error Message element. Set if status different from success.<br><br><b>Type:</b> Not empty string (max 255 chars).                                                                                                                                                                                                                               |

**Table 8-12: GetQuotationResponseAck description.**

8.1.5.3 Exceptions

In case of errors during the processing of the request the service shall return an ows: ExceptionReport according to the clause 8 of [NR9].

### 8.1.6 Submit Operation

This operation allows either to submit an EO products order or to subscribe EO products.

The order to submit can be specified in two different ways:

- Via quotation identifier

When the server supports order quotation, then the order can be submitted specifying the quotation identifier received from the previously executed GetQuotation operation.

- Via order specification

When the server does not support quotation or the user does not need it then the order can be submitted directly specifying all the order parameters.

Submit is asynchronous operation, but allows the client to specify the amount of notification to receive:

- None: no asynchronous notification is sent to the client.

This kind of notification is activated by:

- setting Submit/statusNotification to None.

- Final: the client is notified when the whole order has been completed. This mechanism is possible only for clients working as server and implementing the SubmitResponse operation.

This kind of notification is activated by:

- setting Submit/statusNotification has to Final;
- setting <wsa:ReplyTo> of Submit message with the address where the client is listening to the notification and <wsa:MessageID> shall include a unique identifier of the request.

- Every change of the order status is notified to the client. This mechanism is possible only for clients working as server and implementing the SubmitResponse operation.

This kind of notification is activated by:

- setting Submit/statusNotification to All;
- setting <wsa:ReplyTo> of Submit message with the address where the client is listening to the notification and <wsa:MessageID> shall include a unique identifier of the request.

#### 8.1.6.1 Submit input message: Submit

The type of Submit is SubmitProductOrderRequestType.

The following figure provides a graphical representation of this type.

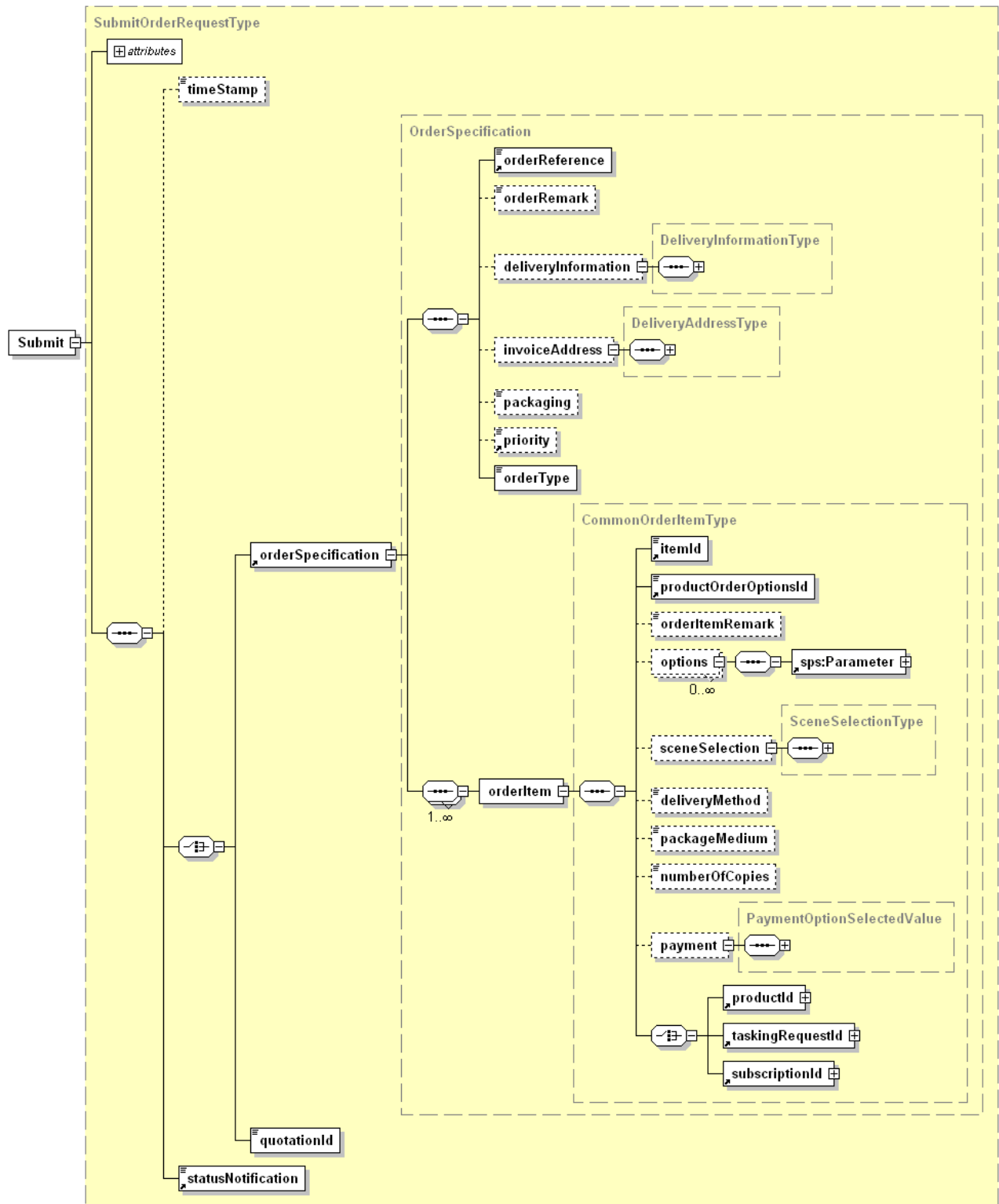


Figure 8-10: Submit diagram.

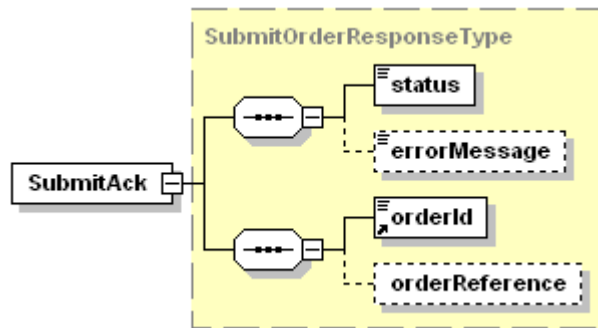
| Tag Name           | Tag Description                                                                                |
|--------------------|------------------------------------------------------------------------------------------------|
| Submit             | It contains the information to submit an order.                                                |
| service            | Service type identifier<br>Type: non-empty string<br>Allowed values: OS                        |
| version            | Specification version for operation<br>Type: non-empty string. Format: <x>.<y>.<z>             |
| timeStamp          | It is the time when the request has been issued.<br>Type: xs:DateTime                          |
| orderSpecification | Order Specification element.<br>Type: OrderSpecification Table 7-6                             |
| quotationId        | QuotationId returned by GetQuotation operation,<br>Type: QuotationIdType.                      |
| statusNotification | This element specifies how many status notifications are sent back to the client (see 8.1.1.1) |

**Table 8-13: Submit description.**

8.1.6.2 Submit output message: SubmitAck

The type of SubmitAck is SubmitProductOrderResponseType.

The following figure provides a graphical representation of this type.



**Figure 8-11: SubmitAck diagram**

| Tag Name  | Tag Description                     |
|-----------|-------------------------------------|
| SubmitAck | Acknowledgment to order submission. |

| Tag Name       | Tag Description                                                                                                                                                                                                                                                                                                                                                                                  |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| status         | Completion result of the operation: <ul style="list-style-type: none"> <li>○ success: operation successfully executed;</li> <li>○ partial: non blocking errors occurred during processing of the request.</li> <li>○ failure: severe error occurred during the processing of the request. Request aborted.</li> </ul> <b>Type:</b> String<br><b>Permitted Values:</b> success, partial, failure. |
| errorMessage   | Error Message element. Set if status different from success.<br><br><b>Type:</b> Not empty string (max 255 chars).                                                                                                                                                                                                                                                                               |
| orderId        | Order identification number unique for this Provider.<br>Set to "FAILURE" in case <b>status</b> field is set to failure<br><br><b>Type:</b> xs:anyURI                                                                                                                                                                                                                                            |
| orderReference | See Table 8-13                                                                                                                                                                                                                                                                                                                                                                                   |

**Table 8-14: SubmitAck description.**

#### 8.1.6.3 Exceptions

In case of errors during the processing of the request the service shall return an ows: ExceptionReport according to the clause 8 of [NR9].

#### 8.1.7 SubmitResponse: call-back for Submit operation.

This operation has to be implemented by a client of Ordering service supporting asynchronous operations.

This operation allows the Ordering Service to send to the client notifications about the progress of submitted orders.

##### 8.1.7.1 SubmitResponse input message: SubmitResponse

The following figure provides a graphical representation of this element.

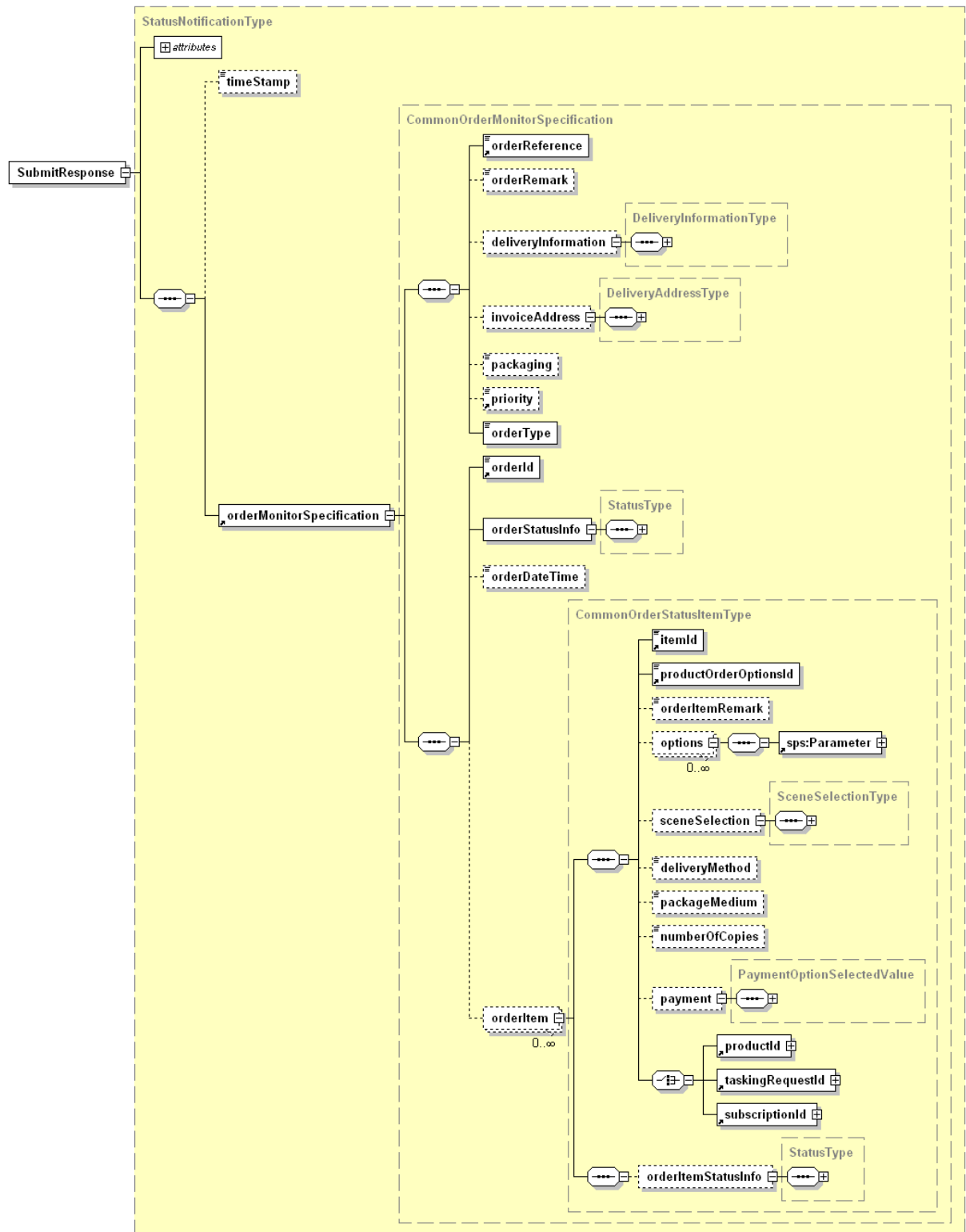


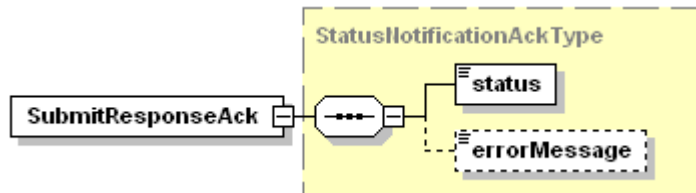
Figure 8-12: SubmitResponse diagram.

| Tag Name                  | Tag Description                                                                                                                                                                               |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SubmitResponse            |                                                                                                                                                                                               |
| service                   | Service type identifier<br>Type: non-empty string<br>Allowed values: OS                                                                                                                       |
| version                   | Specification version for operation<br>Type: non-empty string. Format: <x>.<y>.<z>                                                                                                            |
| timeStamp                 | It is the time when the request has been issued.<br>Type: xs:DateTime                                                                                                                         |
| orderMonitorSpecification | Order Monitor Specification element.<br>The content of this element correspond to that returned by GetStatus with <b>full</b> presentation.<br>Type: CommonOrderMonitorSpecification §7.1.6.1 |

**Table 8-15: SubmitResponse description.**

8.1.7.2 SubmitResponse output message: SubmitResponseAck

The following figure provides a graphical representation of this element.



**Figure 8-13: SubmitResponseAck diagram.**

| Tag Name          | Tag Description                                                                                                             |
|-------------------|-----------------------------------------------------------------------------------------------------------------------------|
| SubmitResponseAck | Acknowledge to SubmitResponse.                                                                                              |
| status            | Status of reception of SubmitResponse message.<br><b>Type:</b> String<br><b>Permitted Values:</b> success, partial, failure |
| errorMessage      | Error Message element.<br><b>Type:</b> Not empty string (max 255 chars).                                                    |

**Table 8-16: SubmitResponseAck description.**



### 8.1.7.3 Exceptions

In case of errors during the processing of the request the service shall return an ows: ExceptionReport according to the clause 8 of [NR9].

### 8.1.8 GetStatus Operation

This operation is in charge of returning the status of submitted orders.

It can be used in different ways:

- Order search

In this way the operation returns all orders matching the filtering criteria:

- Last update: all orders updated after the specified date are returned;
- Order status: all orders having the specified status are returned;
- Order retrieve

Only the order matching the order identifier is returned.

The amount of returned information depends on the presentation:

- brief: only order level information are returned (no order items returned);
- full: whole information returned.

Both presentation values can be used for order search and order retrieve, but for the sake of efficiency the following usage is recommended:

- brief presentation to be used for order search;
- full presentation to be used for getting all details of some of the orders returned by the order search.

#### 8.1.8.1 GetStatus input message: GetStatus

The type of GetStatus is GetStatusRequestType.

The following figure provides a graphical representation of this type.

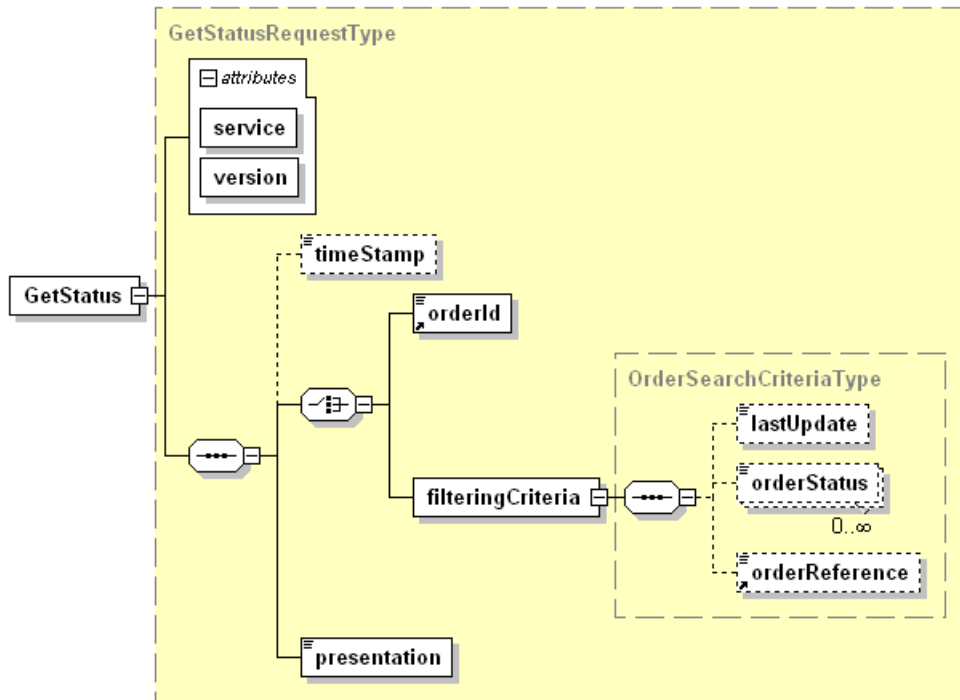


Figure 8-14: GetStatus diagram.

| Tag Name  | Tag Description                                                                    |
|-----------|------------------------------------------------------------------------------------|
| GetStatus | OrderMonitorRequest element.                                                       |
| service   | Service type identifier<br>Type: non-empty string<br>Allowed values: OS            |
| version   | Specification version for operation<br>Type: non-empty string. Format: <x>.<y>.<z> |
| timeStamp | It is the time when the request has been issued.<br>Type: xs:DateTime              |
| orderId   | Identifier of the order to retrieve.<br>See Table 8-14                             |

| Tag Name          | Tag Description                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| filteringCriteria | This element, alternative to the orderId, allows searching submitted orders.<br>Supported search criteria are: <ul style="list-style-type: none"> <li>○ Last update: only orders which status has been changed after the specified date and time are returned</li> <li>○ orderStatus: only orders having the specified statuses are returned.</li> <li>○ orderReference: only the orders having the specified order reference are returned.</li> </ul> |
| lastUpdate        | Last update of the order.<br><br>Type: Type: date in ISO 8601 format (CCYY-MM-DD)                                                                                                                                                                                                                                                                                                                                                                      |
| orderStatus       | Status of an order.<br><br><b>Type:</b> String (Table 7-16)                                                                                                                                                                                                                                                                                                                                                                                            |
| orderReference    | User defined string specified when the order has been submitted.<br><br>Type String                                                                                                                                                                                                                                                                                                                                                                    |
| presentation      | This element specifies the amount of information to be returned by the GetStatus operation: <ul style="list-style-type: none"> <li>○ brief: only information about the whole order are returned. No order items are returned.</li> <li>○ full: the whole order information are returned.</li> </ul> Type: enumerated string<br>Permitted values: brief, full                                                                                           |

**Table 8-17: GetStatus description.**

#### 8.1.8.2 GetStatus output message: GetStatusResponse

The type of GetStatusResponse is GetStatusResponseType.

