

# ***HMA-Testbed Phase 2***

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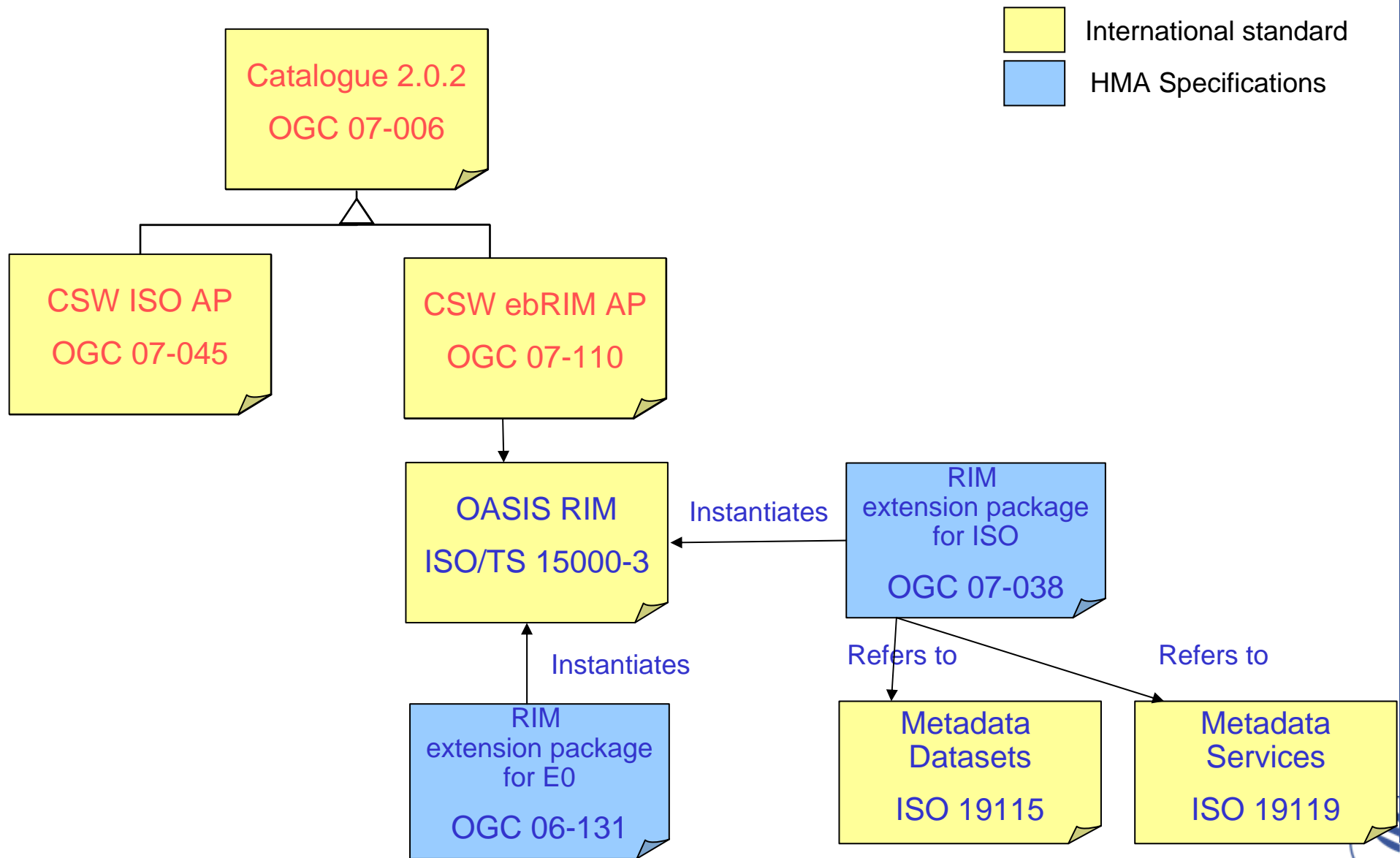
Yves Coene, SPACEBEL

