

HMA for Science Kickoff Meeting

KO Meeting
24 January 2013, ESRIN Frascati

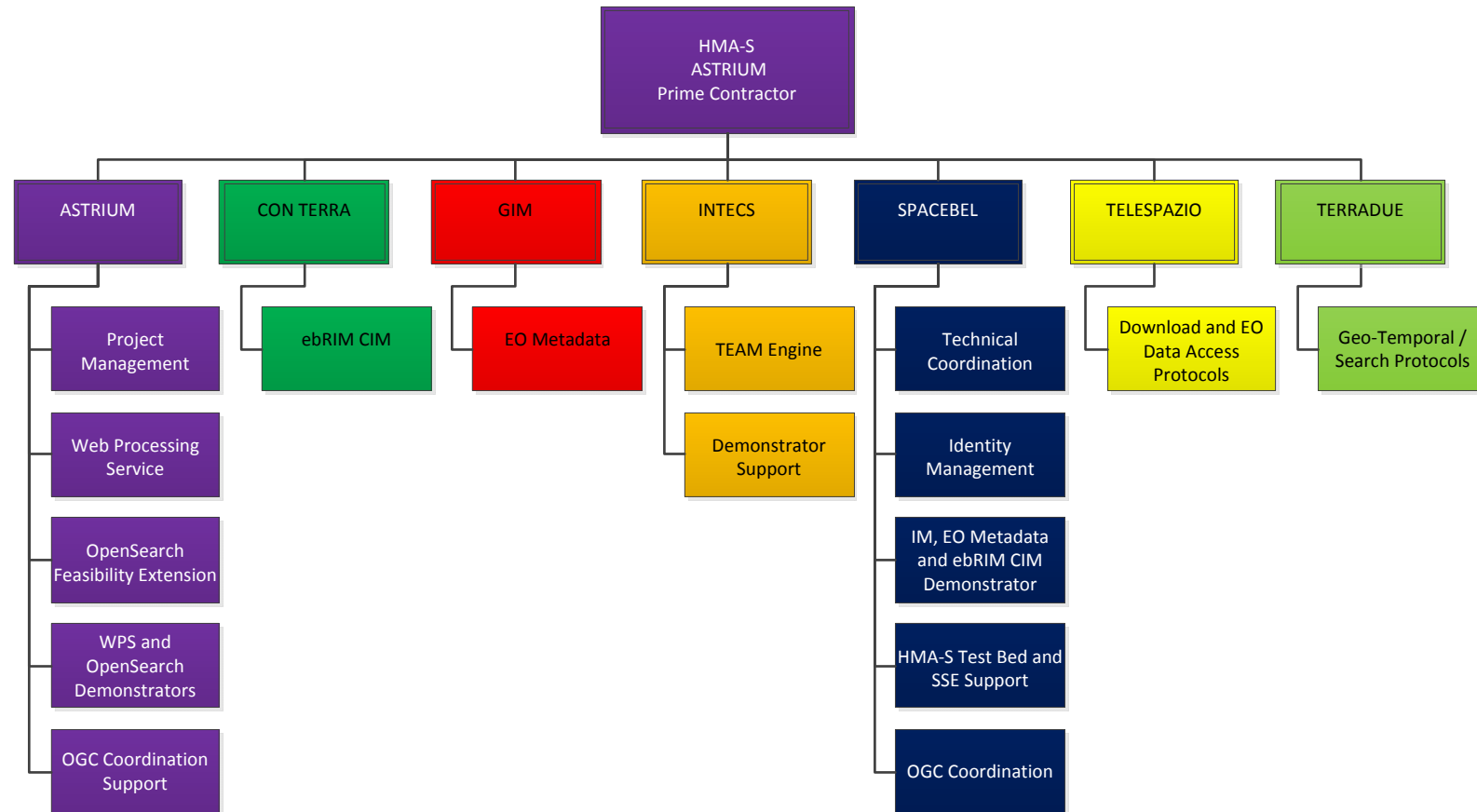
Yves Coene, SPACEBEL
Pierre Denis, SPACEBEL