The following figure provides a graphical representation of this type.



| Tag Name                  | Tag Description                                                                                                                                                                                                                                                                                                                                                                                                                                   | Product Ordering | Subscription |
|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|--------------|
| GetStatusResponse         | OrderMonitorResponse element for submitted order.                                                                                                                                                                                                                                                                                                                                                                                                 | X                | X            |
| status                    | <p>Completion result of the operation:</p> <ul style="list-style-type: none"> <li>○ success: operation successfully executed;</li> <li>○ partial: some error occurred during the processing of the request which lead to an incomplete response.</li> <li>○ failure: severe error occurred during the processing of the request. Request aborted.</li> </ul> <p><b>Type:</b> String<br/><b>Permitted Values:</b> success, failure, incomplete</p> |                  |              |
| errorMessage              | <p>Error Message element. Set if status different from success.</p> <p><b>Type:</b> Not empty string (max 255 chars).</p>                                                                                                                                                                                                                                                                                                                         |                  |              |
| orderMonitorSpecification | <p>Order Monitor Specification element.<br/>The amount of returned information depends on the presentation specified in the request message.<br/>Mandatory if status &lt;&gt; failure.</p> <p><b>Type:</b> CommonOrderMonitorSpecification 7.1.6.1</p>                                                                                                                                                                                            |                  |              |

**Table 8-18: GetStatusResponse description.**

### 8.1.8.3 Exceptions

In case of errors during the processing of the request the service shall return an ows: ExceptionReport according to the clause 8 of [NR9].

### 8.1.9 DescribeResultAccess operation

This operation is in charge of returning the URL of products ordered specifying on-line delivery.

8.1.9.1 DescribeResultAccess input message: DescribeResultAccess

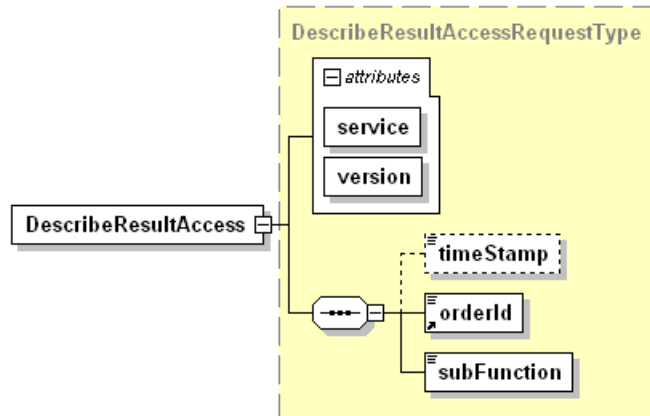


Figure 8-16: DescribeResultAccess diagram.

| Tag Name             | Tag Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DescribeResultAccess |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| service              | Service type identifier<br>Type: non-empty string<br>Allowed values: OS                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| version              | Specification version for operation<br>Type: non-empty string. Format: <x>.<y>.<z>                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| timeStamp            | It is the time when the request has been issued.<br>Type: xs:DateTime                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| orderId              | See Table 8-14                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| subFunction          | It is an enumerative string specifying the precise behaviour of the operation.<br>Permitted values: <ul style="list-style-type: none"> <li>allReady<br/>Flag indicating if all the currently completed items are to be retrieved.<br/>Calling DescribeResultAccess with this flag before at least one Item is in status “Completed” will return an empty list of URL(s).</li> <li>nextReady<br/>Flag indicating if all the completed items since last call (or from the beginning of the processing anyway) are to be retrieved.</li> </ul> |

Table 8-19: DescribeResultAccess description.

8.1.9.2 DescribeResultAccess output message: DescribeResultAccessResponse

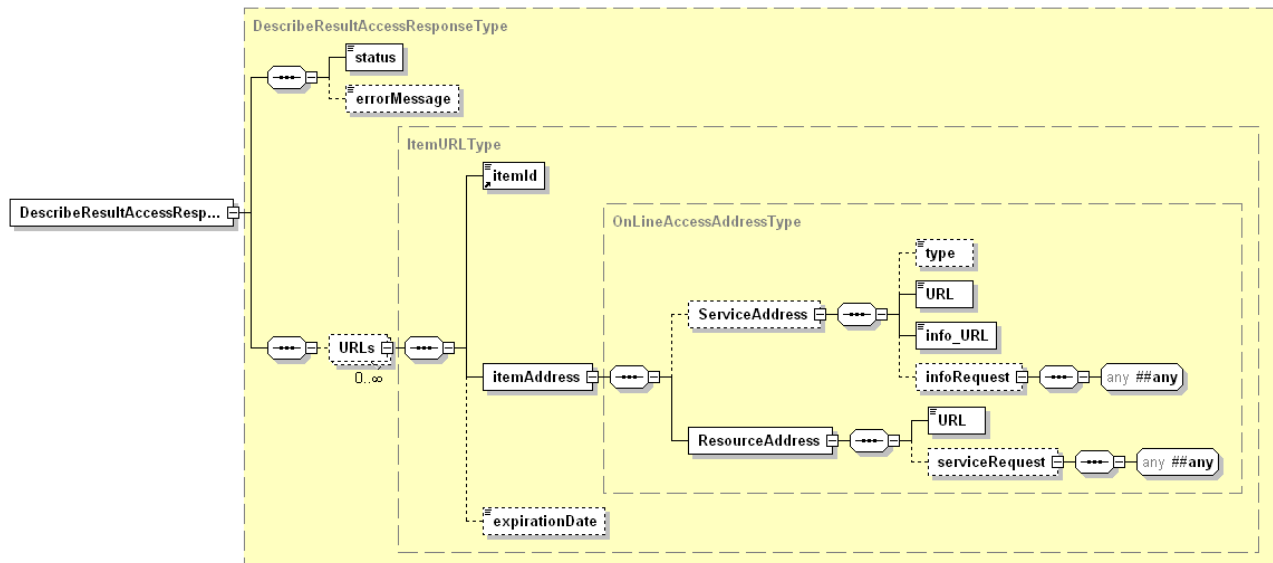


Figure 8-17: DescribeResultAccessResponse diagram.

| Tag Name                     | Tag Description                                                                                                                                                                                                                                                                                                                                                                                                                    |
|------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DescribeResultAccessResponse |                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| status                       | Completion result of the operation: <ul style="list-style-type: none"> <li>o success: operation successfully executed;</li> <li>o partial: some error occurred during the processing of the request which lead to an incomplete response.</li> <li>o failure: severe error occurred during the processing of the request. Request aborted.</li> </ul> <b>Type:</b> String<br><b>Permitted Values:</b> success, failure, incomplete |
| errorMessage                 | Error Message element. Set if status different from success.<br><b>Type:</b> Not empty string (max 255 chars).                                                                                                                                                                                                                                                                                                                     |
| URLs                         |                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| itemId                       | Order item identifier specified in the Submit request.<br><b>Type:</b> non-empty string (max 80 chars)                                                                                                                                                                                                                                                                                                                             |

| Tag Name       | Tag Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| itemAddress    | <p>This is the address of a single “item” to be retrieved; according to the settings of “packaging” in Submit an “item” might be the whole result of the Submit operation or a subset.</p> <p>If “allReady” flag is set to true, this list will contain the URL(s) of all the items currently available: if there are still items being processed these will NOT be available. According to the settings of packaging flag in Submit this might yield a single item or a bunch of items (packaging=None).</p> <p>If “nextReady” flag is set to true, this list will contain all the products available since last call (or from the beginning of the processing if called for the first time). According to the settings of packaging flag in Submit, this might yield a single item or a bunch of items (packaging=None).</p> <p><b>Type:</b> OnLineAccessAddressType.</p> |
| expirationDate | <p>Date and time at which the URL will expire.</p> <p>Type: xs:dateTime</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

**Table 8-20: DescribeResultAccessResponse description.**

| Tag Name                | Tag Description                                                                                                                                                                        |
|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| OnLineAccessAddressType | This type defines the full information for accessing an on-line ordered item. In particular it provides information about the ordered resource and also about the server that host it. |
| ServiceAddress          | <p>This element provides full information about the server hosting the order item.</p> <p>This element is useful e.g. in case of items ordered through a WCS / WMS / etc.</p>          |
| type                    | <p>This field specifies the type of the service hosting the ordered item e.g.: WCS, WMS, etc.</p> <p>Type String</p>                                                                   |
| URL                     | <p>URL of the server hosting the ordered item.</p> <p>Type: anyURI</p>                                                                                                                 |
| info_URL                | <p>URL of a document providing metadata about the server. In case of OGC Web Services, it refers to the GetCapabilities operation (HTTP GET, KVP binding).</p> <p>Type: anyURI</p>     |



| Tag Name        | Tag Description                                                                                                                                                                                                                                                       |
|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| infoRequest     | In case the server information are returned via HTTP POST request, this element specifies the message to send (e.g. in case the service supports GetCapabilities with SOAP binding, then the GetCapabilities XML message is specified in this tag)<br><br>Type: ##any |
| ResourceAddress | This element provides full information for accessing directly the ordered item.                                                                                                                                                                                       |
| URL             | URL of the ordered item.<br><br>Type: anyURI                                                                                                                                                                                                                          |
| serviceRequest  | In case the ordered item is accessible via HTTP POST protocol, this element specifies the message to send for getting the ordered item.<br><br>Type: ##any                                                                                                            |

**Table 8-21: DescribeResultAccessResponse description.**

### 8.1.9.3 Exceptions

In case of errors during the processing of the request the service shall return an ows: ExceptionReport according to the clause 8 of [NR9].

### 8.1.10 Cancel Operation

This operation allows cancelling a previously submitted order.

In case of EO product orders this operation triggers the cancellation of the order items; in case of subscriptions it means to unsubscribe from them.

The cancellation of product order items is not always possible, and then the operation returns the following results:

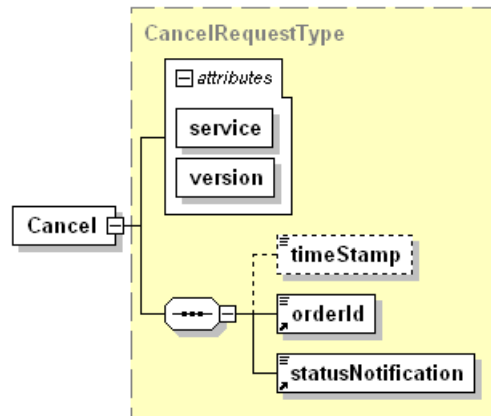
- “success”, if all items can be cancelled;
- “incomplete”, in case of partial cancellation
- “failure” in case the cancellation is not supported by the service or no item can be cancelled.

The cancellation is not a real-time process, and then the operation is asynchronous.

#### 8.1.10.1 Cancel input message: Cancel

The type of Cancel is CancelRequestType.

The following figure provides a graphical representation of this type.

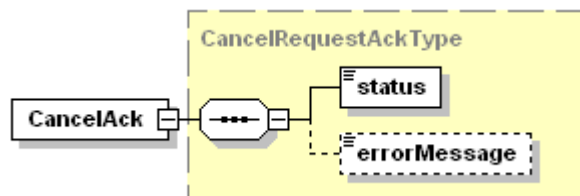


**Figure 8-18: Cancel diagram.**

| Tag Name           | Tag Description                                                                                |
|--------------------|------------------------------------------------------------------------------------------------|
| Cancel             | Cancel Request element.                                                                        |
| timeStamp          | It is the time when the request has been issued.<br>Type: xs:DateTime                          |
| orderId            | See Table 8-14                                                                                 |
| statusNotification | This element specifies how many status notifications are sent back to the client (see 8.1.1.1) |

**Table 8-22: Cancel description.**

8.1.10.2 Cancel output message: CancelAck



**Figure 8-19: CancelAck diagram.**

| Tag Name  | Tag Description                         |
|-----------|-----------------------------------------|
| CancelAck | Cancel acknowledge for submitted order. |

| Tag Name     | Tag Description                                                                                                                  |
|--------------|----------------------------------------------------------------------------------------------------------------------------------|
| status       | Completion result of the operation (see 8.1.10).<br><b>Type:</b> String<br><b>Permitted Values:</b> success, failure, incomplete |
| errorMessage | Error Message element.<br><b>Type:</b> Not empty string (max 255 chars).                                                         |

**Table 8-23: CancelAck description.**

### 8.1.10.3 Exceptions

In case of errors during the processing of the request the service shall return an ows: ExceptionReport according to the clause 8 of [NR9].

### 8.1.11 CancelResponse: call-back for Cancel operation.

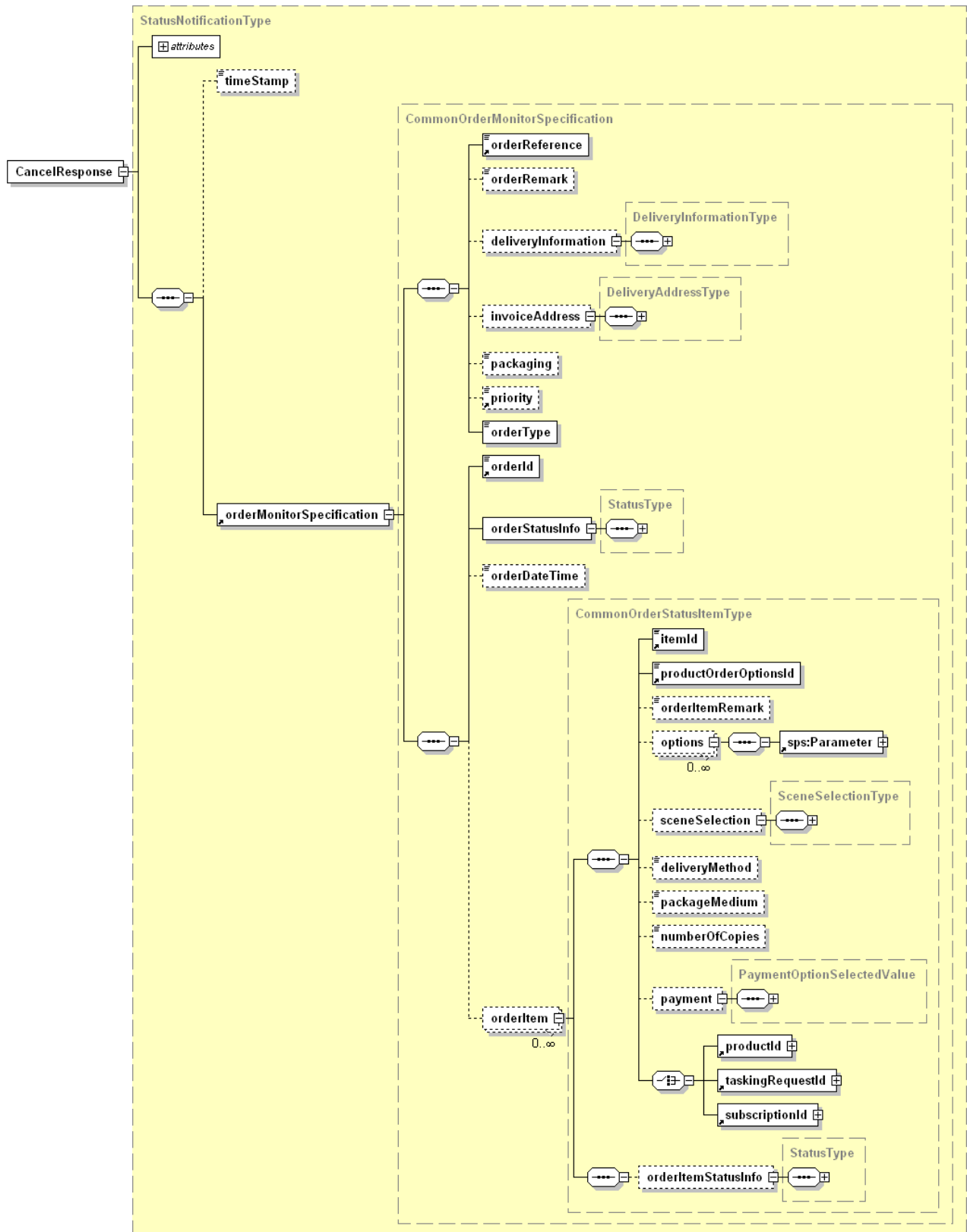
This operation has to be implemented by a client of Ordering service supporting asynchronous operations.

This operation allows the Ordering Service to send to the client notifications about the progress of cancellation of submitted orders.

#### 8.1.11.1 CancelResponse input message: CancelResponse

Because the UpdateStatus operation carries the same information returned by the GetStatus operation, then the UpdateStatus element uses the OrderMonitorSpecification, which is used into the GetStatusResponse element.

The following figure provides a graphical representation of this element.

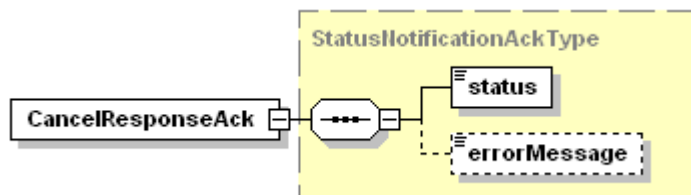


**Figure 8-20: CancelResponse diagram.**

| Tag Name                  | Tag Description                                                                                                                                                                              |
|---------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CancelResponse            |                                                                                                                                                                                              |
| service                   | Service type identifier<br>Type: non-empty string<br>Allowed values: OS                                                                                                                      |
| version                   | Specification version for operation<br>Type: non-empty string. Format: <x>.<y>.<z>                                                                                                           |
| timeStamp                 | It is the time when the request has been issued.<br>Type: xs:DateTime                                                                                                                        |
| orderMonitorSpecification | Order Monitor Specification element.<br>The content of this element correspond to that returned by GetStatus with <b>full</b> presentation.<br>Type: CommonOrderMonitorSpecification 7.1.6.1 |

**Table 8-24: CancelResponse description.**

8.1.11.2 CancelResponse output message: CancelResponseAck



**Figure 8-21: CancelResponseAck diagram.**

| Tag Name          | Tag Description                                                                                               |
|-------------------|---------------------------------------------------------------------------------------------------------------|
| CancelResponseAck |                                                                                                               |
| status            | Status of reception of CancelResponse message.<br>Type: String<br>Permitted Values: success, partial, failure |
| errorMessage      | Error Message element.<br>Type: Not empty string (max 255 chars).                                             |

**Table 8-25: CancelResponseAck description.**

### 8.1.11.3 Exceptions

In case of errors during the processing of the request the service shall return an ows: ExceptionReport according to the clause 8 of [NR9].

## 8.2 *Implementation guidance*

The following section gives developers help when setting up an order service instance that complies with this interface specification. Any information provided here is non-normative or is a detailing of former descriptions.

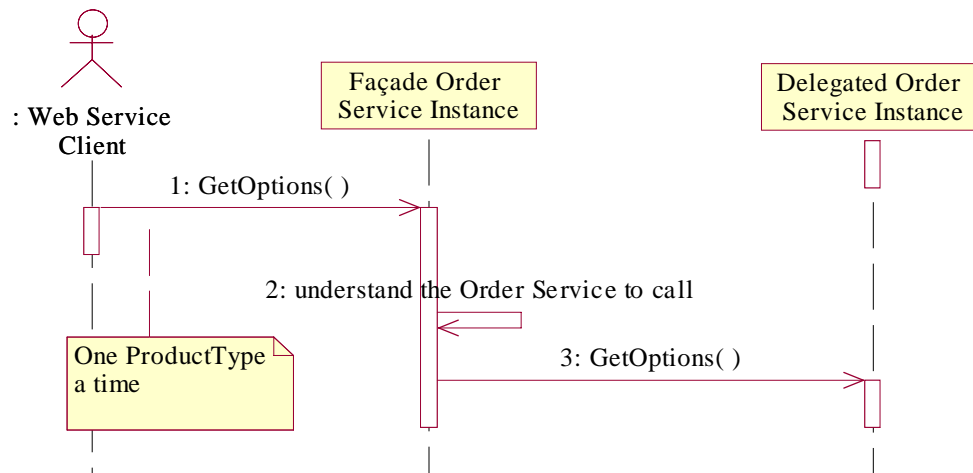
### 8.2.1 **Distributed Orders implementation**

The Order Service operations have been defined to support also a multi-provider scenario where the client is allowed to build and submit orders involving Earth Observation products managed by different providers (e.g. ESA Multi-Mission Ground Segment, SPOT and Radarsat-2 CSA Ground Segment). Then in this scenario we have different order service instances with different roles:

- **façade Order Service Instance**, which is the intermediary element in charge of providing the clients a transparent access to the different providers and to orchestrate the access to them.
- **Delegated Order Service Instances**, which are the services instances running in the provider's environment that are in charge of effectively carrying out the orders.