- HMA-T Objectives
- ITT and Proposal information
  - Evolution of specifications
  - Conformance Testing
  - Uptake and (Open-source) implementations
- Schedule and Reviews

1. Permit evolution and test of HMA interoperability standards in parallel with EODAIL-Implementation and implementation of I/F with Partner G/S.
2. Permit conformance testing of any HMA adopted standards.
3. Support take-up of HMA defined standards by European Institutional Users and geospatial software product developers

# *Part 1: Evolution of Specifications*

- Support evolution of specifications (catalogue)
  - EO Product catalogues
  - OGC 06-131 EO Extension Package for ebRIM (ERDAS)
    - Maintenance of specification is covered by HMA-E project
  - Collection catalogues
  - OGC 07-038 ISO Extension Package for ebRIM (ERDAS)
    - Setup and manage OGC Specification Working Group (SWG) for CIM extension package. Setup at OGC TC Atlanta (Sept. 2008)
    - Include full support for ISO 19115/19119 requirements
    - Extend for EO needs with ISO 19115-2.
    - Output: updated OGC 07-038 specification



➤ Support evolution of specifications

- Feasibility analysis
- OGC 07-018 EO Profile for Sensor Planning Service - SPS (Spotimage)
  - Alignment with upcoming SPS 2.0 will be tested via implementation for optical and radar SPS (Joined Deimos and Spotimage proposal).
  - Note: Spotimage is leading the SPS 2.0 and EO Profile for SPS revisions at OGC.

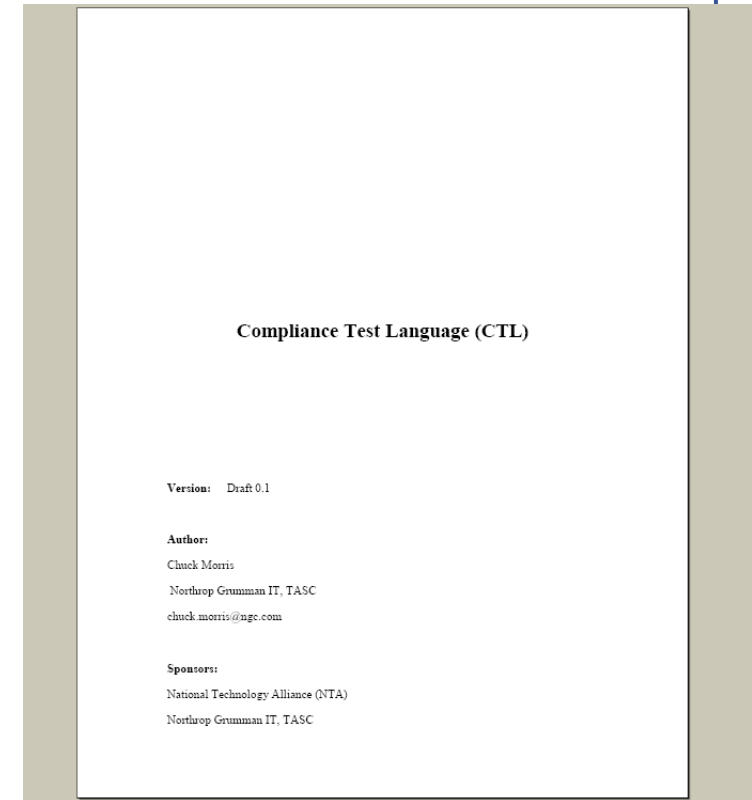
# ***Part 2: Conformance Testing***

- OGC 07-038: Collection catalogue
- OGC 06-131: Product catalogue
- OGC 07-118: User Management