- Specification Activities
 - Task 2: Identity Management

- Demonstrators
 - Task 2: Identity Management
 - Task 3: EO Metadata
 - Task 5: Enhancement ebRIM EP

- Task 8: HMA-S Testbed

- Technical Coordination
 - Task 9: Coordination and harmonisation

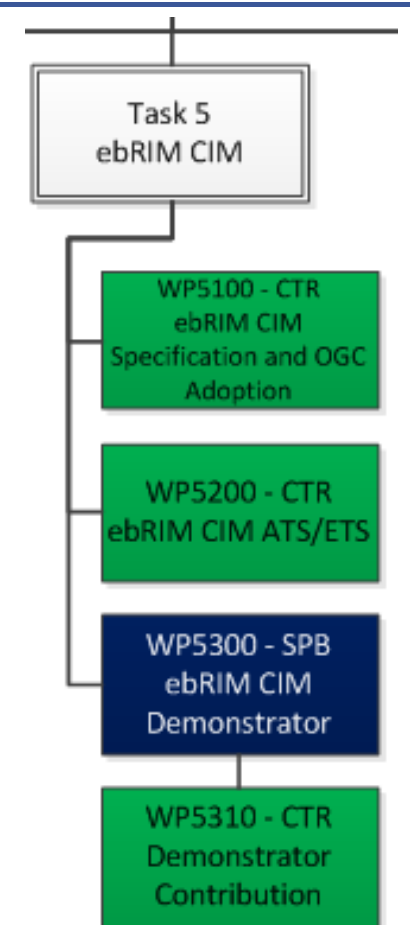


➤ Task inputs:

- D5000.1: Updated CIM EP of CSW ebRIM
- D4000.1: Opensearch extension for EO with O&M response.

➤ Tasks:

- ERGO catalog server: allowing to import and serve ISO metadata (Intecs)
- Updated SMAAD CIM to INSPIRE bridge (WP5310)
- Catalog client derived from SMAAD CIM EP catalog client



- Open-source Client derived from SMAAD client (<http://geo.spacebel.be>).

Metadata

Identification Information

Identifier: urn:uuid:bab7e5da-e17b-48f0-8c85-e286d0013eb0
 Title: FEDEO Clearinghouse
 Abstract: The FEDEO Clearinghouse provides distributed access to Earth Observation product metadata from various missions from various GMES Contributing Missions available through the ESA EO-DAIL.
 Topic Category:
 Created:
 Language: eng
 Dataset Language:
 Thesaurus Name: GEMET - INSPIRE Themes, Version 1.0
 Keyword Type:
 Keywords: Geology
 Thesaurus Name: GEMET - INSPIRE Themes, Version 1.0
 Keyword Type:
 Keywords: Land cover
 Thesaurus Name: NASA/Global Change Master Directory (GCMD) Earth Science Keywords, Version 8.0.0.0.0
 Keyword Type:
 Keywords: CATALOG SERVICE FOR THE WEB
 Online Resource: <http://gcmdata.esa.int/web/guest/commissions/envisat>

esa smaad semantic-web for mediated access

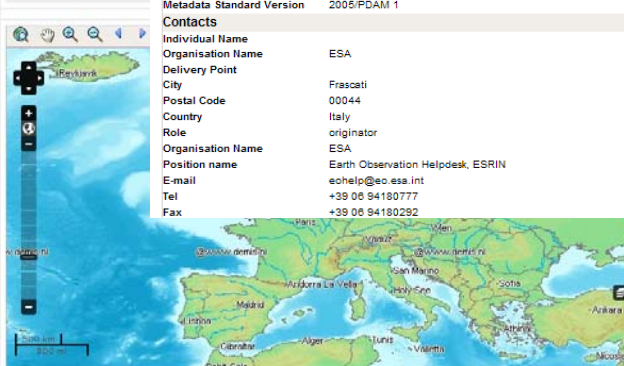
Home Services Administration Service Registration Order List Ann