In the following sections the interactions occurring between the different service instances for executing the Order Service operations are described.

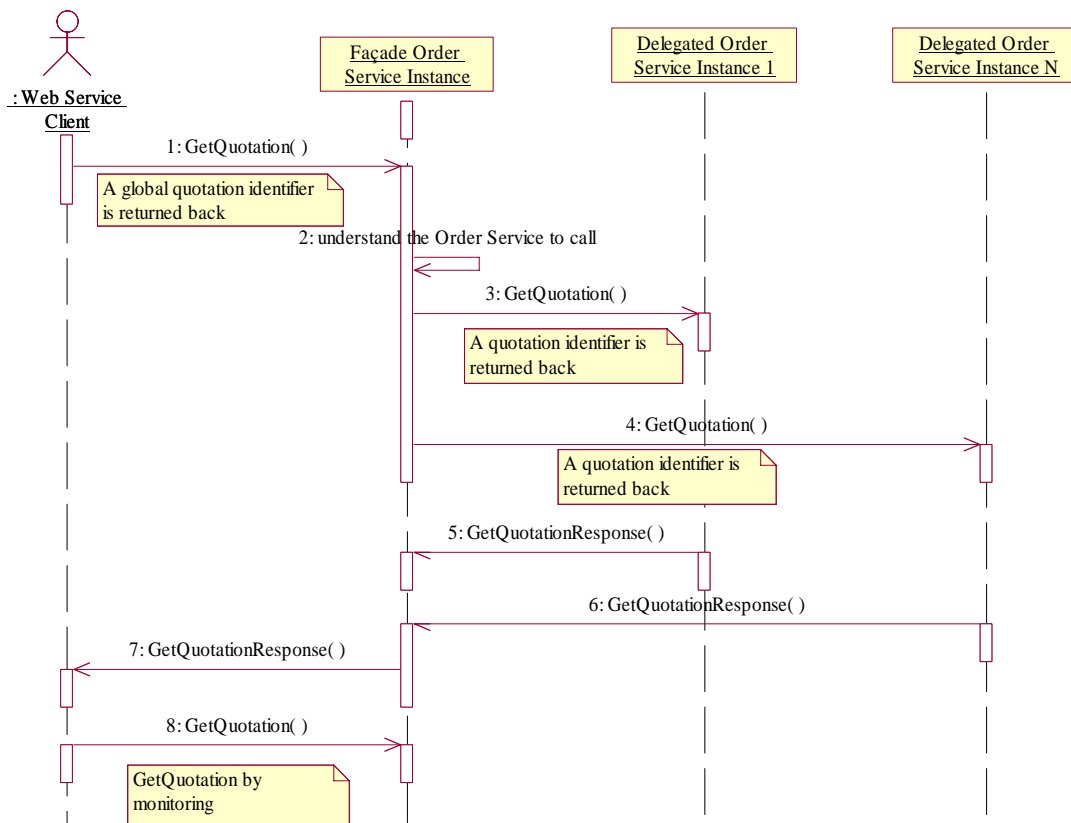
## 8.2.1.1 Get Options scenario

**Figure 8-22: Get Options Scenario.**

The order options are not centralised in the façade Order Service instance, but are distributed between the different providers.

- The client asks order options for **one** specific data set collection;
- The façade Order Service instance retrieves the information about the order services allowing to order that specific product / data set collection;
- The order options are asked to the right provider and then returned back to the client.

## 8.2.1.2 Get Quotation scenario



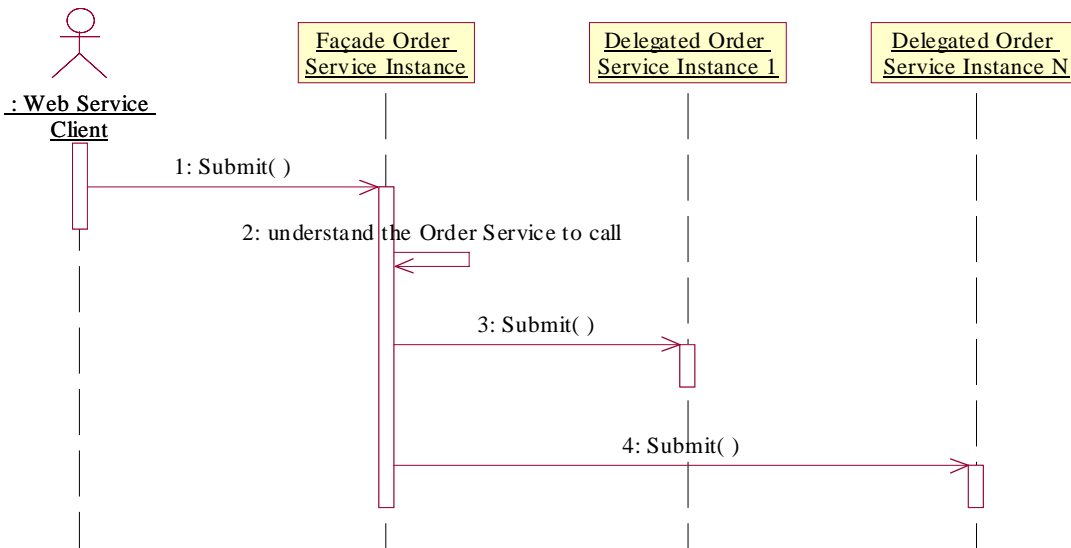
**Figure 8-23: Get Quotation Scenario.**

- The client has prepared the order with needed products and suitable options. Before submitting the order, it asks the quotation;
- The façade Order Service instance retrieves the information about the order services allowing to order that specific products / data set collections;
- The input order is split into different sub-orders each regrouping all items that can be managed by a single provider;
- The different identified providers are asked for the quotation of the different sub-orders. Each returns the identifier of the received quotation request. All the received quotation identifiers are stored locally and a global quotation id generated by the façade Order Service is sent to the client.
- The different providers send back the quotations to the façade calling the asynchronous call-back operation.
- When all quotations have been received, several options are possible:



- If the client specified asynchronous quotation, the client is notified by calling the call-back operation;
- If the client specified no notification, then the client has to monitor the status of the quotation by calling again GetQuotation operation specifying the quotationId received by the first call.

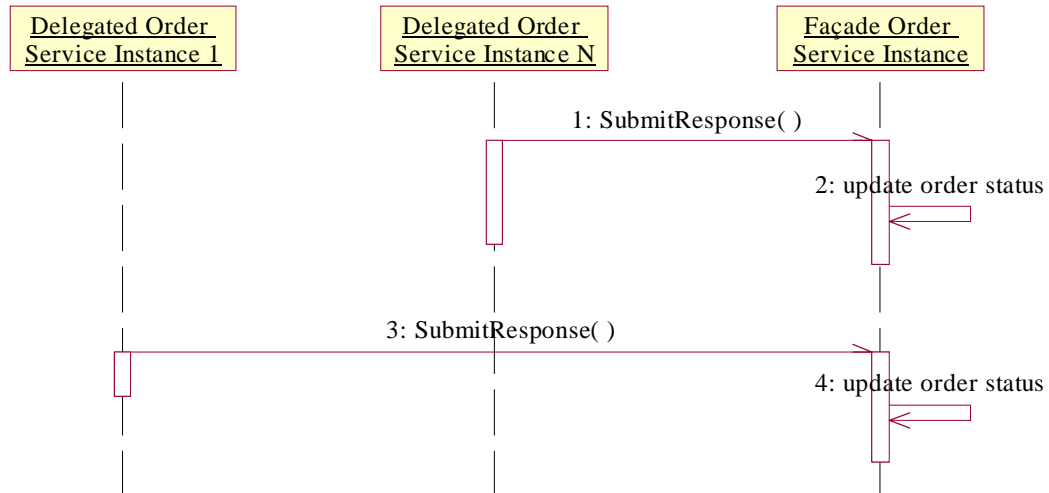
### 8.2.1.3 Submit scenario



**Figure 8-24: Submit Scenario.**

- The client has prepared an order for precisely identified items. Before submitting the order, it has also asked the quotation; then the order is submitted.
- In case the order is submitted providing the quotationId, the quotation id of the different sub-orders are retrieved from the local store and are used for actually submitting the sub-orders.
- In case the order is submitted specifying all parameters:
  - The façade Order Service instance retrieves the information about the order services allowing to order that specific product / subscription;
  - The input order is split into different sub-orders each regrouping all items that can be managed by a single provider;
  - The split sub-orders are sent to different providers identified in the second step.
- Each provider creates and returns back the identifier of the sub-order that has been submitted to it.
- The façade Order Service instance creates and returns back to the client the identifier of the whole order. Internally it has to manage the link between the “Client Order” and the different “Sub Orders”.

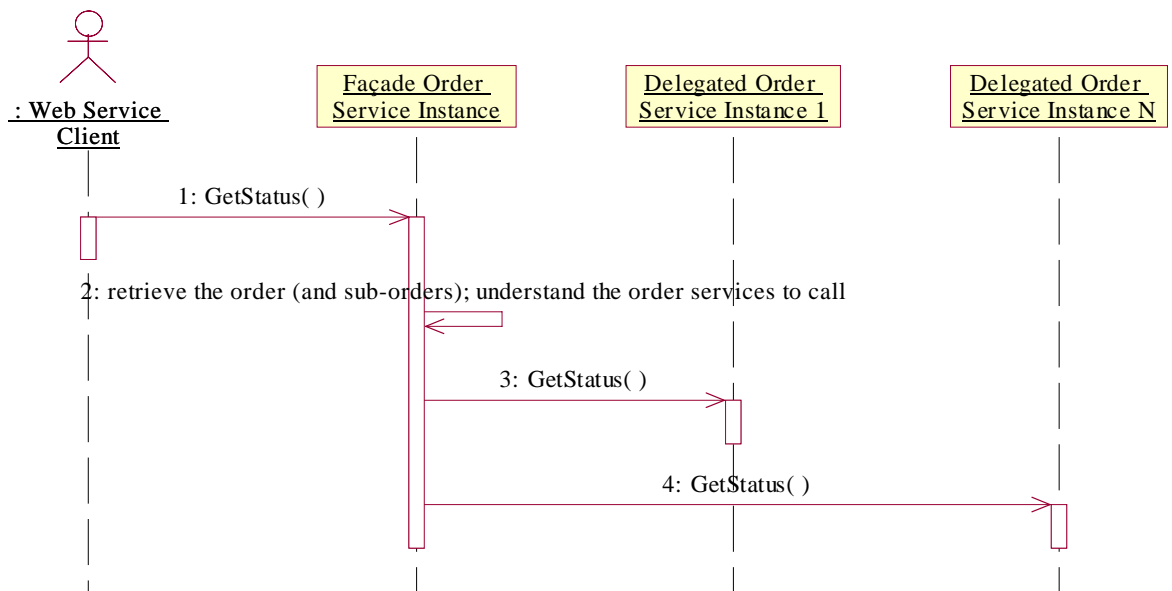
## 8.2.1.4 Status notification scenario



**Figure 8-25: Update Status Scenario.**

- Whenever a sub-order processed by a delegated order service instance changes its status and depending also on the values set in the statusNotification element, the façade Order Service Instance is notified through the SubmitResponse operation.
- The SubmitResponse is called specifying the identifier of the sub-order, then the façade Order Service Instance has to retrieve the original order submitted by the client and then has to update the status of items specified in the notification.

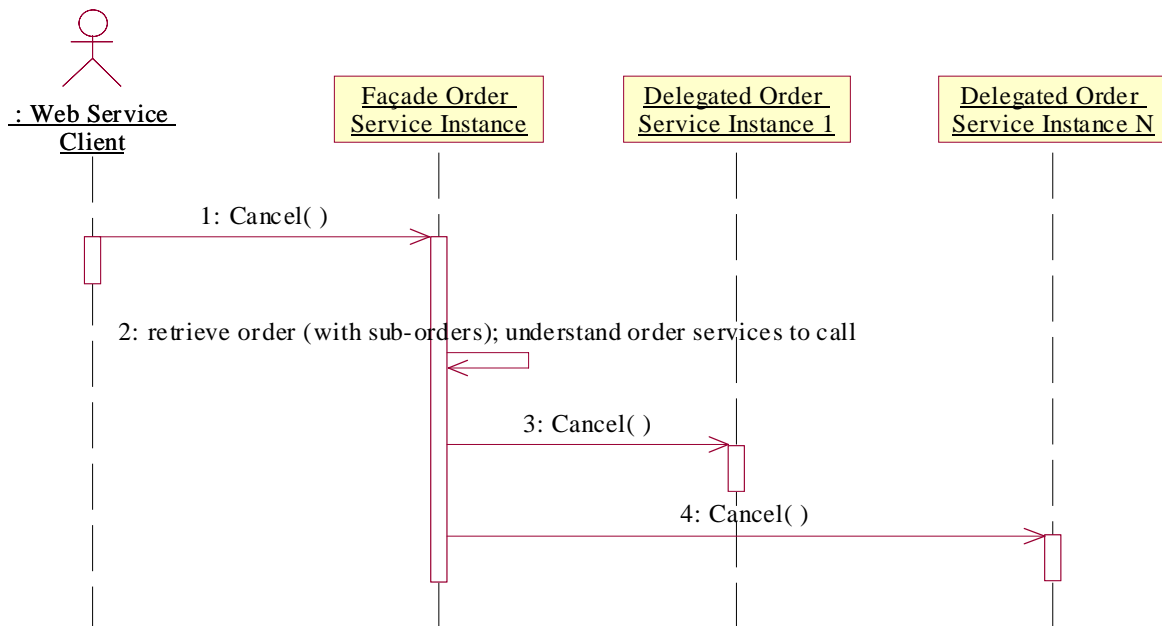
## 8.2.1.5 Get Status scenario



**Figure 8-26: Get Status Scenario.**

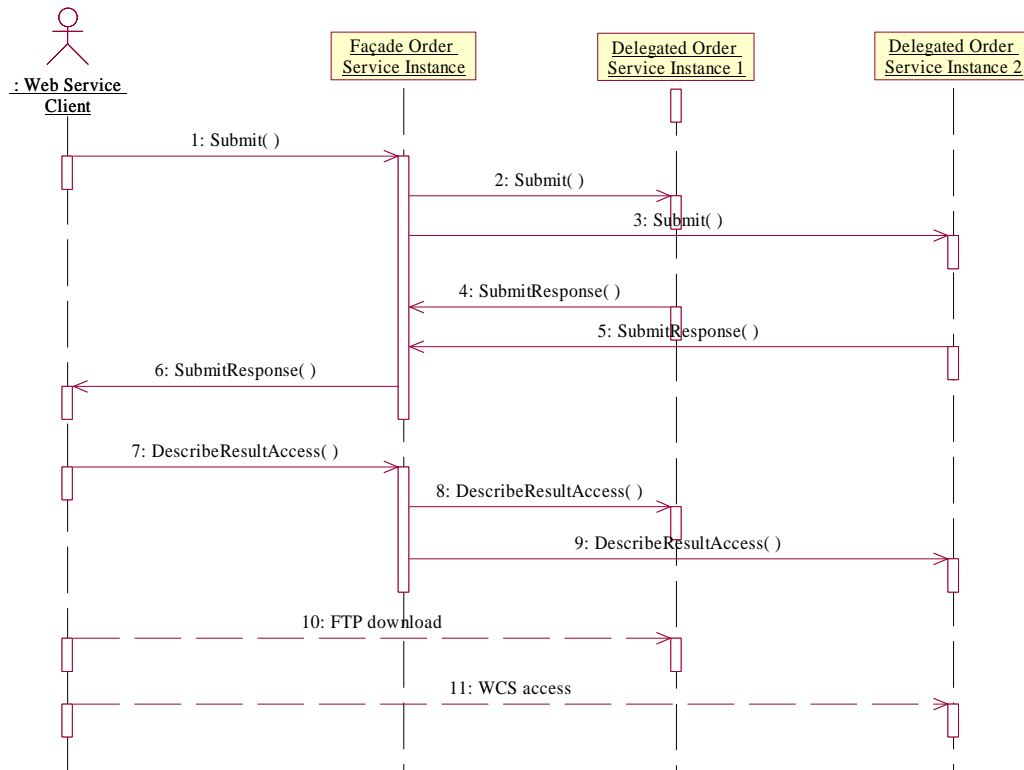
- The client asks the status of a previously submitted order.
- The façade Order Service instance retrieves the identifiers of the sub-orders linked to the order to get the status.
- For each sub-order a GetStatus request is sent to the corresponding provider. The received statuses are put together and sent back to the client.

## 8.2.1.6 Cancel scenario

**Figure 8-27: Cancel Scenario.**

- The client requires the cancellation of a specific order.
- The façade Order Service instance retrieves the identifiers of the sub-orders linked to the order to be cancelled.
- For each sub-order a cancellation request is sent to the corresponding provider.

## 8.2.1.7 Retrieval of on-line available data scenario



**Figure 8-28: Retrieval of on-line available data scenario**

- The initial steps for preparing the order are not considered in this scenario.
- An order with on-line delivery is prepared and submitted by the client asking final asynchronous notification.
- When all providers had made available the data the SubmitResponse of the façade is called.
- The façade notifies the client by calling the SubmitResponse operation of it.
- The client can access the data by calling the DescribeResultAccess operation.
- Depending on the selected delivery method, the client can download the data via FTP or can interact with it by using the WCS protocol, etc.

### 8.2.2 Semantic issues

None.

### 8.2.3 Technical issues

- SOAP: Only SOAP messaging (via HTTP/POST) with document/literal style has to be used. Messages must conform to SOAP 1.2 (<http://www.w3.org/TR/SOAP/>). The message payload will be in the body of the SOAP envelope.

### 8.2.4 Other Issues

- Order modification due to the delegated order services.

In some cases, the order services update the received orders. A possible example is the ESA Multi Mission Ground Segment, where the orders submitted by the users can be:

- re-shuffled, because internally the order is organized in deliveries and then all order items having the same delivery type are managed together.
- Updated, in case of problems on some ordered products, the order operator, upon agreement with the user, can replace them with possible alternatives.

Then, to manage these possible modifications performed by the delegated order service instances, the UpdateStatus operation should be allowed also to update orders.

- Order Options management.

The current approach is that order options are not centralized in the Façade Order Service Instance, and then the GetOptions request is forwarded to right Order Service instance owning the specified order options.

A better approach is the centralized management of data, because the order options, similarly to the collection and service metadata, is almost static data and then once the data is stored in a registry, the possible updates are very rare.