➤ Context

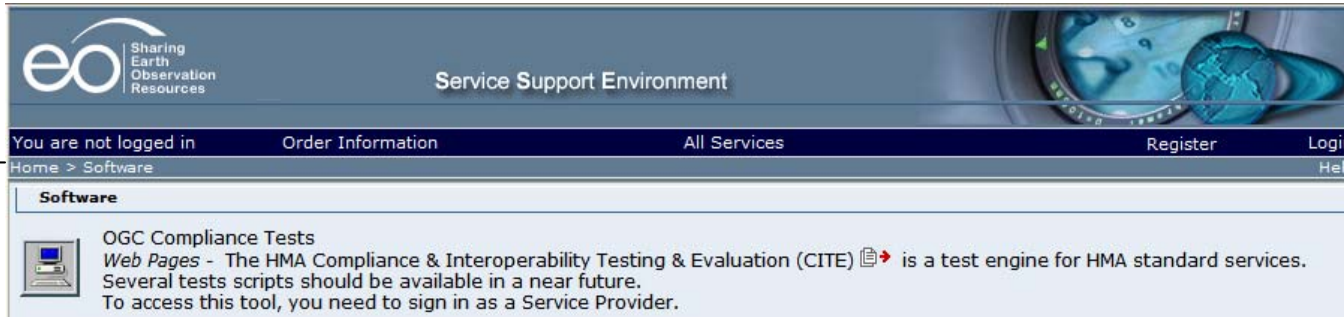
- To support GMES missions to test their HMA-compliant EO interfaces.
- OGC adopted open-source TEAM Test Engine (<http://sourceforge.net/projects/teamengine>)
- Compliance Test Language (CTL), OGC 06-126.



➤ **Conformance Testing (CITE)**

- Use same open-source conformance test engine as OGC (TEAM engine with CTL scripts).
- Host conformance tests at ESRIN, accessible via public Web pages.
- All CITE tests will be defined in similar way. Abstract and Executable Test Suites (ATS and ETS) structure proposed by IGN-F.
- Use common approach for SOAP and asynchronous operations test, based on contribution from ESA ERGO project.
- Main contribution:
  - CITE Abstract and Executable Test Suites (ATS and ETS) including executable CTL scripts contributed to OGC CITE WG.
  - SOAP tests very relevant for INSPIRE.

- Deployment of CITE test environment in permanent testbed at ESRIN



## TEAM Engine

(Test, Evaluation, And Measurement Engine)



### Welcome

The Test, Evaluation, And Measurement (TEAM) Engine is a test script interpreter. It executes test scripts written using the [Compliance Test Language \(CTL\)](#) to verify that an implementation of a specification complies with the specification.

The following test suites are available:

- [WRS 1.0 Conformance Test Suite \(M1\)](#)  
Verify that a WRS catalogue implementation satisfies all applicable constraints.  
[Test data](#)
- [Earth Observation \(EO\) Products Extension Package Conformance Test Suite \(0.1\)](#)  
Verify that a WRS catalogue implementation satisfies all applicable constraints for the EO package.  
[Test data](#)

⚠ It may be necessary to load test data before running a test suite!

[Start Testing](#)

Problems? Email the [webmaster](#)

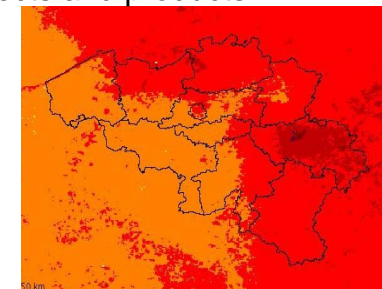
- Conformance Testing (CITE) Activities:
  - OGC 06-131 EO Extension Package for ebRIM
    - IGN
    - CNR-IMAA
  - OGC 07-038 ISO Extension Package for ebRIM
    - IGN
    - CNR-IMAA
    - Conterra (definition of conformance test levels + INSPIRE guidance)
  - OGC 07-118 User management for EO
    - Terradue
    - Intecs