FEDEO Collection Catalogue

Choose a queryable: Abstract, Subject, Keyword

Focus on: Agriculture (GCMD)

Search



GROUP ON EARTH OBSERVATIONS | GEO Portal


provided by: esa

Home Services

FEDEO Collection Catalogue

Choose a queryable: Abstract, Subject, Identifier, Organisation Name, Keyword Type

Search



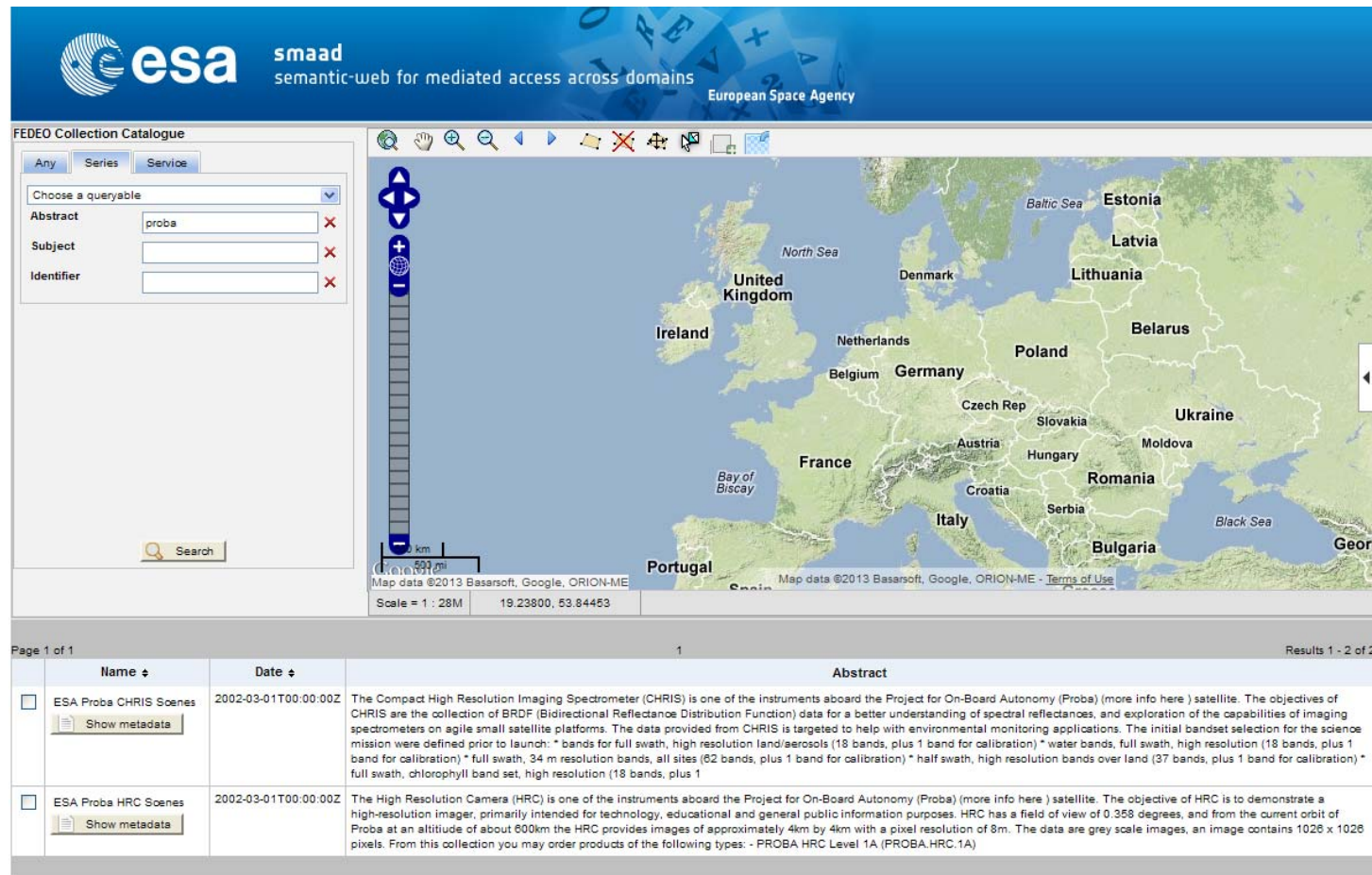
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| Name | Date | Abstract |
|------------------------|----------------------|--|
| ESA Proba CHRIS Scenes | 2002-03-01T00:00:00Z | The Compact High Resolution Imaging Spectrometer (CHRIS) is one of the instruments aboard the Project for On-Board Autonomy (Proba) (more info here) satellite. The objectives of CHRIS are the collection of BRDF (Bidirectional Reflectance Distribution Function) data for a better understanding of spectral reflectances, and exploration of the capabilities of imaging spectrometers on agile small satellite platforms. The data provided from CHRIS is targeted to help with environmental monitoring applications. The initial bandset selection for the science mission were defined prior to launch: * bands for full swath, high resolution land/water/veg (18 bands, plus 1 band for calibration) * water bands, full swath, high resolution (18 bands, plus 1 band for calibration) * full swath, 34 m resolution bands, all sites (82 bands, plus 1 band for calibration) * half swath, high resolution bands over land (37 bands, plus 1 band for calibration) * full swath, chlorophyll band set, high resolution (18 bands, plus 1 |