## APPENDIX A XML Schema definitions (Normative)

```
<?xml version="1.0" encoding="UTF-8"?>
```

```
<!-- :.xsd
```

```
Type :C Schema
```

```
:
:Order Schema
```

```
:
:Marchionni
:9.4 -->
```

```
<xs:schema xmlns="http://earth.esa.int/hma/ordering" xmlns:xs="http://www.w3.org/2001/XMLSchema"
xmlns:ows="http://www.opengis.net/ows" xmlns:gml="http://www.opengis.net/gml" xmlns:swe="http://www.opengis.net/swe/0.0"
xmlns:sps="http://www.opengis.net/sps/0" targetNamespace="http://earth.esa.int/hma/ordering" elementFormDefault="qualified"
attributeFormDefault="unqualified">
```

```
<xs:import namespace="http://www.opengis.net/swe/0.0" schemaLocation="..swe/sweCommon/0.0.0/swe.xsd"/>
```

```
<xs:import namespace="http://www.opengis.net/ows" schemaLocation="..ows/1.0.0/owsGetCapabilities.xsd"/>
```

```
<xs:import namespace="http://www.opengis.net/sps/0" schemaLocation="Order_spsCommon.xsd"/>
```

```
<xs:import namespace="http://www.opengis.net/gml" schemaLocation="..gml/3.1.1/base/gml.xsd"/>
```

```
<xs:import namespace="http://www.opengis.net/ows" schemaLocation="..ows/1.0.0/owsExceptionReport.xsd"/>
```

```
<!-- =====>
```

```
<!-- ===== Operations root element =====>
```

```
<!-- =====>
```

```
<xs:element name="GetCapabilities">
```

```
<xs:annotation>
```

allows a client to retrieve service metadata (capabilities XML) providing metadata for the specific Order server. In this XML encoding, no "request" parameter is included, since the element name specifies the specific operation. </xs:documentation>

```
</xs:annotation>
```

```
<xs:complexType>
```

```
<xs:complexContent>
```

```
<xs:extension base="ows:GetCapabilitiesType">
```

```
<xs:attribute name="service" type="ows:ServiceType" use="required" fixed="OS"/>
```

```
</xs:extension>
```

```
</xs:complexContent>
```

```
</xs:complexType>
```

```
</xs:element>
```

```
<xs:element name="Capabilities">
```

```
<xs:annotation>
```

<xs:documentation>XML encoded Order Service GetCapabilities operation response. This document provides clients with service metadata about a specific service instance. If the server does not implement the updateSequence parameter, the server shall always return the complete Capabilities document, without the updateSequence parameter. When the server implements the updateSequence parameter and the GetCapabilities operation request included the updateSequence parameter with the current value, the server shall return this element with only the "version" and "updateSequence" attributes. Otherwise, all optional elements shall be included or not depending on the actual value of the Sections parameter in the GetCapabilities operation request.

```
</xs:documentation>
```

```
</xs:annotation>
```

```
<xs:complexType>
```

```
<xs:complexContent>
```

```
<xs:extension base="ows:CapabilitiesBaseType">
```

```
<xs:sequence>
```

```
<xs:element name="Contents" type="OrderingServiceContentsType"
```

```
minOccurs="0"/>
```

```
</xs:sequence>
```

```
</xs:extension>
```

```
</xs:complexContent>
```

```
</xs:complexType>
```

```
</xs:element>
```

```
<xs:element name="GetOptions" type="OrderOptionsRequestType"/>
```

```
<xs:element name="GetOptionsResponse" type="OrderOptionsResponseType"/>
```

```
<xs:element name="GetQuotation" type="GetQuotationRequestType">
```

```
<xs:annotation>
```

```
<xs:documentation>GetQuotation operation - request message</xs:documentation>
```

```
</xs:annotation>
```

```
</xs:element>
```

```
<xs:element name="GetQuotationAck" type="GetQuotationAckType">
```

```
<xs:annotation>
```

```
<xs:documentation>GetQuotation operation - response message</xs:documentation>
```

```
</xs:annotation>
```

```

</xs:element>
<xs:element name="GetQuotationResponse" type="GetQuotationResponseRequestType">
  <xs:annotation>
    <xs:documentation>Async reply to GetQuotation - This message carries on the
quotation.</xs:documentation>
  </xs:annotation>
</xs:element>
<xs:element name="GetQuotationResponseAck" type="GetQuotationResponseAckType">
  <xs:annotation>
    <xs:documentation>Response to acknowledge the reception of quotation.</xs:documentation>
  </xs:annotation>
</xs:element>
<xs:element name="Submit" type="SubmitOrderRequestType"/>
<xs:element name="SubmitAck" type="SubmitOrderResponseType"/>
<xs:element name="SubmitResponse" type="StatusNotificationType"/>
<xs:element name="SubmitResponseAck" type="StatusNotificationAckType">
  <xs:annotation>
    <xs:documentation>Response to acknowledge the reception of order status
notification.</xs:documentation>
  </xs:annotation>
</xs:element>
<xs:element name="GetStatus" type="GetStatusRequestType"/>
<xs:element name="GetStatusResponse" type="GetStatusResponseType"/>
<xs:element name="DescribeResultAccess" type="DescribeResultAccessRequestType"/>
<xs:element name="DescribeResultAccessResponse" type="DescribeResultAccessResponseType"/>
<xs:element name="Cancel" type="CancelRequestType"/>
<xs:element name="CancelAck" type="CancelRequestAckType"/>
<xs:element name="CancelResponse" type="StatusNotificationType"/>
<xs:element name="CancelResponseAck" type="StatusNotificationAckType"/>
<!-- ===== Elements Definition Section ===== -->
<!-- ===== -->
<!-- ===== -->
<xs:element name="orderId" type="xs:anyURI"/>
<xs:element name="priority" type="PriorityType"/>
<xs:element name="statusNotification">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:enumeration value="None"/>
      <xs:enumeration value="Final"/>
      <xs:enumeration value="All"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="collectionId">
  <xs:annotation>
    <xs:documentation>ESA GS: Provider.Facility.CollectionId --> 62 char</xs:documentation>
  </xs:annotation>
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:minLength value="1"/>
      <xs:maxLength value="62"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<!-- ===== ComplexType Definition Section ===== -->
<!-- ===== -->
<!-- ===== -->
<xs:complexType name="OrderRequestBaseType">
  <xs:annotation>
    <xs:documentation>XML encoded SPS operation request base, for all operations except Get Capabilities.
In this XML encoding, no "request" parameter is included, since the element name specifies the specific operation.</xs:documentation>
  </xs:annotation>
  <xs:attribute name="service" type="xs:string" use="required" fixed="OS">
    <xs:annotation>
      <xs:documentation>Service type identifier.</xs:documentation>
    </xs:annotation>
  </xs:attribute>
  <xs:attribute name="version" use="required">
    <xs:annotation>

```



```

        <xs:documentation>Specification version for SPS version and operation.</xs:documentation>
      </xs:annotation>
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:maxLength value="5"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:attribute>
</xs:complexType>
<xs:complexType name="OrderResponseBaseType">
  <xs:annotation>
    <xs:documentation>Base type for all Ordering Service operation responses.</xs:documentation>
  </xs:annotation>
  <xs:sequence>
    <xs:element name="status" type="OrderResponseStatusType" nillable="false"/>
    <xs:element name="errorMessage" minOccurs="0">
      <xs:annotation>
        <xs:documentation>This field is set when status element is different from success. It
provides some information about the occurred problem.</xs:documentation>
      </xs:annotation>
      <xs:simpleType>
        <xs:restriction base="xs:string">
          <xs:maxLength value="255"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="OrderingServiceContentsType">
  <xs:sequence>
    <xs:element name="GetQuotationCapabilities">
      <xs:annotation>
        <xs:documentation>This element specifies if and how the order quotation is
supported: synchronously, asynchronously, synchronous with polling.</xs:documentation>
      </xs:annotation>
      <xs:complexType>
        <xs:attribute name="supported" type="xs:boolean" use="required"/>
        <xs:attribute name="synchronous" type="xs:boolean" use="required"/>
        <xs:attribute name="asynchronous" type="xs:boolean" use="required"/>
        <xs:attribute name="monitoring" type="xs:boolean" use="required"/>
        <xs:attribute name="off-line" type="xs:boolean" use="required"/>
      </xs:complexType>
    </xs:element>
    <xs:element name="FutureProductsOrdering">
      <xs:annotation>
        <xs:documentation>Specifies whether the Ordering Services supports future products
ordering and the corresponding SPS URL.</xs:documentation>
      </xs:annotation>
      <xs:complexType>
        <xs:attribute name="supported" type="xs:boolean" use="required"/>
        <xs:attribute name="SPS_URL" type="xs:anyURI"/>
      </xs:complexType>
    </xs:element>
    <xs:element name="SupportedCollections">
      <xs:annotation>
        <xs:documentation>List of collections allowed for ordering.</xs:documentation>
      </xs:annotation>
      <xs:complexType>
        <xs:sequence>
          <xs:element ref="collectionId" minOccurs="0" maxOccurs="unbounded"/>
        </xs:sequence>
      </xs:complexType>
    </xs:element>
  </xs:sequence>
</xs:complexType>
<!-- ===== -->
<!-- ===== Order Submission ===== -->
<!-- ===== -->
<xs:complexType name="SubmitOrderRequestType">

```

```

<xs:complexContent>
  <xs:extension base="OrderRequestBaseType">
    <xs:sequence>
      <xs:element name="timeStamp" type="xs:dateTime" minOccurs="0"/>
      <xs:choice>
        <xs:element ref="orderSpecification"/>
        <xs:element name="quotationId" type="QuotationIdType"/>
      </xs:choice>
      <xs:element ref="statusNotification">
        <xs:annotation>
          <xs:documentation>This element specifies how many status
notifications are sent back to the caller of the Submit operation.</xs:documentation>
        </xs:annotation>
      </xs:element>
    </xs:sequence>
  </xs:extension>
</xs:complexContent>
</xs:complexType>
<xs:complexType name="SubmitOrderResponseType">
  <xs:complexContent>
    <xs:extension base="OrderResponseBaseType">
      <xs:sequence>
        <xs:element ref="orderId"/>
        <xs:element name="orderReference" minOccurs="0"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="OrderSpecification">
  <xs:complexContent>
    <xs:extension base="CommonOrderSpecification">
      <xs:sequence maxOccurs="unbounded">
        <xs:element name="orderItem" type="CommonOrderItemType"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="CommonOrderSpecification">
  <xs:sequence>
    <xs:element ref="orderReference"/>
    <xs:element name="orderRemark" minOccurs="0">
      <xs:simpleType>
        <xs:restriction base="xs:string">
          <xs:maxLength value="255"/>
          <xs:minLength value="1"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
    <xs:element name="deliveryInformation" type="DeliveryInformationType" minOccurs="0"/>
    <xs:element name="invoiceAddress" type="DeliveryAddressType" minOccurs="0">
      <xs:annotation>
        <xs:documentation>Address for sending the invoice.</xs:documentation>
      </xs:annotation>
    </xs:element>
    <xs:element name="packaging" type="EnumPackagingType" nillable="true" minOccurs="0"/>
    <xs:element ref="priority" minOccurs="0"/>
    <xs:element name="orderType" type="EnumOrderType"/>
  </xs:sequence>
</xs:complexType>
<xs:element name="orderSpecification" type="OrderSpecification" abstract="false"/>
<xs:complexType name="CreditCardInfoType">
  <xs:sequence>
    <xs:element name="creditCardInstitute"/>
    <xs:element name="nameOnCard"/>
    <xs:element name="cardNumber"/>
    <xs:element name="expirationDate"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="PaymentOptionSelectedValue">

```

```

    <xs:sequence>
      <xs:element ref="paymentMethod"/>
      <xs:choice>
        <xs:element name="orderAccount" minOccurs="0">
          <xs:simpleType>
            <xs:restriction base="xs:string">
              <xs:minLength value="1"/>
              <xs:maxLength value="20"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
        <xs:element name="creditCardInfo" type="xs:string" minOccurs="0">
          <xs:annotation>
            <xs:documentation>This element should be managed in more secure
way</xs:documentation>
          </xs:annotation>
        </xs:element>
      </xs:choice>
    </xs:sequence>
  </xs:complexType>
  <!-- ===== Order Monitoring ===== -->
  <!-- ===== -->
  <xs:complexType name="GetStatusRequestType">
    <xs:complexContent>
      <xs:extension base="OrderRequestBaseType">
        <xs:sequence>
          <xs:element name="timeStamp" type="xs:dateTime" minOccurs="0"/>
          <xs:choice>
            <xs:element ref="orderId"/>
            <xs:element name="filteringCriteria" type="OrderSearchCriteriaType"/>
          </xs:choice>
          <xs:element name="presentation" type="PresentationType"/>
        </xs:sequence>
      </xs:extension>
    </xs:complexContent>
  </xs:complexType>
  <xs:complexType name="GetStatusResponseType">
    <xs:complexContent>
      <xs:extension base="OrderResponseBaseType">
        <xs:sequence>
          <xs:element ref="orderMonitorSpecification" minOccurs="0"
maxOccurs="unbounded"/>
        </xs:sequence>
      </xs:extension>
    </xs:complexContent>
  </xs:complexType>
  <xs:complexType name="CommonOrderMonitorSpecification">
    <xs:complexContent>
      <xs:extension base="CommonOrderSpecification">
        <xs:sequence>
          <xs:element ref="orderId"/>
          <xs:element name="orderStatusInfo" type="StatusType"/>
          <xs:element name="orderDateTime" type="xs:dateTime" minOccurs="0"/>
          <xs:element name="orderItem" type="CommonOrderStatusItemType" minOccurs="0"
maxOccurs="unbounded">
            <xs:annotation>
              <xs:documentation>The orderItem has been defined optional in
order to perform GetStatus request with brief presentation. Of course orders without order items cannot be
submitted.</xs:documentation>
            </xs:annotation>
          </xs:element>
        </xs:sequence>
      </xs:extension>
    </xs:complexContent>
  </xs:complexType>
  <xs:element name="orderMonitorSpecification" type="CommonOrderMonitorSpecification" abstract="false"/>
  <xs:complexType name="OrderSearchCriteriaType">
    <xs:sequence>

```

```

        <xs:element name="lastUpdate" type="DateTimeTypes" minOccurs="0"/>
        <xs:element name="orderStatus" type="EnumStatusType" minOccurs="0" maxOccurs="unbounded"/>
        <xs:element ref="orderReference" minOccurs="0"/>
    </xs:sequence>
</xs:complexType>
<!-- ===== Order Item ===== -->
<!-- ===== -->
<xs:complexType name="CommonOrderItemType">
    <xs:sequence>
        <xs:element ref="itemId"/>
        <xs:element ref="productOrderOptionsId"/>
        <xs:element name="orderItemRemark" minOccurs="0">
            <xs:simpleType>
                <xs:restriction base="xs:string">
                    <xs:maxLength value="255"/>
                </xs:restriction>
            </xs:simpleType>
        </xs:element>
        <xs:element name="options" minOccurs="0" maxOccurs="unbounded">
            <xs:complexType>
                <xs:sequence>
                    <xs:element ref="sps:Parameter"/>
                </xs:sequence>
            </xs:complexType>
        </xs:element>
        <xs:element name="sceneSelection" type="SceneSelectionType" minOccurs="0"/>
        <xs:element name="deliveryMethod" type="DeliveryMethodType" minOccurs="0"/>
        <xs:element name="packageMedium" type="PackageMedium" minOccurs="0"/>
        <xs:element name="numberOfCopies" type="xs:int" minOccurs="0">
            <xs:annotation>
                <xs:documentation>In case of mail delivery, the number of copies to be delivered can
be specified.</xs:documentation>
            </xs:annotation>
        </xs:element>
        <xs:element name="payment" type="PaymentOptionSelectedValue" minOccurs="0"/>
    </xs:choice>
        <xs:element ref="productId"/>
        <xs:element ref="taskingRequestId"/>
        <xs:element ref="subscriptionId"/>
    </xs:choice>
</xs:sequence>
</xs:complexType>
<xs:complexType name="OrderItemIdType" abstract="false">
    <xs:annotation>
        <xs:documentation>Root type of the hierarchy of order item identifiers</xs:documentation>
    </xs:annotation>
</xs:complexType>
<xs:complexType name="ProductIdType">
    <xs:annotation>
        <xs:documentation>Identifier of catalogued product</xs:documentation>
    </xs:annotation>
    <xs:complexContent>
        <xs:extension base="OrderItemIdType">
            <xs:sequence>
                <xs:element ref="identifier"/>
                <xs:element ref="collectionId" minOccurs="0"/>
            </xs:sequence>
        </xs:extension>
    </xs:complexContent>
</xs:complexType>
<xs:element name="productId" type="ProductIdType"/>
<xs:complexType name="SubscriptionIdType">
    <xs:annotation>
        <xs:documentation>Identifier of subscription</xs:documentation>
    </xs:annotation>
    <xs:complexContent>
        <xs:extension base="OrderItemIdType">
            <xs:sequence>

```

```

                <xs:element ref="collectionId"/>
            </xs:sequence>
        </xs:extension>
    </xs:complexContent>
</xs:complexType>
<xs:complexType name="TaskingRequestIdType">
    <xs:complexContent>
        <xs:extension base="OrderItemIdType">
            <xs:sequence>
                <xs:element ref="sps:ID"/>
            </xs:sequence>
        </xs:extension>
    </xs:complexContent>
</xs:complexType>
<xs:element name="taskingRequestId" type="TaskingRequestIdType"/>
<xs:element name="subscriptionId" type="SubscriptionIdType"/>
<!-- ===== -->
<!-- ===== Order Item Monitor ===== -->
<!-- ===== -->
<xs:complexType name="CommonOrderStatusItemType">
    <xs:complexContent>
        <xs:extension base="CommonOrderItemType">
            <xs:sequence>
                <xs:element name="orderItemStatusInfo" type="StatusType" minOccurs="0"/>
            </xs:sequence>
        </xs:extension>
    </xs:complexContent>
</xs:complexType>
<!-- ===== -->
<!-- ===== Order Options Definitions ===== -->
<!-- ===== -->
<xs:simpleType name="PackageMedium">
    <xs:restriction base="xs:string">
        <xs:enumeration value="NTP"/>
        <xs:enumeration value="DAT"/>
        <xs:enumeration value="Exabyte"/>
        <xs:enumeration value="CD-ROM"/>
        <xs:enumeration value="DLT"/>
        <xs:enumeration value="D1"/>
        <xs:enumeration value="DVD"/>
        <xs:enumeration value="file"/>
        <xs:enumeration value="HDDVD"/>
        <xs:enumeration value="BD"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="DeliveryMethodType">
    <xs:restriction base="xs:string">
        <xs:enumeration value="mail"/>
        <xs:enumeration value="ftp"/>
        <xs:enumeration value="ftps"/>
        <xs:enumeration value="sftp"/>
        <xs:enumeration value="P2P"/>
        <xs:enumeration value="wcs"/>
        <xs:enumeration value="wms"/>
        <xs:enumeration value="e-mail"/>
        <xs:enumeration value="dds"/>
    </xs:restriction>
</xs:simpleType>
<xs:complexType name="OrderOptionsRequestType">
    <xs:complexContent>
        <xs:extension base="OrderRequestBaseType">
            <xs:sequence>
                <xs:element name="timeStamp" type="xs:dateTime" minOccurs="0"/>
                <xs:choice>
                    <xs:element ref="collectionId"/>
                    <xs:element ref="identifier" minOccurs="0" maxOccurs="unbounded"/>
                    <xs:element ref="taskingRequestId"/>
                </xs:choice>
            </xs:sequence>
        </xs:extension>
    </xs:complexContent>
</xs:complexType>