## ***Part 3: Support Uptake of HMA Specifications***

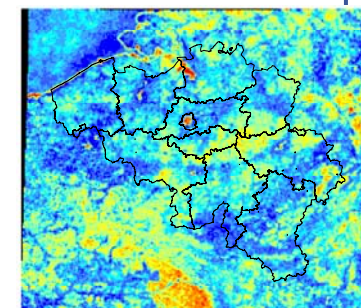
- OGC 06-080, 06-131, 07-038: Catalogue-related
- OGC 07-018: EO Profile Sensor Planning Service
- OGC 07-118: User Management
- OGC 07-063: EO Profile Web Mapping Service

➤ Support uptake of HMA standards

- OGC 06-080 EO Profile of GML applied to VITO derived and airborne products (GIM). Projects and products that will be considered:
  - Geosuccess, Atmosphere (AOD, PM10 etc.),
  - APEX (Airborn Prism Experiment), GMFS

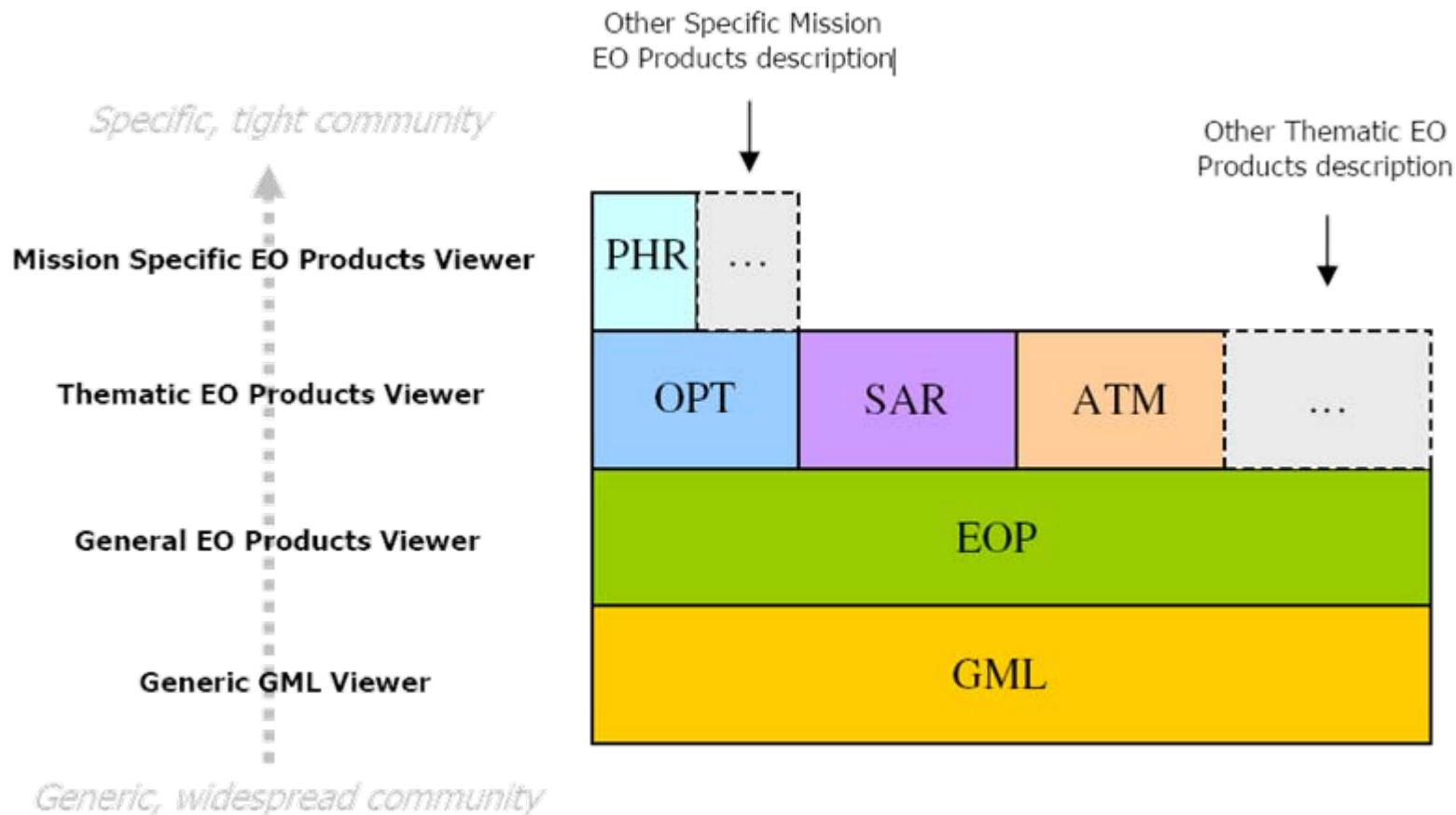


Product name	Product data format
Vegetation Productivity Indicator	<ul style="list-style-type: none"> <li>- ENVI header file (*.hdr)</li> <li>- IDRISI header (*.doc)</li> <li>- Binary images (*.img)</li> <li>- *.png (QL)</li> </ul>
Dry Matter Productivity (different version than for GeoSuccess)	<ul style="list-style-type: none"> <li>- ENVI header file (*.hdr)</li> <li>- Binary images (*.img)</li> </ul>
Fraction of Absorbed Photosynthetically Active Radiation	<ul style="list-style-type: none"> <li>- ENVI header file (*.hdr)</li> <li>- Binary images (*.img)</li> </ul>