```

```

        </xs:extension>
      </xs:complexContent>
    </xs:complexType>
    <xs:complexType name="OrderOptionsResponseType">
      <xs:complexContent>
        <xs:extension base="OrderResponseBaseType">
          <xs:sequence>
            <xs:element ref="orderOptions" minOccurs="0" maxOccurs="unbounded">
              <xs:annotation>
                <xs:documentation>This element is not set when status is failure.
It can be set if status is incomplete. It shall be set when status is success.</xs:documentation>
              </xs:annotation>
            </xs:element>
          </xs:sequence>
        </xs:extension>
      </xs:complexContent>
    </xs:complexType>
    <xs:complexType name="CommonOrderOptionsType">
      <xs:sequence>
        <xs:element ref="productOrderOptionsId"/>
        <xs:element name="description" minOccurs="0">
          <xs:simpleType>
            <xs:restriction base="xs:string">
              <xs:maxLength value="255"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
        <xs:element name="orderType" type="EnumOrderType"/>
        <xs:element name="options" type="ParameterDescriptorType" minOccurs="0" maxOccurs="unbounded"/>
        <xs:element name="productDeliveryOptions" maxOccurs="unbounded">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="deliveryMethod" type="DeliveryMethodType"/>
              <xs:element name="packageMedium" type="PackageMedium"
maxOccurs="unbounded"/>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
        <xs:element name="orderOptionInfoURL" type="xs:anyURI" minOccurs="0"/>
        <xs:element name="paymentOptions" type="PaymentOptionDefinitionType" minOccurs="0"
maxOccurs="unbounded">
          <xs:annotation>
            <xs:documentation>List of possible payment options for ordering the product. This
element is not specified if the payment options are defined in the user profile.</xs:documentation>
          </xs:annotation>
        </xs:element>
        <xs:element name="sceneSelectionOption" minOccurs="0" maxOccurs="unbounded">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="sceneType">
                <xs:simpleType>
                  <xs:restriction base="xs:string">
                    <xs:maxLength value="20"/>
                    <xs:minLength value="1"/>
                  </xs:restriction>
                </xs:simpleType>
              </xs:element>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
      </xs:sequence>
    </xs:complexType>
    <xs:element name="orderOptions" type="CommonOrderOptionsType" abstract="false"/>
    <xs:complexType name="PaymentOptionDefinitionType">
      <xs:sequence>
        <xs:element ref="paymentMethod"/>
        <xs:element name="paymentOptionInfoURL" type="xs:anyURI" minOccurs="0"/>
      </xs:sequence>
    </xs:complexType>

```

```

<xs:complexType name="ParameterDescriptorType">
  <xs:complexContent>
    <xs:extension base="sps:ParameterDescriptorType">
      <xs:sequence>
        <xs:element ref="identifier" minOccurs="0"/>
        <xs:element name="grouping" minOccurs="0">
          <xs:annotation>
            <xs:documentation>It identifies the group the option belong to
e.g. processing option, etc.</xs:documentation>
          </xs:annotation>
          <xs:simpleType>
            <xs:restriction base="xs:string">
              <xs:maxLength value="40"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
<!-- ===== Order Quotation Definitions ===== -->
<!-- ===== -->
<xs:complexType name="GetQuotationRequestType">
  <xs:complexContent>
    <xs:extension base="OrderRequestBaseType">
      <xs:sequence>
        <xs:element name="timeStamp" type="xs:dateTime" minOccurs="0"/>
        <xs:choice>
          <xs:element ref="orderSpecification">
            <xs:annotation>
              <xs:documentation>This choice is set for getting the
quotation of an order.</xs:documentation>
            </xs:annotation>
          </xs:element>
          <xs:element name="quotationId" type="QuotationIdType">
            <xs:annotation>
              <xs:documentation>This choice is set when quotation
monitoring is supported and a quotation request has been already submitted.</xs:documentation>
            </xs:annotation>
          </xs:element>
        </xs:choice>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="GetQuotationAckType">
  <xs:complexContent>
    <xs:extension base="OrderResponseBaseType">
      <xs:sequence minOccurs="0">
        <xs:annotation>
          <xs:documentation>The element is set when status is different from
failure.</xs:documentation>
        </xs:annotation>
        <xs:choice>
          <xs:element name="quotationId" type="QuotationIdType">
            <xs:annotation>
              <xs:documentation>This choice is set in case of non
sync quotations.</xs:documentation>
            </xs:annotation>
          </xs:element>
          <xs:element name="quotation" type="OrderQuotation">
            <xs:annotation>
              <xs:documentation>This choice is set in case of
synchronous quotations or as answer to quotation monitoring.</xs:documentation>
            </xs:annotation>
          </xs:element>
        </xs:choice>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>

```





```

        <xs:element ref="subscriptionId"/>
      </xs:choice>
      <xs:element name="price" type="CurrencyType" minOccurs="0">
        <xs:annotation>
          <xs:documentation>Price of the item; is optional if the price at group level is provided;
not supported in case the products are free of charge.</xs:documentation>
        </xs:annotation>
      </xs:element>
      <xs:element ref="contractInformation" minOccurs="0"/>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="CurrencyType">
    <xs:sequence>
      <xs:element name="value" type="xs:double"/>
      <xs:element name="currency">
        <xs:annotation>
          <xs:documentation>Currency including ISO 4217 (e.g.: EUR, USD (US Dollar), CAD
(Canada Dollar), AUD (Australia Dollar), GBP (United Kindom Pounds), etc.) and also special values for representing
quota.</xs:documentation>
        </xs:annotation>
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:maxLength value="10"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="ProviderType">
    <xs:sequence>
      <xs:element name="serviceName">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:maxLength value="40"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
      <xs:element name="organization">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:maxLength value="40"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
    </xs:sequence>
  </xs:complexType>
  <xs:simpleType name="QuotationIdType">
    <xs:restriction base="xs:anyURI"/>
  </xs:simpleType>
  <!-- ===== DescribeResultAccess Definitions =====>
  <!-- =====>
  <xs:complexType name="DescribeResultAccessRequestType">
    <xs:complexContent>
      <xs:extension base="OrderRequestBaseType">
        <xs:sequence>
          <xs:element name="timeStamp" type="xs:dateTime" minOccurs="0"/>
          <xs:element ref="orderId"/>
          <xs:element name="subFunction">
            <xs:simpleType>
              <xs:restriction base="xs:string">
                <xs:enumeration value="allReady"/>
                <xs:enumeration value="nextReady"/>
              </xs:restriction>
            </xs:simpleType>
          </xs:element>
        </xs:sequence>
      </xs:extension>
    </xs:complexContent>
  </xs:complexType>

```

```

</xs:complexType>
<xs:complexType name="DescribeResultAccessResponseType">
  <xs:complexContent>
    <xs:extension base="OrderResponseBaseType">
      <xs:sequence>
        <xs:element name="URLs" type="ItemURLType" minOccurs="0"
maxOccurs="unbounded"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
<!--Generic Definitions-->
<!--Generic Definitions-->
<xs:simpleType name="EnumStatusType">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Submitted"/>
    <xs:enumeration value="Accepted"/>
    <xs:enumeration value="Cancelled"/>
    <xs:enumeration value="Completed"/>
    <xs:enumeration value="InProduction"/>
    <xs:enumeration value="Suspended"/>
    <xs:enumeration value="Failed"/>
    <xs:enumeration value="Terminated"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="StatusType">
  <xs:sequence>
    <xs:element name="status" type="EnumStatusType"/>
    <xs:element name="additionalStatusInfo" minOccurs="0">
      <xs:simpleType>
        <xs:restriction base="xs:string">
          <xs:minLength value="1"/>
          <xs:maxLength value="255"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
    <xs:element name="missionSpecificStatusInfo" minOccurs="0">
      <xs:simpleType>
        <xs:restriction base="xs:string">
          <xs:maxLength value="255"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="SceneSelectionType">
  <xs:sequence>
    <xs:element name="sceneType">
      <xs:simpleType>
        <xs:restriction base="xs:string">
          <xs:maxLength value="20"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
    <xs:element name="sceneCoordinates">
      <xs:complexType>
        <xs:choice>
          <xs:element ref="gml:Point"/>
          <xs:element ref="gml:Polygon"/>
          <xs:element ref="gml:Rectangle"/>
        </xs:choice>
      </xs:complexType>
    </xs:element>
    <xs:element name="albumExtract" minOccurs="0">
      <xs:annotation>
        <xs:documentation>source data extract defined by its bounding box with album
catalog coordinates (impossible for mosaic or cropping)</xs:documentation>
      </xs:annotation>
    </xs:element>
  </xs:sequence>
</xs:complexType>

```

```

        <xs:complexType>
          <xs:sequence>
            <xs:element name="firstRow" type="xs:int"/>
            <xs:element name="nbRow" type="xs:int"/>
            <xs:element name="firstCol" type="xs:int"/>
            <xs:element name="nbCol" type="xs:int"/>
          </xs:sequence>
        </xs:complexType>
      </xs:element>
      <xs:element name="temporalSelection" minOccurs="0">
        <xs:complexType>
          <xs:sequence>
            <xs:element name="startDateTime" type="xs:dateTime"/>
            <xs:element name="endDateTime" type="xs:dateTime"/>
          </xs:sequence>
        </xs:complexType>
      </xs:element>
      <xs:element name="scenePosition" minOccurs="0">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:maxLength value="40"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
      <xs:element name="sceneSize" minOccurs="0">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:maxLength value="40"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="DeliveryInformationType">
    <xs:sequence>
      <xs:element name="ftp" type="FTPAddressType" minOccurs="0"/>
      <xs:element name="mail" type="DeliveryAddressType" minOccurs="0"/>
      <xs:element name="e-mail" minOccurs="0">
        <xs:annotation>
          <xs:documentation>E-mail address of the issuer of the request</xs:documentation>
        </xs:annotation>
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:maxLength value="40"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
      <xs:element name="receiverAddress" minOccurs="0">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:maxLength value="20"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="DeliveryAddressType">
    <xs:sequence>
      <xs:element name="recipient" minOccurs="0">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:minLength value="1"/>
            <xs:maxLength value="40"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
      <xs:element name="companyRef" minOccurs="0">
        <xs:simpleType>
          <xs:restriction base="xs:string">

```

```

        <xs:maxLength value="40"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:element>
  <xs:element name="postalAddress" minOccurs="0">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="streetAddress">
          <xs:simpleType>
            <xs:restriction base="xs:string">
              <xs:maxLength value="40"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
        <xs:element name="city">
          <xs:simpleType>
            <xs:restriction base="xs:string">
              <xs:maxLength value="40"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
        <xs:element name="state">
          <xs:simpleType>
            <xs:restriction base="xs:string">
              <xs:maxLength value="40"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
        <xs:element name="postalCode">
          <xs:simpleType>
            <xs:restriction base="xs:string">
              <xs:maxLength value="12"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
        <xs:element name="country">
          <xs:simpleType>
            <xs:restriction base="xs:string">
              <xs:maxLength value="40"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
        <xs:element name="postBox">
          <xs:annotation>
            <xs:documentation>only number part, only digits
          </xs:annotation>
          <xs:simpleType>
            <xs:restriction base="xs:string">
              <xs:maxLength value="12"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
  <xs:element name="telephoneNumber" minOccurs="0">
    <xs:annotation>
      <xs:documentation>including country code, prefix, without special sign or
intermediate blanks</xs:documentation>
    </xs:annotation>
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:minLength value="1"/>
        <xs:maxLength value="18"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:element>

```

```

        <xs:element name="facsimileTelephoneNumber" minOccurs="0">
            <xs:annotation>
                <xs:documentation>including country code, prefix, without special sign or
intermediate blanks</xs:documentation>
            </xs:annotation>
            <xs:simpleType>
                <xs:restriction base="xs:string">
                    <xs:maxLength value="18"/>
                    <xs:minLength value="1"/>
                </xs:restriction>
            </xs:simpleType>
        </xs:element>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="CancelRequestType">
    <xs:complexContent>
        <xs:extension base="OrderRequestBaseType">
            <xs:sequence>
                <xs:element name="timeStamp" type="xs:dateTime" minOccurs="0"/>
                <xs:element ref="orderId"/>
                <xs:element ref="statusNotification"/>
            </xs:sequence>
        </xs:extension>
    </xs:complexContent>
</xs:complexType>
<xs:complexType name="CancelRequestAckType">
    <xs:complexContent>
        <xs:extension base="OrderResponseBaseType"/>
    </xs:complexContent>
</xs:complexType>
<xs:complexType name="StatusNotificationType">
    <xs:complexContent>
        <xs:extension base="OrderRequestBaseType">
            <xs:sequence>
                <xs:element name="timeStamp" type="xs:dateTime" minOccurs="0"/>
                <xs:element ref="orderMonitorSpecification"/>
            </xs:sequence>
        </xs:extension>
    </xs:complexContent>
</xs:complexType>
<xs:complexType name="StatusNotificationAckType">
    <xs:complexContent>
        <xs:extension base="OrderResponseBaseType"/>
    </xs:complexContent>
</xs:complexType>
<xs:complexType name="FTPAddressType">
    <xs:sequence>
        <xs:element name="serverAddress" type="xs:string"/>
        <xs:element name="userId">
            <xs:simpleType>
                <xs:restriction base="xs:string">
                    <xs:maxLength value="8"/>
                </xs:restriction>
            </xs:simpleType>
        </xs:element>
        <xs:element name="userPassword" type="xs:string"/>
        <xs:element name="directory">
            <xs:simpleType>
                <xs:restriction base="xs:string">
                    <xs:maxLength value="1024"/>
                </xs:restriction>
            </xs:simpleType>
        </xs:element>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="OnLineAccessAddressType">
    <xs:sequence>
        <xs:element name="ServiceAddress" minOccurs="0">
            <xs:annotation>

```

```

    <xs:documentation>Address information related to the Server hosting the item to be
accessed.</xs:documentation>
    </xs:annotation>
    <xs:complexType>
      <xs:sequence>
        <xs:element name="type" type="xs:string" minOccurs="0">
          <xs:annotation>
            <xs:documentation>It specifies the type of the service
hosting the resource e.g. WCS, WMS, etc. This field is optional, since full information about the server can be retrieved from info_URL
and infoRequest elements.</xs:documentation>
          </xs:annotation>
        </xs:element>
        <xs:element name="URL" type="xs:anyURI">
          <xs:annotation>
            <xs:documentation>Address of the
Server</xs:documentation>
          </xs:annotation>
        </xs:element>
        <xs:element name="info_URL" type="xs:anyURI">
          <xs:annotation>
            <xs:documentation>Address for getting information
about the server. In case of OGC Web Services it can refer to GetCapabilities operation with HTTP GET binding.</xs:documentation>
          </xs:annotation>
        </xs:element>
        <xs:element name="infoRequest" minOccurs="0">
          <xs:annotation>
            <xs:documentation>In case the information can be
retrieved by sending a request message, this field stores the message to be sent. In case of OGC Web Services supporting SOAP
GetCapabilities, this field specifies the GetCapabilities message to send at the address specified in info_URL
element.</xs:documentation>
          </xs:annotation>
        </xs:element>
      </xs:sequence>
    </xs:complexType>
  </xs:sequence>
</xs:element>
<xs:element name="ResourceAddress">
  <xs:annotation>
    <xs:documentation>Address information of the resource to be
accessed.</xs:documentation>
  </xs:annotation>
  <xs:complexType>
    <xs:sequence>
      <xs:element name="URL" type="xs:anyURI">
        <xs:annotation>
          <xs:documentation>URL for accessing the
resource.</xs:documentation>
        </xs:annotation>
      </xs:element>
      <xs:element name="serviceRequest" minOccurs="0">
        <xs:annotation>
          <xs:documentation>In case the resource cannot be
accessed simply via the URL, but a message needs to be sent, then this field specifies the message to send.</xs:documentation>
        </xs:annotation>
      </xs:element>
    </xs:sequence>
  </xs:complexType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:sequence>
</xs:complexType>

```

```

<xs:complexType name="ItemURLType">
  <xs:sequence>
    <xs:element ref="itemId"/>
    <xs:element name="itemAddress" type="OnLineAccessAddressType">
      <xs:annotation>
        <xs:documentation>This field specifies the full information for accessing the ordered
item.</xs:documentation>
      </xs:annotation>
    </xs:element>
    <xs:element name="expirationDate" type="xs:dateTime" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
<xs:simpleType name="EnumOrderType">
  <xs:restriction base="xs:string">
    <xs:enumeration value="PRODUCT_ORDER"/>
    <xs:enumeration value="SUBSCRIPTION_ORDER"/>
  </xs:restriction>
</xs:simpleType>
<!-- ===== -->
<!-- ===== Simple Types-->
<!-- ===== -->
<xs:simpleType name="EnumPackagingType">
  <xs:restriction base="xs:string">
    <xs:enumeration value="zip"/>
    <xs:enumeration value="tar"/>
    <xs:enumeration value="tgz"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="DateTimeTypes">
  <xs:union memberTypes="xs:date xs:dateTime"/>
</xs:simpleType>
<xs:simpleType name="OrderResponseStatusType">
  <xs:restriction base="xs:string">
    <xs:enumeration value="success"/>
    <xs:enumeration value="partial"/>
    <xs:enumeration value="failure"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="PresentationType">
  <xs:restriction base="xs:string">
    <xs:enumeration value="brief"/>
    <xs:enumeration value="full"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="PriorityType">
  <xs:restriction base="xs:string">
    <xs:enumeration value="STANDARD"/>
    <xs:enumeration value="FAST_TRACK"/>
  </xs:restriction>
</xs:simpleType>
<!-- ===== -->
<!-- ===== -->
<!-- Types & Elements taken from hma.xsd-->
<!-- ===== -->
<!-- ===== -->
<xs:complexType name="CodeWithAuthorityType">
  <xs:simpleContent>
    <xs:extension base="xs:string">
      <xs:attribute name="codeSpace" type="xs:anyURI" use="required"/>
    </xs:extension>
  </xs:simpleContent>
</xs:complexType>
<xs:element name="identifier" type="CodeWithAuthorityType"/>
<xs:element name="itemId">
  <xs:annotation>
    <xs:documentation>string identifying the order item within the order.</xs:documentation>
  </xs:annotation>
  <xs:simpleType>
    <xs:restriction base="xs:string">

```

```

        <xs:maxLength value="80"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:element>
  <xs:element name="paymentMethod">
    <xs:annotation>
      <xs:documentation>Examples:, invoice, prepay (to be indicated for free products), deposit account, credit
card, credit card previously supplied</xs:documentation>
    </xs:annotation>
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:maxLength value="40"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:element>
  <xs:element name="contractInformation">
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:maxLength value="1024"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:element>
  <xs:element name="orderReference">
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:maxLength value="30"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:element>
  <xs:element name="productOrderOptionsId">
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:maxLength value="40"/>
        <xs:minLength value="1"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:element>
</xs:schema>

```



## APPENDIX B WSDL Specification (Informative)

```

<?xml version="1.0" encoding="UTF-8"?>
<!--:      Order.wsdl Type:      XML instance of W3C WSDL 1.1 Schema :      05 Sep 2008:      WSDL file for HMA Order service :
Order.xsd :      Marchionni Daniele :      V0.9.4
-->
<definitions xmlns="http://schemas.xmlsoap.org/wsdl/" xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"
xmlns:tns="http://earth.esa.int/hma/ordering" xmlns:ns1="http://www.w3.org/2001/XMLSchema"
xmlns:wsa="http://www.w3.org/2005/08/addressing" xmlns:ns="http://www.isotc211.org/2005/gco"
xmlns:ns2="http://www.isotc211.org/2005/gmd" xmlns:ns3="http://www.isotc211.org/2005/gsr"
xmlns:ns4="http://www.isotc211.org/2005/gss" xmlns:ns5="http://www.isotc211.org/2005/gts" xmlns:ns6="http://www.opengis.net/gml"
xmlns:ns7="http://www.opengis.net/ows" xmlns:ns8="http://www.opengis.net/sps/0" xmlns:ns9="http://www.opengis.net/swe/0.0"
xmlns:ns10="http://www.opengis.net/swe/st/0" xmlns:ns11="http://www.w3.org/2001/SMIL20/"
xmlns:ns12="http://www.w3.org/2001/SMIL20/Language" targetNamespace="http://earth.esa.int/hma/ordering">
  <types>
    <schema attributeFormDefault="qualified" elementFormDefault="qualified"
targetNamespace="http://schemas.xmlsoap.org/wsdl/" xmlns="http://www.w3.org/2001/XMLSchema">
      <import namespace="http://earth.esa.int/hma/ordering" schemaLocation="Order.xsd"/>
      <import namespace="http://www.w3.org/2005/08/addressing" schemaLocation="..ws-addressing\ws-
addr.xsd"/>
    </schema>
  </types>
  <message name="GetCapabilitiesRequest">
    <part name="parameter" element="tns:GetCapabilities"/>
  </message>
  <message name="GetCapabilitiesResponse">
    <part name="parameter" element="tns:Capabilities"/>
  </message>
  <message name="getOptionsRequest">
    <part name="GetOptionsRequestParameter" element="tns:GetOptions"/>
  </message>
  <message name="getOptionsResponse">
    <part name="GetOptionsResponseParameter" element="tns:GetOptionsResponse"/>
  </message>
  <message name="getQuotationRequest">
    <part name="GetQuotationRequestParameter" element="tns:GetQuotation"/>
  </message>
  <message name="getQuotationAck">
    <part name="GetQuotationAckParameter" element="tns:GetQuotationAck"/>
  </message>
  <message name="getQuotationResponse">
    <part name="GetQuotationResponseParameter" element="tns:GetQuotationResponse"/>
  </message>
  <message name="getQuotationResponseAck">
    <part name="GetQuotationResponseAckParameter" element="tns:GetQuotationResponseAck"/>
  </message>
  <message name="submitRequest">
    <part name="SubmitRequestParameter" element="tns:Submit"/>
  </message>
  <message name="submitAck">
    <part name="SubmitAckParameter" element="tns:SubmitAck"/>
  </message>
  <message name="submitResponse">
    <part name="SubmitResponseParameter" element="tns:SubmitResponse"/>
  </message>
  <message name="submitResponseAck">
    <part name="SubmitResponseAckParameter" element="tns:SubmitResponseAck"/>
  </message>
  <message name="getStatusRequest">
    <part name="GetStatusRequestParameter" element="tns:GetStatus"/>
  </message>
  <message name="getStatusResponse">
    <part name="GetStatusResponseParameter" element="tns:GetStatusResponse"/>
  </message>
  <message name="cancelRequest">
    <part name="CancelRequestParameter" element="tns:Cancel"/>
  </message>
  <message name="cancelAck">

```

```

        <part name="CancelAckParameter" element="tns:CancelAck"/>
</message>
<message name="cancelResponse">
  <part name="CancelResponseParameter" element="tns:CancelResponse"/>
</message>
<message name="cancelResponseAck">
  <part name="CancelResponseAckParameter" element="tns:CancelResponseAck"/>
</message>
<message name="describeResultAccess">
  <part name="DescribeResultAccessParameter" element="tns:DescribeResultAccess"/>
</message>
<message name="describeResultAccessResponse">
  <part name="DescribeResultAccessResponseParameter" element="tns:DescribeResultAccessResponse"/>
</message>
<message name="StartHeader">
  <part name="MessageID" element="wsa:MessageID"/>
  <part name="ReplyTo" element="wsa:ReplyTo"/>
</message>
<message name="ContinueHeader">
  <part name="RelatesTo" element="wsa:RelatesTo"/>
</message>
<message name="ServiceExceptionReport">
  <part name="fault" element="ns7:ExceptionReport"/>
</message>
<portType name="SOAPport">
  <operation name="GetCapabilities">
    <input message="tns:GetCapabilitiesRequest"/>
    <output message="tns:GetCapabilitiesResponse"/>
    <fault name="ServiceExceptionReport" message="tns:ServiceExceptionReport"/>
  </operation>
  <operation name="GetOptions">
    <input message="tns:getOptionsRequest"/>
    <output message="tns:getOptionsResponse"/>
    <fault name="ServiceExceptionReport" message="tns:ServiceExceptionReport"/>
  </operation>
  <operation name="GetQuotation">
    <input message="tns:getQuotationRequest"/>
    <output message="tns:getQuotationAck"/>
    <fault name="ServiceExceptionReport" message="tns:ServiceExceptionReport"/>
  </operation>
  <operation name="GetQuotationResponse">
    <input message="tns:getQuotationResponse"/>
    <output message="tns:getQuotationResponseAck"/>
    <fault name="ServiceExceptionReport" message="tns:ServiceExceptionReport"/>
  </operation>
  <operation name="Submit">
    <input message="tns:submitRequest"/>
    <output message="tns:submitAck"/>
    <fault name="ServiceExceptionReport" message="tns:ServiceExceptionReport"/>
  </operation>
  <operation name="SubmitResponse">
    <input message="tns:submitResponse"/>
    <output message="tns:submitResponseAck"/>
    <fault name="ServiceExceptionReport" message="tns:ServiceExceptionReport"/>
  </operation>
  <operation name="GetStatus">
    <input message="tns:getStatusRequest"/>
    <output message="tns:getStatusResponse"/>
    <fault name="ServiceExceptionReport" message="tns:ServiceExceptionReport"/>
  </operation>
  <operation name="Cancel">
    <input message="tns:cancelRequest"/>
    <output message="tns:cancelAck"/>
    <fault name="ServiceExceptionReport" message="tns:ServiceExceptionReport"/>
  </operation>
  <operation name="CancelResponse">
    <input message="tns:cancelResponse"/>
    <output message="tns:cancelResponseAck"/>
    <fault name="ServiceExceptionReport" message="tns:ServiceExceptionReport"/>
  </operation>

```

```

</operation>
<operation name="DescribeResultAccess">
  <input message="tns:describeResultAccess"/>
  <output message="tns:describeResultAccessResponse"/>
  <fault name="ServiceExceptionReport" message="tns:ServiceExceptionReport"/>
</operation>
</portType>
<binding name="HMA_OrderingBinding" type="tns:SOAPport">
  <soap:binding style="document" transport="http://schemas.xmlsoap.org/soap/http"/>
  <operation name="GetCapabilities">
    <soap:operation soapAction="GetCapabilities"/>
    <input>
      <soap:body use="literal"/>
    </input>
    <output>
      <soap:body use="literal"/>
    </output>
    <fault name="ServiceExceptionReport">
      <soap:fault name="ServiceExceptionReport" use="literal"/>
    </fault>
  </operation>
  <operation name="GetOptions">
    <soap:operation soapAction="GetOptions"/>
    <input>
      <soap:body use="literal"/>
    </input>
    <output>
      <soap:body use="literal"/>
    </output>
    <fault name="ServiceExceptionReport">
      <soap:fault name="ServiceExceptionReport" use="literal"/>
    </fault>
  </operation>
  <operation name="GetQuotation">
    <soap:operation soapAction="GetQuotation"/>
    <input>
      <soap:body use="literal"/>
      <soap:header message="StartHeader" part="ReplyTo" use="literal"/>
      <soap:header message="StartHeader" part="MessageID" use="literal"/>
    </input>
    <output>
      <soap:body use="literal"/>
    </output>
    <fault name="ServiceExceptionReport">
      <soap:fault name="ServiceExceptionReport" use="literal"/>
    </fault>
  </operation>
  <operation name="GetQuotationResponse">
    <soap:operation soapAction="GetQuotation"/>
    <input>
      <soap:body use="literal"/>
      <soap:header message="ContinueHeader" part="RelatesTo" use="literal"/>
    </input>
    <output>
      <soap:body use="literal"/>
    </output>
    <fault name="ServiceExceptionReport">
      <soap:fault name="ServiceExceptionReport" use="literal"/>
    </fault>
  </operation>
  <operation name="Submit">
    <soap:operation soapAction="Submit"/>
    <input>
      <soap:body use="literal"/>
      <soap:header message="StartHeader" part="ReplyTo" use="literal"/>
      <soap:header message="StartHeader" part="MessageID" use="literal"/>
    </input>
    <output>
      <soap:body use="literal"/>
    </output>
  </operation>

```

```

        </output>
        <fault name="ServiceExceptionReport">
          <soap:fault name="ServiceExceptionReport" use="literal"/>
        </fault>
      </operation>
    <operation name="SubmitResponse">
      <soap:operation soapAction="SubmitResponse"/>
      <input>
        <soap:body use="literal"/>
        <soap:header message="ContinueHeader" part="RelatesTo" use="literal"/>
      </input>
      <output>
        <soap:body use="literal"/>
      </output>
      <fault name="ServiceExceptionReport">
        <soap:fault name="ServiceExceptionReport" use="literal"/>
      </fault>
    </operation>
    <operation name="GetStatus">
      <soap:operation soapAction="GetStatus"/>
      <input>
        <soap:body use="literal"/>
      </input>
      <output>
        <soap:body use="literal"/>
      </output>
      <fault name="ServiceExceptionReport">
        <soap:fault name="ServiceExceptionReport" use="literal"/>
      </fault>
    </operation>
    <operation name="Cancel">
      <soap:operation soapAction="Cancel"/>
      <input>
        <soap:body use="literal"/>
        <soap:header message="StartHeader" part="ReplyTo" use="literal"/>
        <soap:header message="StartHeader" part="MessageID" use="literal"/>
      </input>
      <output>
        <soap:body use="literal"/>
      </output>
      <fault name="ServiceExceptionReport">
        <soap:fault name="ServiceExceptionReport" use="literal"/>
      </fault>
    </operation>
    <operation name="CancelResponse">
      <soap:operation soapAction="CancelResponse"/>
      <input>
        <soap:body use="literal"/>
        <soap:header message="ContinueHeader" part="RelatesTo" use="literal"/>
      </input>
      <output>
        <soap:body use="literal"/>
      </output>
      <fault name="ServiceExceptionReport">
        <soap:fault name="ServiceExceptionReport" use="literal"/>
      </fault>
    </operation>
    <operation name="DescribeResultAccess">
      <soap:operation soapAction="DescribeResultAccess"/>
      <input>
        <soap:body use="literal"/>
      </input>
      <output>
        <soap:body use="literal"/>
      </output>
      <fault name="ServiceExceptionReport">
        <soap:fault name="ServiceExceptionReport" use="literal"/>
      </fault>
    </operation>
  </operation>

```

```
</binding>
<service name="HMA_OrderingService">
  <port name="HMA_OrderingServicePort" binding="tns:HMA_OrderingBinding">
    <soap:address location="http://earth.esa.int"/>
  </port>
</service>
<!-- Modified import schema in order to define this WSDL as WS-I Basic Profile compliant -->
</definitions>
```

## APPENDIX C Examples

### C.1 GetCapabilities

#### C.1.1 Request

```
<?xml version="1.0" encoding="UTF-8"?>
<SOAP-ENV:Envelope xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/" xmlns:SOAP-
ENC="http://schemas.xmlsoap.org/soap/encoding/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:m0="http://www.opengis.net/ows">
  <SOAP-ENV:Body>
    <GetCapabilities xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns="http://earth.esa.int/hma/ordering" xsi:schemaLocation="http://earth.esa.int/hma/ordering ..\Order.xsd" updateSequence=""
service="OS">
      <m0:AcceptVersions>
        <m0:Version>1.0.0</m0:Version>
      </m0:AcceptVersions>
    </GetCapabilities>
  </SOAP-ENV:Body>
</SOAP-ENV:Envelope>
```

#### C.1.2 Response

```
<?xml version="1.0" encoding="UTF-8"?>
<SOAP-ENV:Envelope xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/" xmlns:SOAP-
ENC="http://schemas.xmlsoap.org/soap/encoding/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:m0="http://www.opengeospatial.net/ows">
  <SOAP-ENV:Body>
    <Capabilities xmlns:ows="http://www.opengis.net/ows" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xlink="http://www.w3.org/1999/xlink" xmlns="http://earth.esa.int/hma/ordering"
xsi:schemaLocation="http://earth.esa.int/hma/ordering ..\Order.xsd" version="0.00.00">
      <ows:ServiceIdentification>
        <ows:Title>ESA Order Service</ows:Title>
        <ows:Abstract>Service for ordering Earth observation products</ows:Abstract>
        <ows:Keywords>
          <ows:Keyword>OS</ows:Keyword>
          <ows:Type codeSpace="http://www.xmlspy.com">String</ows:Type>
        </ows:Keywords>
        <ows:ServiceType codeSpace="http://www.xmlspy.com">OGC:OS</ows:ServiceType>
        <ows:ServiceTypeVersion>0.01.00</ows:ServiceTypeVersion>
        <ows:Fees>NONE</ows:Fees>
        <ows:AccessConstraints>NONE</ows:AccessConstraints>
      </ows:ServiceIdentification>
      <ows:ServiceProvider>
        <ows:ProviderName>ESA EECF</ows:ProviderName>
        <ows:ProviderSite/>
        <ows:ServiceContact>
          <ows:IndividualName>John Smith</ows:IndividualName>
          <ows:PositionName>EO Help Desk Operator</ows:PositionName>
          <ows:ContactInfo>
            <ows:Phone>
              <ows:Voice>+39 06 90 180 999</ows:Voice>
            </ows:Phone>
          </ows:ContactInfo>
          <ows:Role codeSpace="http://www.xmlspy.com">String</ows:Role>
        </ows:ServiceContact>
      </ows:ServiceProvider>
      <ows:OperationsMetadata>
        <ows:Operation name="GetCapabilities">
          <ows:DCP>
            <ows:HTTP>
              <ows:Post xlink:href="http://earth.esa.int"/>
            </ows:HTTP>
          </ows:DCP>
        </ows:Operation>
      </ows:OperationsMetadata>
    </Capabilities>
  </SOAP-ENV:Body>
</SOAP-ENV:Envelope>
```

```

</ows:Operation>
<ows:Operation name="GetOptions">
  <ows:DCP>
    <ows:HTTP>
      <ows:Post xlink:href="http://earth.esa.int"/>
    </ows:HTTP>
  </ows:DCP>
</ows:Operation>
<ows:Operation name="GetQuotation">
  <ows:DCP>
    <ows:HTTP>
      <ows:Post xlink:href="http://earth.esa.int"/>
    </ows:HTTP>
  </ows:DCP>
</ows:Operation>
<ows:Operation name="Submit">
  <ows:DCP>
    <ows:HTTP>
      <ows:Post xlink:href="http://earth.esa.int"/>
    </ows:HTTP>
  </ows:DCP>
</ows:Operation>
<ows:Operation name="GetStatus">
  <ows:DCP>
    <ows:HTTP>
      <ows:Post xlink:href="http://earth.esa.int"/>
    </ows:HTTP>
  </ows:DCP>
</ows:Operation>
<ows:Operation name="Cancel">
  <ows:DCP>
    <ows:HTTP>
      <ows:Post xlink:href="http://earth.esa.int"/>
    </ows:HTTP>
  </ows:DCP>
</ows:Operation>
<ows:Operation name="DescribeResultAccess">
  <ows:DCP>
    <ows:HTTP>
      <ows:Post xlink:href="http://earth.esa.int"/>
    </ows:HTTP>
  </ows:DCP>
</ows:Operation>
</ows:OperationsMetadata>
<Contents>
  <GetQuotationCapabilities asynchronous="true" monitoring="false" off-line="false"
supported="true" synchronous="true"/>
  <FutureProductsOrdering supported="true" SPS_URL="http://hma.esa.int/programming"/>
  <SupportedCollections>
    <collectionId>ESA.EECF.ENVISAT_ASA_IMx_xS</collectionId>
    <collectionId>ESA.EECF.ENVISAT_ASA_IMx_xF</collectionId>
  </SupportedCollections>
</Contents>
</Capabilities>
</SOAP-ENV:Body>
</SOAP-ENV:Envelope>

```

## C.2 GetOptions

### C.2.1 Product Order Request

```

<?xml version="1.0" encoding="UTF-8"?>
<SOAP-ENV:Envelope xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/" xmlns:SOAP-
ENC="http://schemas.xmlsoap.org/soap/encoding/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <SOAP-ENV:Body>

```

```

    <GetOptions xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="http://earth.esa.int/hma/ordering"
xsi:schemaLocation="http://earth.esa.int/hma/ordering ..\Order.xsd" service="OS" version="1.2.0">
      <collectionId>ESA.EECF.ENVISAT_ASA_IMP_xS</collectionId>
    </GetOptions>
  </SOAP-ENV:Body>
</SOAP-ENV:Envelope>

```

### C.2.2 Product Order Response

```

<?xml version="1.0" encoding="UTF-8"?>
<SOAP-ENV:Envelope xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/" xmlns:SOAP-
ENC="http://schemas.xmlsoap.org/soap/encoding/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <SOAP-ENV:Body>
    <GetOptionsResponse xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns="http://earth.esa.int/hma/ordering" xmlns:sps="http://www.opengis.net/sps/0" xmlns:swe="http://www.opengis.net/swe/0.0"
xsi:schemaLocation="http://earth.esa.int/hma/ordering ..\Order.xsd">
      <status>success</status>
      <orderOptions>
        <productOrderOptionsId>Level 1,Product PRI (ASA_IMP)</productOrderOptionsId>
        <description>Order Options for producing ASAR IMP 1P product</description>
        <orderType>PRODUCT_ORDER</orderType>
        <options parameterID="processingLevel" use="required" updateable="false">
          <sps:Description>Product Level.</sps:Description>
          <sps:definition>
            <sps:commonData>
              <swe:Category>
                <swe:constraint>
                  <swe:AllowedTokens>
                    <swe:valueList>1B</swe:valueList>
                  </swe:AllowedTokens>
                </swe:constraint>
              </swe:Category>
            </sps:commonData>
          </sps:definition>
          <sps:cardinality>1</sps:cardinality>
          <grouping>Processing Option</grouping>
        </options>
        <options parameterID="productType" use="required" updateable="false">
          <sps:Description>Product type.</sps:Description>
          <sps:definition>
            <sps:commonData>
              <swe:Category>
                <swe:constraint>
                  <swe:AllowedTokens>
                    <swe:valueList>ASA_IMP_1P</swe:valueList>
                  </swe:AllowedTokens>
                </swe:constraint>
              </swe:Category>
            </sps:commonData>
          </sps:definition>
          <sps:cardinality>1</sps:cardinality>
          <grouping>Processing Option</grouping>
        </options>
        <options parameterID="qualityOfService" use="required" updateable="false">
          <sps:Description>.</sps:Description>
          <sps:definition>
            <sps:commonData>
              <swe:Category>
                <swe:constraint>
                  <swe:AllowedTokens>
                    <swe:valueList>STANDARD NRT
RUSH</swe:valueList>
                  </swe:AllowedTokens>
                </swe:constraint>
              </swe:Category>
            </sps:commonData>
          </sps:definition>
        </options>
      </orderOptions>
    </GetOptionsResponse>
  </SOAP-ENV:Body>
</SOAP-ENV:Envelope>

```



```

        </swe:Category>
      </sps:commonData>
    </sps:definition>
    <sps:cardinality>1</sps:cardinality>
    <grouping>Processing Option</grouping>
  </options>
  <!-- ===== -->
  <!-- Example of complex option (suggested by Eumetsat AR#24) -->
  <!-- ===== -->
  <options parameterID="spectralBandColorComposition" use="required" updateable="false">
    <sps:Description>A user can pick out of 12 bands 3 bands. A color can be assigned
to a band (R,G,B). This is to allow a user to form a composite colored image</sps:Description>
    <sps:definition>
      <sps:commonData>
        <swe:DataRecord>
          <swe:field name="RedBand">
            <swe:Category>
              <swe:constraint>
                <swe:AllowedTokens>
<swe:valueList>band1 band2 band3 band4 band5 band6 band7 band8 band9 band10 band11 band12</swe:valueList>
              </swe:AllowedTokens>
            </swe:constraint>
          </swe:Category>
        </swe:field>
        <swe:field name="GreenBand">
          <swe:Category>
            <swe:constraint>
              <swe:AllowedTokens>
<swe:valueList>band1 band2 band3 band4 band5 band6 band7 band8 band9 band10 band11 band12</swe:valueList>
            </swe:AllowedTokens>
          </swe:constraint>
        </swe:Category>
        <swe:field>
          <swe:field name="BlueBand">
            <swe:Category>
              <swe:constraint>
                <swe:AllowedTokens>
<swe:valueList>band1 band2 band3 band4 band5 band6 band7 band8 band9 band10 band11 band12</swe:valueList>
              </swe:AllowedTokens>
            </swe:constraint>
          </swe:Category>
        </swe:field>
      </swe>DataRecord>
    </sps:commonData>
  </sps:definition>
  <sps:cardinality>1</sps:cardinality>
</options>
<productDeliveryOptions>
  <deliveryMethod>mail</deliveryMethod>
  <packageMedium>CD-ROM</packageMedium>
</productDeliveryOptions>
<orderOptionInfoURL>http://www.provider.com/envisat/orderoptions.html</orderOptionInfoURL>
  <paymentOptions>
    <paymentMethod>quota</paymentMethod>
  </paymentOptions>
  <sceneSelectionOption>
    <sceneType>Floating</sceneType>
  </sceneSelectionOption>
</orderOptions>
<orderOptions>
  <productOrderOptionsId>Level 1,Product GEC (ASA_IMG)</productOrderOptionsId>
  <description>Order Options for producing ASAR IMG 1P product</description>
  <orderType>PRODUCT_ORDER</orderType>
  <options parameterID="processingLevel" use="required" updateable="false">
    <sps:Description>Product Level.</sps:Description>