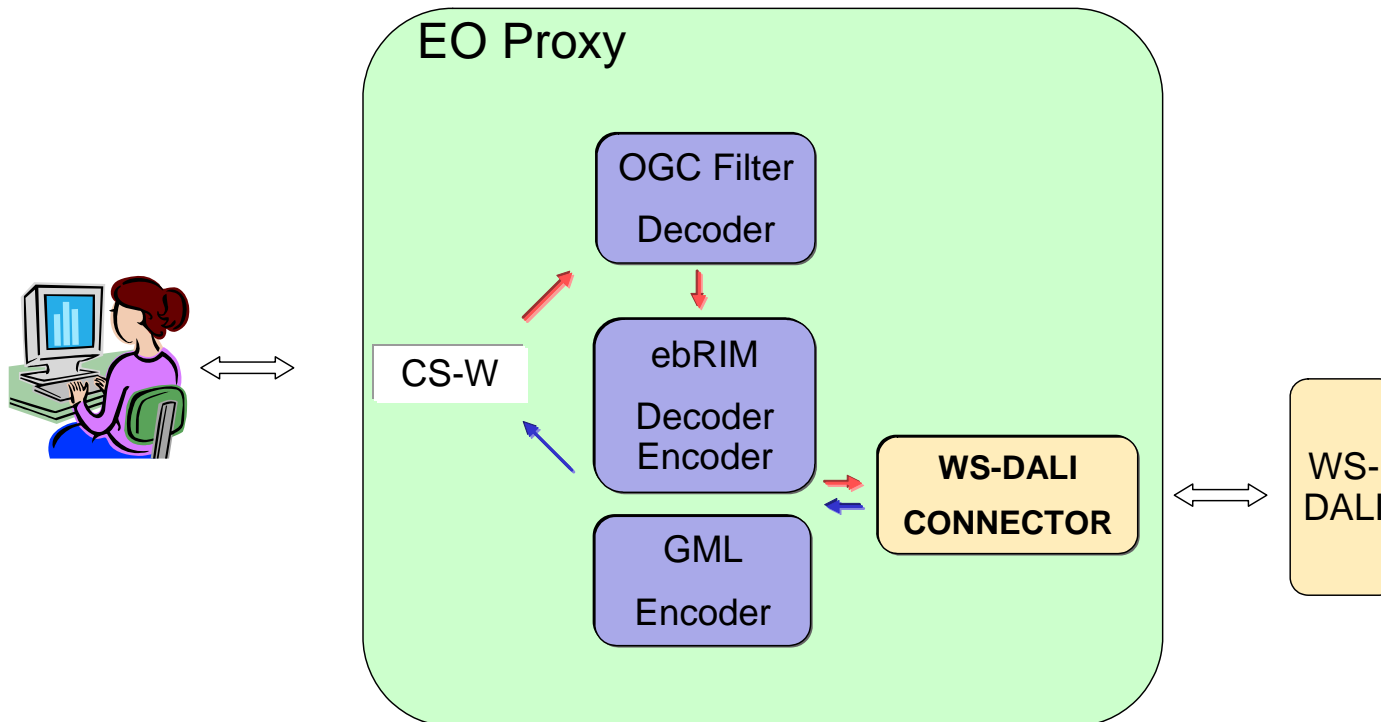


OGC 06-131 EO Extension Package for ebRIM applied to VITO synthesis and airborne products (GIM, VITO, ERDAS)

- Approach for metadata according to OGC 06-080
  - Extensions expected to cover VITO (synthesis and derived products) product needs.



- Support uptake of HMA standards (catalogue)
  - OGC 06-131 EO Extension Package for ebRIM for WS-Dali (Spot Image, ERDAS)





- Support uptake of HMA standards
  - OGC 07-018 EO Profile of SPS implementation for Radar – Earth Explorer (Deimos) and Optical (Spot Image)
    - Deliver a SPS EO Library
    - Test evolution towards new SPS 2.0 specification.

- Support uptake of HMA standards (identity management)
  - OGC 07-118 User Management integration with G-POD Grid (Terradue)
  - Objectives:
    - Harmonization of auth/N and auth/Z between G-POD and HMA
    - Assess the potential of 07-118 in a Grid infrastructure
    - Promote the usage of 07-118
    - Output: Prototype SOAP Gateway implementing 07-118 integrated in G-POD (reference platform @Terradue)

- Open-source support of HMA standards (identity management)
  - OGC 07-118 User Management - Open-source SSE toolbox implementation (Intecs)

- Open-source support of HMA standards