```

```

        <sps:definition>
          <sps:commonData>
            <swe:Category>
              <swe:constraint>
                <swe:AllowedTokens>
<swe:valueList>1B</swe:valueList>
              </swe:AllowedTokens>
            </swe:constraint>
          </swe:Category>
        </sps:commonData>
      </sps:definition>
      <sps:cardinality>1</sps:cardinality>
      <grouping>Processing Option</grouping>
    </options>
    <options parameterID="productType" use="required" updateable="false">
      <sps:Description>Product type.</sps:Description>
      <sps:definition>
        <sps:commonData>
          <swe:Category>
            <swe:constraint>
              <swe:AllowedTokens>
<swe:valueList>ASA_IMG_1P</swe:valueList>
            </swe:AllowedTokens>
          </swe:constraint>
        </swe:Category>
      </sps:commonData>
    </sps:definition>
    <sps:cardinality>1</sps:cardinality>
    <grouping>Processing Option</grouping>
  </options>
  <options parameterID="qualityOfService" use="required" updateable="false">
    <sps:Description>.</sps:Description>
    <sps:definition>
      <sps:commonData>
        <swe:Category>
          <swe:constraint>
            <swe:AllowedTokens>
              <swe:valueList>STANDARD NRT
RUSH</swe:valueList>
            </swe:AllowedTokens>
          </swe:constraint>
        </swe:Category>
      </sps:commonData>
    </sps:definition>
    <sps:cardinality>1</sps:cardinality>
    <grouping>Processing Option</grouping>
  </options>
  <productDeliveryOptions>
    <deliveryMethod>mail</deliveryMethod>
    <packageMedium>CD-ROM</packageMedium>
  </productDeliveryOptions>
  <orderOptionInfoURL>http://www.provider.com/envisat/orderoptions.html</orderOptionInfoURL>
  <paymentOptions>
    <paymentMethod>quota</paymentMethod>
  </paymentOptions>
  <sceneSelectionOption>
    <sceneType>Floating</sceneType>
  </sceneSelectionOption>
</orderOptions>
<orderOptions>
  <productOrderOptionsId>Level 1,Product SLC (ASA_IMS)</productOrderOptionsId>
  <description>Order Options for producing ASAR IMS 1P product</description>
  <orderType>PRODUCT_ORDER</orderType>
  <options parameterID="processingLevel" use="required" updateable="false">
    <sps:Description>Product Level.</sps:Description>
    <sps:definition>

```

```

        <sps:commonData>
          <swe:Category>
            <swe:constraint>
              <swe:AllowedTokens>
                </swe:AllowedTokens>
            </swe:constraint>
          </swe:Category>
        </sps:commonData>
      </sps:definition>
      <sps:cardinality>1</sps:cardinality>
      <grouping>Processing Option</grouping>
    </options>
    <options parameterID="productType" use="required" updateable="false">
      <sps:Description>Product type.</sps:Description>
      <sps:definition>
        <sps:commonData>
          <swe:Category>
            <swe:constraint>
              <swe:AllowedTokens>
                </swe:AllowedTokens>
            </swe:constraint>
          </swe:Category>
        </sps:commonData>
      </sps:definition>
      <sps:cardinality>1</sps:cardinality>
      <grouping>Processing Option</grouping>
    </options>
    <options parameterID="qualityOfService" use="required" updateable="false">
      <sps:Description>.</sps:Description>
      <sps:definition>
        <sps:commonData>
          <swe:Category>
            <swe:constraint>
              <swe:AllowedTokens>
                <swe:valueList>STANDARD NRT
              </swe:AllowedTokens>
            </swe:constraint>
          </swe:Category>
        </sps:commonData>
      </sps:definition>
      <sps:cardinality>1</sps:cardinality>
      <grouping>Processing Option</grouping>
    </options>
  </productDeliveryOptions>
  <productDeliveryOptions>
    <deliveryMethod>mail</deliveryMethod>
    <packageMedium>CD-ROM</packageMedium>
  </productDeliveryOptions>
  <orderOptionInfoURL>http://www.provider.com/envisat/orderoptions.html</orderOptionInfoURL>
  <paymentOptions>
    <paymentMethod>quota</paymentMethod>
  </paymentOptions>
  <sceneSelectionOption>
    <sceneType>Floating</sceneType>
  </sceneSelectionOption>
</orderOptions>
<orderOptions>
  <productOrderOptionsId>Level 1,Product MRI (ASA_IMM)</productOrderOptionsId>
  <description>Order Options for producing ASAR IMM 1P product</description>
  <orderType>PRODUCT_ORDER</orderType>
  <options parameterID="processingLevel" use="required" updateable="false">
    <sps:Description>Product Level.</sps:Description>
    <sps:definition>
      <sps:commonData>

```



```

        <!-- Processing Option -->
        <swe:constraint>
          <swe:AllowedTokens>
            <swe:valueList>0</swe:valueList>
          </swe:AllowedTokens>
        </swe:constraint>
      </swe:Category>
    </sps:commonData>
  </sps:definition>
  <sps:cardinality>1</sps:cardinality>
  <grouping>Processing Option</grouping>
</options>
<options parameterID="productType" use="required" updateable="false">
  <sps:Description>Product type.</sps:Description>
  <sps:definition>
    <sps:commonData>
      <swe:Category>
        <swe:constraint>
          <swe:AllowedTokens>
            <swe:valueList>ASA_IM__OP</swe:valueList>
          </swe:AllowedTokens>
        </swe:constraint>
      </swe:Category>
    </sps:commonData>
  </sps:definition>
  <sps:cardinality>1</sps:cardinality>
  <grouping>Processing Option</grouping>
</options>
<options parameterID="qualityOfService" use="required" updateable="false">
  <sps:Description>.</sps:Description>
  <sps:definition>
    <sps:commonData>
      <swe:Category>
        <swe:constraint>
          <swe:AllowedTokens>
            <swe:valueList>STANDARD NRT
RUSH</swe:valueList>
          </swe:AllowedTokens>
        </swe:constraint>
      </swe:Category>
    </sps:commonData>
  </sps:definition>
  <sps:cardinality>1</sps:cardinality>
  <grouping>Processing Option</grouping>
</options>
<productDeliveryOptions>
  <deliveryMethod>mail</deliveryMethod>
  <packageMedium>CD-ROM</packageMedium>
</productDeliveryOptions>
<orderOptionInfoURL>http://www.provider.com/envisat/orderoptions.html</orderOptionInfoURL>
  <paymentOptions>
    <paymentMethod>quota</paymentMethod>
  </paymentOptions>
  <sceneSelectionOption>
    <sceneType>Floating</sceneType>
  </sceneSelectionOption>
</orderOptions>
</GetOptionsResponse>
</SOAP-ENV:Body>
</SOAP-ENV:Envelope>

```

### C.2.3 Subscription with restrictions Request

```

<?xml version="1.0" encoding="UTF-8"?>
<SOAP-ENV:Envelope xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/" xmlns:SOAP-
ENC="http://schemas.xmlsoap.org/soap/encoding/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">

```

```

    <SOAP-ENV:Body>
      <GetOptions xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="http://earth.esa.int/hma/ordering"
xsi:schemaLocation="http://earth.esa.int/hma/ordering ..\Order.xsd" service="OS" version="1.2.0">
        <collectionId>TEST.DLR.TSX.SUBSCRIPTION</collectionId>
      </GetOptions>
    </SOAP-ENV:Body>
  </SOAP-ENV:Envelope>

```

#### C.2.4 Subscription with restrictions Response

```

<?xml version="1.0" encoding="UTF-8"?>
<SOAP-ENV:Envelope xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/" xmlns:SOAP-
ENC="http://schemas.xmlsoap.org/soap/encoding/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <SOAP-ENV:Body>
    <GetOptionsResponse xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns="http://earth.esa.int/hma/ordering" xmlns:sps="http://www.opengis.net/sps/0" xmlns:swe="http://www.opengis.net/swe/0.0"
xsi:schemaLocation="http://earth.esa.int/hma/ordering ..\Order.xsd">
      <status>success</status>
      <orderOptions>
        <productOrderOptionsId>TerraSAR-X_SubscriptionOptions</productOrderOptionsId>
        <description>Order Options for Subscription</description>
        <orderType>SUBSCRIPTION_ORDER</orderType>
        <options parameterID="regionOfInterest" use="required" updateable="false">
          <sps:Description>User area of interest on which the subscription shall be
limited.</sps:Description>
          <sps:definition>
            <sps:GeometryDefinition>gml:polygon</sps:GeometryDefinition>
          </sps:definition>
          <sps:cardinality>1</sps:cardinality>
          <grouping>Processing Option</grouping>
        </options>
        <options parameterID="startDate" use="required" updateable="false">
          <sps:Description>Definition of the base time period of interest.</sps:Description>
          <sps:definition>
            <sps:commonData>
              <swe:Time>
                </swe:Time>
            </sps:commonData>
          </sps:definition>
          <sps:cardinality>1</sps:cardinality>
          <grouping>Processing Option</grouping>
        </options>
        <options parameterID="completionDate" use="required" updateable="false">
          <sps:Description>Definition of the base time period of interest.</sps:Description>
          <sps:definition>
            <sps:commonData>
              <swe:Time>
                </swe:Time>
            </sps:commonData>
          </sps:definition>
          <sps:cardinality>1</sps:cardinality>
          <grouping>Processing Option</grouping>
        </options>
        <options parameterID="numberOfObservations" use="required" updateable="false">
          <sps:Description>Numbe of times the specified area shall be
covered.</sps:Description>
          <sps:definition>
            <sps:commonData>
              <swe:Count/>
            </sps:commonData>
          </sps:definition>
          <sps:cardinality>1</sps:cardinality>
          <grouping>Processing Option</grouping>
        </options>
        <options parameterID="observationGap" use="required" updateable="false">

```

```

another.</sps:Description>
    <sps:definition>
        <sps:commonData>
            <swe:Count/>
        </sps:commonData>
    </sps:definition>
    <sps:cardinality>1</sps:cardinality>
    <grouping>Processing Option</grouping>
</options>
<productDeliveryOptions>
    <deliveryMethod>mail</deliveryMethod>
    <packageMedium>CD-ROM</packageMedium>
</productDeliveryOptions>
<orderOptionInfoURL>http://www.provider.com/TerraSAR-
X/orderoptions.html</orderOptionInfoURL>
    <paymentOptions>
        <paymentMethod>quota</paymentMethod>
    </paymentOptions>
</orderOptions>
</GetOptionsResponse>
</SOAP-ENV:Body>
</SOAP-ENV:Envelope>

```

## C.3 GetQuotation

### C.3.1 Request

```

<?xml version="1.0" encoding="UTF-8"?>
<SOAP-ENV:Envelope xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/" xmlns:SOAP-
ENC="http://schemas.xmlsoap.org/soap/encoding/" xmlns:sps="http://www.opengis.net/sps/0"
xmlns:swe="http://www.opengis.net/swe/0" xmlns:gml="http://www.opengis.net/gml" xmlns:xsi="http://www.w3.org/2001/XMLSchema-
instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
    <SOAP-ENV:Body>
        <GetQuotation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="http://earth.esa.int/hma/ordering"
xsi:schemaLocation="http://earth.esa.int/hma/ordering ..\Order.xsd" service="OS" version="1.2.0">
            <orderSpecification>
                <orderReference>example_0001</orderReference>
                <orderRemark>example</orderRemark>
                <deliveryInformation>
                    <mail>
                        <recipient>Mr. John Smith</recipient>
                        <companyRef>DTMT</companyRef>
                        <postalAddress>
                            <streetAddress>Esrin Esa No. 1</streetAddress>
                            <city>Frascati</city>
                            <state></state>
                            <postalCode>00100</postalCode>
                            <country>IT</country>
                            <postBox></postBox>
                        </postalAddress>
                        <telephoneNumber>00390694180999</telephoneNumber>
                    </mail>
                </deliveryInformation>
                <orderType>PRODUCT_ORDER</orderType>
                <orderItem>
                    <itemId>item_0001</itemId>
                    <productOrderOptionsId>Level 1,Product SLC (ASA_IMS)</productOrderOptionsId>
                    <orderItemRemark>First product</orderItemRemark>
                    <options>
                        <sps:Parameter parameterID="processingLevel">
                            <sps:value>
                                <swe:Category>
                                    <swe:value>1B</swe:value>
                                </swe:Category>
                            </sps:value>
                        </sps:Parameter>
                    </options>
                </orderItem>
            </GetQuotation>
        </SOAP-ENV:Body>
    </SOAP-ENV:Envelope>

```

```

    </options>
  <options>
    <sps:Parameter parameterID="productType">
      <sps:value>
        <swe:Category>
          <swe:value>ASA_IMS_1P</swe:value>
        </swe:Category>
      </sps:value>
    </sps:Parameter>
  </options>
  <options>
    <sps:Parameter parameterID="qualityOfService">
      <sps:value>
        <swe:Category>
          <swe:value>STANDARD</swe:value>
        </swe:Category>
      </sps:value>
    </sps:Parameter>
  </options>
  <sceneSelection>
    <sceneType>Floating Scene</sceneType>
    <sceneCoordinates>
      <gml:Point srsName="EPSG:4326">
        <gml:pos>2.374167 43.190833</gml:pos>
      </gml:Point>
    </sceneCoordinates>
    <temporalSelection>
      <startDateTime>2005-12-19T21:11:52.42</startDateTime>
      <endDateTime>2005-12-19T21:12:07.51</endDateTime>
    </temporalSelection>
    <scenePosition>frame 920</scenePosition>
  </sceneSelection>
  <deliveryMethod>mail</deliveryMethod>
  <packageMedium>CD-ROM</packageMedium>
  <payment>
    <paymentMethod>quota</paymentMethod>
    <orderAccount>project_10000</orderAccount>
  </payment>
  <productId>
    <identifier codeSpace="402825105102011441311.3578391">EN1-
05121921114570-3322.XI</identifier>
    <collectionId>ESA.EECF.ENVISAT_ASA_IMx_xS</collectionId>
  </productId>
</orderItem>
</orderSpecification>
</GetQuotation>
</SOAP-ENV:Body>
</SOAP-ENV:Envelope>

```

### C.3.2 Response

```

<?xml version="1.0" encoding="UTF-8"?>
<SOAP-ENV:Envelope xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/" xmlns:SOAP-
ENC="http://schemas.xmlsoap.org/soap/encoding/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:sps="http://www.opengis.net/sps/0" xmlns:swe="http://www.opengis.net/swe/0"
xmlns:gml="http://www.opengis.net/gml">
  <SOAP-ENV:Body>
    <GetQuotationAck xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns="http://earth.esa.int/hma/ordering" xsi:schemaLocation="http://earth.esa.int/hma/ordering ../Order.xsd">
      <status>success</status>
      <quotation>
        <quotationId>urn:ESA:EECF:quotationId_0001</quotationId>
        <validityTime>2007-05-01T00:00:00.00Z</validityTime>
        <price>
          <value>15</value>
          <currency>QUOTA</currency>

```



```

        </price>
        <orderItemGroupPrice>
          <provider>
            <serviceName>ESA_ORDER_SERVICE</serviceName>
            <organization>ESA</organization>
          </provider>
          <price>
            <value>15</value>
            <currency>QUOTA</currency>
          </price>
          <balance>
            <value>20</value>
            <currency>QUOTA</currency>
          </balance>
          <orderItemPrice>
            <itemId>item_0001</itemId>
            <productId>
              <identifier
codeSpace="402825105102011441311.3578391">EN1-05121921114570-3322.XI</identifier>
              <collectionId>ESA.EECF.ENVISAT_ASA_IMx_xS</collectionId>
            </productId>
          </orderItemPrice>
        </orderItemGroupPrice>
      </quotation>
    </GetQuotationAck>
  </SOAP-ENV:Body>
</SOAP-ENV:Envelope>

```

## C.4 Submit

### C.4.1 Request

```

<?xml version="1.0" encoding="UTF-8"?>
<SOAP-ENV:Envelope xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/" xmlns:SOAP-
ENC="http://schemas.xmlsoap.org/soap/encoding/" xmlns:sps="http://www.opengis.net/sps/0"
xmlns:swe="http://www.opengis.net/swe/0" xmlns:gml="http://www.opengis.net/gml" xmlns:xsi="http://www.w3.org/2001/XMLSchema-
instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <SOAP-ENV:Header>
    <m:ReplyTo xmlns:m="http://www.w3.org/2005/08/addressing">
      <m:Address>http://order_service_client.it</m:Address>
    </m:ReplyTo>
    <m:MessageID xmlns:m="http://www.w3.org/2005/08/addressing">000234359776845494</m:MessageID>
  </SOAP-ENV:Header>
  <SOAP-ENV:Body>
    <Submit xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="http://earth.esa.int/hma/ordering"
xsi:schemaLocation="http://earth.esa.int/hma/ordering ..\Order.xsd" service="OS" version="1.2.0">
      <orderSpecification>
        <orderReference>example_0001</orderReference>
        <orderRemark>example</orderRemark>
        <deliveryInformation>
          <mail>
            <recipient>Mr. John Smith</recipient>
            <companyRef>DTMT</companyRef>
            <postalAddress>
              <streetAddress>Esrin Esa No. 1</streetAddress>
              <city>Frascati</city>
              <state></state>
              <postalCode>00100</postalCode>
              <country>IT</country>
              <postBox></postBox>
            </postalAddress>
            <telephoneNumber>00390694180999</telephoneNumber>
          </mail>
        </deliveryInformation>
        <orderType>PRODUCT_ORDER</orderType>
        <orderItem>
          <itemId>item_0001</itemId>

```

```

<productOrderOptionsId>Level 1,Product SLC (ASA_IMS)</productOrderOptionsId>
<orderItemRemark>First product</orderItemRemark>
<options>
  <sps:Parameter parameterID="processingLevel">
    <sps:value>
      <swe:Category>
        <swe:value>1B</swe:value>
      </swe:Category>
    </sps:value>
  </sps:Parameter>
</options>
<options>
  <sps:Parameter parameterID="productType">
    <sps:value>
      <swe:Category>
        <swe:value>ASA_IMS_1P</swe:value>
      </swe:Category>
    </sps:value>
  </sps:Parameter>
</options>
<options>
  <sps:Parameter parameterID="qualityOfService">
    <sps:value>
      <swe:Category>
        <swe:value>STANDARD</swe:value>
      </swe:Category>
    </sps:value>
  </sps:Parameter>
</options>
<sceneSelection>
  <sceneType>Floating Scene</sceneType>
  <sceneCoordinates>
    <gml:Point srsName="EPSG:4326">
      <gml:pos>2.374167 43.190833</gml:pos>
    </gml:Point>
  </sceneCoordinates>
  <temporalSelection>
    <startDateTime>2005-12-19T21:11:52.42</startDateTime>
    <endDateTime>2005-12-19T21:12:07.51</endDateTime>
  </temporalSelection>
  <scenePosition>frame 920</scenePosition>
</sceneSelection>
<deliveryMethod>mail</deliveryMethod>
<packageMedium>CD-ROM</packageMedium>
<payment>
  <paymentMethod>quota</paymentMethod>
  <orderAccount>project_10000</orderAccount>
</payment>
<productId>
  <identifier codeSpace="402825105102011441311.3578391">EN1-
05121921114570-3322.XI</identifier>
  <collectionId>ESA.EECF.ENVISAT_ASA_IMx_xS</collectionId>
</productId>
</orderItem>
</orderSpecification>
<statusNotification>Final</statusNotification>
</Submit>
</SOAP-ENV:Body>
</SOAP-ENV:Envelope>

```

## C.4.2 Response

```

<?xml version="1.0" encoding="UTF-8"?>
<SOAP-ENV:Envelope xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/" xmlns:SOAP-
ENC="http://schemas.xmlsoap.org/soap/encoding/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <SOAP-ENV:Body>

```

```

        <SubmitAck xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="http://earth.esa.int/hma/ordering"
xsi:schemaLocation="http://earth.esa.int/hma/ordering ..\Order.xsd">
            <status>success</status>
            <orderId>urn:ESA:EECF:order_id_0001</orderId>
            <orderReference>example_0001</orderReference>
        </SubmitAck>
    </SOAP-ENV:Body>
</SOAP-ENV:Envelope>

```

## C.5 Submit Response

### C.5.1 Request

```

<?xml version="1.0" encoding="UTF-8"?>
<SOAP-ENV:Envelope xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/" xmlns:SOAP-
ENC="http://schemas.xmlsoap.org/soap/encoding/" xmlns:sps="http://www.opengis.net/sps/0"
xmlns:swe="http://www.opengis.net/swe/0" xmlns:gml="http://www.opengis.net/gml" xmlns:xsi="http://www.w3.org/2001/XMLSchema-
instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
    <SOAP-ENV:Header>
        <m:RelatesTo xmlns:m="http://www.w3.org/2005/08/addressing"
RelationshipType="http://www.w3.org/2005/08/addressing/reply">000234359776845494</m:RelatesTo>
    </SOAP-ENV:Header>
    <SOAP-ENV:Body>
        <SubmitResponse xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns="http://earth.esa.int/hma/ordering" xsi:schemaLocation="http://earth.esa.int/hma/ordering ..\Order.xsd" service="OS"
version="1.2.0">
            <timeStamp>2006-11-18T21:08:00.000</timeStamp>
            <orderMonitorSpecification>
                <orderReference>example_0001</orderReference>
                <orderRemark>example</orderRemark>
                <deliveryInformation>
                    <mail>
                        <recipient>Mr. John Smith</recipient>
                        <companyRef>DTMT</companyRef>
                        <postalAddress>
                            <streetAddress>Esrin Esa No. 1</streetAddress>
                            <city>Frascati</city>
                            <state></state>
                            <postalCode>00100</postalCode>
                            <country>IT</country>
                            <postBox></postBox>
                        </postalAddress>
                        <telephoneNumber>00390694180999</telephoneNumber>
                    </mail>
                </deliveryInformation>
                <orderType>PRODUCT_ORDER</orderType>
                <orderId>123456-001</orderId>
                <orderStatusInfo>
                    <status>Completed</status>
                    <additionalStatusInfo>The order is accomplished</additionalStatusInfo>
                </orderStatusInfo>
                <orderItem>
                    <itemId>item_0001</itemId>
                    <productOrderOptionsId>Level 1,Product SLC (ASA_IMS)</productOrderOptionsId>
                    <orderItemRemark>First product</orderItemRemark>
                    <options>
                        <sps:Parameter parameterID="processingLevel">
                            <sps:value>
                                <swe:Category>
                                    <swe:value>1B</swe:value>
                                </swe:Category>
                            </sps:value>
                        </sps:Parameter>
                    </options>
                    <options>
                        <sps:Parameter parameterID="productType">
                            <sps:value>

```

```

                <swe:Category>
                    <swe:value>ASA_IMS_1P</swe:value>
                </swe:Category>
            </sps:value>
        </sps:Parameter>
    </options>
</options>
<options>
    <sps:Parameter parameterID="qualityOfService">
        <sps:value>
            <swe:Category>
                <swe:value>STANDARD</swe:value>
            </swe:Category>
        </sps:value>
    </sps:Parameter>
</options>
<sceneSelection>
    <sceneType>Floating Scene</sceneType>
    <sceneCoordinates>
        <gml:Point srsName="EPSG:4326"
            <gml:pos>2.374167 43.190833</gml:pos>
        </gml:Point>
    </sceneCoordinates>
    <temporalSelection>
        <startDateTime>2005-12-19T21:11:52.42</startDateTime>
        <endDateTime>2005-12-19T21:12:07.51</endDateTime>
    </temporalSelection>
    <scenePosition>frame 920</scenePosition>
</sceneSelection>
<deliveryMethod>mail</deliveryMethod>
<packageMedium>CD-ROM</packageMedium>
<payment>
    <paymentMethod>quota</paymentMethod>
    <orderAccount>project_10000</orderAccount>
</payment>
<productId>
    <identifier codeSpace="402825105102011441311.3578391">EN1-
05121921114570-3322.XI</identifier>
        <collectionId>ESA.EECF.ENVISAT_ASA_IMx_xS</collectionId>
    </productId>
    <orderItemStatusInfo>
        <status>Completed</status>
    </orderItemStatusInfo>
</orderItem>
</orderMonitorSpecification>
</SubmitResponse>
</SOAP-ENV:Body>
</SOAP-ENV:Envelope>

```

### C.5.2 Response

```

<?xml version="1.0" encoding="UTF-8"?>
<SOAP-ENV:Envelope xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/" xmlns:SOAP-
ENC="http://schemas.xmlsoap.org/soap/encoding/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
    <SOAP-ENV:Body>
        <SubmitResponseAck xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns="http://earth.esa.int/hma/ordering" xsi:schemaLocation="http://earth.esa.int/hma/ordering ..\Order.xsd">
            <status>success</status>
        </SubmitResponseAck>
    </SOAP-ENV:Body>
</SOAP-ENV:Envelope>

```

### C.6 Cancel

### C.6.1 Request

```
<?xml version="1.0" encoding="UTF-8"?>
<SOAP-ENV:Envelope xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/" xmlns:SOAP-
ENC="http://schemas.xmlsoap.org/soap/encoding/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <SOAP-ENV:Header>
    <m:ReplyTo xmlns:m="http://www.w3.org/2005/08/addressing">
      <m:Address>http://order_service_client.it</m:Address>
    </m:ReplyTo>
    <m:MessageID xmlns:m="http://www.w3.org/2005/08/addressing">000234359776845600</m:MessageID>
  </SOAP-ENV:Header>
  <SOAP-ENV:Body>
    <Cancel xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="http://earth.esa.int/hma/ordering"
xsi:schemaLocation="http://earth.esa.int/hma/ordering ..\Order.xsd" service="OS" version="1.2.0">
      <orderId>urn:ESA:EECF:order_id_0001</orderId>
      <statusNotification>Final</statusNotification>
    </Cancel>
  </SOAP-ENV:Body>
</SOAP-ENV:Envelope>
```

### C.6.2 Response

```
<?xml version="1.0" encoding="UTF-8"?>
<SOAP-ENV:Envelope xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/" xmlns:SOAP-
ENC="http://schemas.xmlsoap.org/soap/encoding/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <SOAP-ENV:Body>
    <CancelAck xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="http://earth.esa.int/hma/ordering"
xsi:schemaLocation="http://earth.esa.int/hma/ordering ..\Order.xsd">
      <status>success</status>
    </CancelAck>
  </SOAP-ENV:Body>
</SOAP-ENV:Envelope>
```

## C.7 CancelResponse

### C.7.1 Request

```
<?xml version="1.0" encoding="UTF-8"?>
<SOAP-ENV:Envelope xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/" xmlns:SOAP-
ENC="http://schemas.xmlsoap.org/soap/encoding/" xmlns:sps="http://www.opengis.net/sps/0"
xmlns:swe="http://www.opengis.net/swe/0" xmlns:gml="http://www.opengis.net/gml" xmlns:xsi="http://www.w3.org/2001/XMLSchema-
instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <SOAP-ENV:Header>
    <m:RelatesTo xmlns:m="http://www.w3.org/2005/08/addressing"
RelationshipType="http://www.w3.org/2005/08/addressing/reply">000234359776845600</m:RelatesTo>
  </SOAP-ENV:Header>
  <SOAP-ENV:Body>
    <CancelResponse xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns="http://earth.esa.int/hma/ordering" xsi:schemaLocation="http://earth.esa.int/hma/ordering ..\Order.xsd" service="OS"
version="1.2.0">
      <timeStamp>2006-11-18T21:08:00.000</timeStamp>
      <orderMonitorSpecification>
        <orderReference>example_0001</orderReference>
        <orderRemark>example</orderRemark>
        <deliveryInformation>
          <mail>
            <recipient>Mr. John Smith</recipient>
            <companyRef>DTMT</companyRef>
            <postalAddress>
              <streetAddress>Esrin Esa No. 1</streetAddress>
              <city>Frascati</city>
              <state></state>
              <postalCode>00100</postalCode>
              <country>IT</country>
            </postalAddress>
          </mail>
        </deliveryInformation>
      </orderMonitorSpecification>
    </CancelResponse>
  </SOAP-ENV:Body>
</SOAP-ENV:Envelope>
```

```

        <postBox>-</postBox>
      </postalAddress>
      <telephoneNumber>00390694180999</telephoneNumber>
    </mail>
  </deliveryInformation>
  <orderType>PRODUCT_ORDER</orderType>
  <orderId>123456-001</orderId>
  <orderStatusInfo>
    <status>Cancelled</status>
    <additionalStatusInfo>The order is accomplished</additionalStatusInfo>
  </orderStatusInfo>
  <orderItem>
    <itemId>item_0001</itemId>
    <productOrderOptionsId>OPT1</productOrderOptionsId>
    <orderItemRemark>First product</orderItemRemark>
    <options>
      <sps:Parameter parameterID="processingLevel">
        <sps:value>
          <swe:Category>
            <swe:value>1B</swe:value>
          </swe:Category>
        </sps:value>
      </sps:Parameter>
    </options>
    <options>
      <sps:Parameter parameterID="productType">
        <sps:value>
          <swe:Category>
            <swe:value>ASA_IMS_1P</swe:value>
          </swe:Category>
        </sps:value>
      </sps:Parameter>
    </options>
    <options>
      <sps:Parameter parameterID="qualityOfService">
        <sps:value>
          <swe:Category>
            <swe:value>STANDARD</swe:value>
          </swe:Category>
        </sps:value>
      </sps:Parameter>
    </options>
    <sceneSelection>
      <sceneType>Floating Scene</sceneType>
      <sceneCoordinates>
        <gml:Point srsName="EPSG:4326">
          <gml:pos>2.374167 43.190833</gml:pos>
        </gml:Point>
      </sceneCoordinates>
      <temporalSelection>
        <startDateTime>2005-12-19T21:11:52.42</startDateTime>
        <endDateTime>2005-12-19T21:12:07.51</endDateTime>
      </temporalSelection>
      <scenePosition>frame 920</scenePosition>
    </sceneSelection>
    <deliveryMethod>mail</deliveryMethod>
    <packageMedium>CD-ROM</packageMedium>
    <payment>
      <paymentMethod>quota</paymentMethod>
      <orderAccount>project_10000</orderAccount>
    </payment>
    <productId>
      <identifier codeSpace="402825105102011441311.3578391">EN1-
05121921114570-3322.XI</identifier>
      <collectionId>ESA.EECF.ENVISAT_ASA_IMx_xS</collectionId>
    </productId>
    <orderItemStatusInfo>
      <status>Cancelled</status>

```

```

        </orderItemStatusInfo>
      </orderItem>
    </orderMonitorSpecification>
  </CancelResponse>
</SOAP-ENV:Body>
</SOAP-ENV:Envelope>

```

## C.7.2 Response

```

<?xml version="1.0" encoding="UTF-8"?>
<SOAP-ENV:Envelope xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/" xmlns:SOAP-
ENC="http://schemas.xmlsoap.org/soap/encoding/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <SOAP-ENV:Body>
    <CancelResponseAck xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns="http://earth.esa.int/hma/ordering" xsi:schemaLocation="http://earth.esa.int/hma/ordering ..\Order.xsd">
      <status>success</status>
    </CancelResponseAck>
  </SOAP-ENV:Body>
</SOAP-ENV:Envelope>

```

## C.8 GetStatus

### C.8.1 Request

```

<?xml version="1.0" encoding="UTF-8"?>
<SOAP-ENV:Envelope xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/" xmlns:SOAP-
ENC="http://schemas.xmlsoap.org/soap/encoding/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <SOAP-ENV:Body>
    <GetStatus xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="http://earth.esa.int/hma/ordering"
xsi:schemaLocation="http://earth.esa.int/hma/ordering ..\Order.xsd" service="OS" version="1.2.0">
      <orderId>urn:ESA:EECF:order_id_0001</orderId>
      <presentation>full</presentation>
    </GetStatus>
  </SOAP-ENV:Body>
</SOAP-ENV:Envelope>

```

### C.8.2 Response

```

<?xml version="1.0" encoding="UTF-8"?>
<SOAP-ENV:Envelope xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/" xmlns:SOAP-
ENC="http://schemas.xmlsoap.org/soap/encoding/" xmlns:sps="http://www.opengis.net/sps/0"
xmlns:swe="http://www.opengis.net/swe/0" xmlns:gml="http://www.opengis.net/gml" xmlns:xsi="http://www.w3.org/2001/XMLSchema-
instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <SOAP-ENV:Body>
    <GetStatusResponse xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns="http://earth.esa.int/hma/ordering" xsi:schemaLocation="http://earth.esa.int/hma/ordering ..\Order.xsd">
      <status>success</status>
      <orderMonitorSpecification>
        <orderReference>example_0001</orderReference>
        <orderRemark>example</orderRemark>
        <deliveryInformation>
          <mail>
            <recipient>Mr. John Smith</recipient>
            <companyRef>DTMT</companyRef>
            <postalAddress>
              <streetAddress>Esrin Esa No. 1</streetAddress>
              <city>Frascati</city>
              <state></state>
              <postalCode>00100</postalCode>
              <country>IT</country>
              <postBox></postBox>
            </postalAddress>
          </mail>
        </deliveryInformation>
      </orderMonitorSpecification>
    </GetStatusResponse>
  </SOAP-ENV:Body>
</SOAP-ENV:Envelope>

```

```

        </postalAddress>
        <telephoneNumber>00390694180999</telephoneNumber>
    </mail>
</deliveryInformation>
<orderType>PRODUCT_ORDER</orderType>
<orderId>123456-001</orderId>
<orderStatusInfo>
    <status>Completed</status>
    <additionalStatusInfo>The order is accomplished</additionalStatusInfo>
</orderStatusInfo>
<orderItem>
    <itemId>item_0001</itemId>
    <productOrderOptionsId>Level 1,Product SLC (ASA_IMS)</productOrderOptionsId>
    <orderItemRemark>First product</orderItemRemark>
    <options>
        <sps:Parameter parameterID="processingLevel">
            <sps:value>
                <swe:Category>
                    <swe:value>1B</swe:value>
                </swe:Category>
            </sps:value>
        </sps:Parameter>
    </options>
    <options>
        <sps:Parameter parameterID="productType">
            <sps:value>
                <swe:Category>
                    <swe:value>ASA_IMS_1P</swe:value>
                </swe:Category>
            </sps:value>
        </sps:Parameter>
    </options>
    <options>
        <sps:Parameter parameterID="qualityOfService">
            <sps:value>
                <swe:Category>
                    <swe:value>STANDARD</swe:value>
                </swe:Category>
            </sps:value>
        </sps:Parameter>
    </options>
    <sceneSelection>
        <sceneType>Floating Scene</sceneType>
        <sceneCoordinates>
            <gml:Point srsName="EPSG:4326"
                gml:id="DS_2044263010822">
                <gml:pos>2.374167 43.190833</gml:pos>
            </gml:Point>
        </sceneCoordinates>
        <temporalSelection>
            <startDateTime>2005-12-19T21:11:52.42</startDateTime>
            <endDateTime>2005-12-19T21:12:07.51</endDateTime>
        </temporalSelection>
        <scenePosition>frame 920</scenePosition>
    </sceneSelection>
    <deliveryMethod>mail</deliveryMethod>
    <packageMedium>CD-ROM</packageMedium>
    <payment>
        <paymentMethod>quota</paymentMethod>
        <orderAccount>project_10000</orderAccount>
    </payment>
    <productId>
        <identifier codeSpace="402825105102011441311.3578391">EN1-
            05121921114570-3322.XI</identifier>
        <collectionId>ESA.EECF.ENVISAT_ASA_IMx_xS</collectionId>
    </productId>
    <orderItemStatusInfo>
        <status>Completed</status>
    </orderItemStatusInfo>

```



```

        </orderItem>
      </orderMonitorSpecification>
    </getStatusResponse>
  </SOAP-ENV:Body>
</SOAP-ENV:Envelope>

```

## C.9 DescribeResultAccess

### C.9.1 Request

```

<?xml version="1.0" encoding="UTF-8"?>
<SOAP-ENV:Envelope xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/" xmlns:SOAP-
ENC="http://schemas.xmlsoap.org/soap/encoding/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <SOAP-ENV:Body>
    <DescribeResultAccess xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns="http://earth.esa.int/hma/ordering" xsi:schemaLocation="http://earth.esa.int/hma/ordering ..\Order.xsd" service="OS"
version="1.2.0">
      <orderId>urn:ESA:EECF:order_id_0001</orderId>
      <subFunction>allReady</subFunction>
    </DescribeResultAccess>
  </SOAP-ENV:Body>
</SOAP-ENV:Envelope>

```

### C.9.2 Response

```

<?xml version="1.0" encoding="UTF-8"?>
<SOAP-ENV:Envelope xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/" xmlns:SOAP-
ENC="http://schemas.xmlsoap.org/soap/encoding/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <SOAP-ENV:Body>
    <DescribeResultAccessResponse xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns="http://earth.esa.int/hma/ordering" xsi:schemaLocation="http://earth.esa.int/hma/ordering ..\Order.xsd">
      <status>success</status>
      <URLs>
        <itemId>item_0001</itemId>
        <itemAddress>
          <ResourceAddress>
            <URL>ftp://user:online@eoaserver:2121/0c88028bf3aa6a6a143ed846f2be1ea4</URL>
          </ResourceAddress>
        </itemAddress>
      </URLs>
      <URLs>
        <itemId>item_0002</itemId>
        <itemAddress>
          <ResourceAddress>
            <URL>ftp://user:online@eoaserver:2121/0c88028bf3aa6a6a143ed846f2be1ea5</URL>
          </ResourceAddress>
        </itemAddress>
      </URLs>
      <URLs>
        <itemId>item_0003</itemId>
        <itemAddress>
          <ResourceAddress>
            <URL>ftp://user:online@eoaserver:2121/0c88028bf3aa6a6a143ed846f2be1ea6</URL>
          </ResourceAddress>
        </itemAddress>
      </URLs>
    </DescribeResultAccessResponse>
  </SOAP-ENV:Body>
</SOAP-ENV:Envelope>

```