  - OGC 06-131 EO Extension Package for ebRIM implementation in opensource Gi-cat (CNR-IMAA)
  - OGC 07-038 ISO Extension Package for ebRIM implementation in opensource Gi-cat (CNR-IMAA)
  - OGC 07-063 EO Profile WMS open-source implementation – based on UMN Mapserver (Infoterra-UK)

- To evolve a consistent interpretation of the OpenGIS® Web Map Server standard as a basis for interoperable WMS serving of EO products
  
- To enable and promote interoperability between catalogue and web map services:
  - providing users with a mechanism to evaluate EO products before order / dissemination;
  - providing users with a seamless process for discovery -> evaluation -> order / dissemination.

<i>Event</i>	<i>At</i>	<i>Planned Date</i>	<i>Option 1 (short)</i>	<i>Option 2 (long)</i>
KO (T0)	ESRIN	2-3/07/2008	Phase 2 Kick-off	Phase 2 Kick-off
T0 + 3M	SPACEBEL	22/10/2008	PM1	PDR
T0 + 5M	OGC TC (Valencia)	02/12/2008	PM2 (optional)	PM2 (optional)
AR-1 (T0+7M)	SPACEBEL	30/01/2009	Acceptance Test Review (AR) Phase 2 Part 1	CDR
AR-2 (T0+9M)	SPACEBEL	30/03/2009	PM3	Acceptance Test Review (AR) Phase 2 Part 2
FP (T0+11M)	ESRIN	01/06/2009	Final Presentation (FP) Phase 2	Final Presentation (FP) Phase 2
EOC (T0+18M)	N/A	31/12/2009	End of contract	End of contract