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| ESA Proba HRC Scenes | 2002-03-01T00:00:00Z | The High Resolution Camera (HRC) is one of the instruments aboard the Project for On-Board Autonomy (Proba) (more info here) satellite. The objective of HRC is to demonstrate a high-resolution imager, primarily intended for technology, educational and general public information purposes. HRC has a field of view of 3.358 degrees, and from the current orbit of Proba at an altitude of about 600km the HRC provides images of approximately 4m by 4m with a pixel resolution of 8m. The data are grey scale images, an image contains 1024 x 1024 pixels. From the collection you may order products of the following types: - PROBA-HRC Level 1A (PROBA_HRC_1A) |

- Open-source HMA-S Client (prototype) accessing FEDEO Collection catalog



The screenshot shows the FEDEO Collection Catalogue interface. The top header includes the ESA logo and the text "smaad semantic-web for mediated access across domains European Space Agency". The main content area is divided into a search panel on the left and a map on the right. The search panel has tabs for "Any", "Series", and "Service". Below these are search fields for "Abstract", "Subject", and "Identifier", with "proba" entered in the Abstract field. A "Search" button is at the bottom of the search panel. The map on the right shows Europe with various countries labeled, including the United Kingdom, France, Germany, Poland, and others. A scale bar at the bottom of the map indicates a scale of 1:28M.

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| <input type="checkbox"/> Show metadata | 2002-03-01T00:00:00Z | The Compact High Resolution Imaging Spectrometer (CHRIS) is one of the instruments aboard the Project for On-Board Autonomy (Proba) (more info here) satellite. The objectives of CHRIS are the collection of BRDF (Bidirectional Reflectance Distribution Function) data for a better understanding of spectral reflectances, and exploration of the capabilities of imaging spectrometers on agile small satellite platforms. The data provided from CHRIS is targeted to help with environmental monitoring applications. The initial bandset selection for the science mission were defined prior to launch: * bands for full swath, high resolution land/aerosols (18 bands, plus 1 band for calibration) * water bands, full swath, high resolution (18 bands, plus 1 band for calibration) * full swath, 34 m resolution bands, all sites (62 bands, plus 1 band for calibration) * half swath, high resolution bands over land (37 bands, plus 1 band for calibration) * full swath, chlorophyll band set, high resolution (18 bands, plus 1 |
| <input type="checkbox"/> Show metadata | 2002-03-01T00:00:00Z | The High Resolution Camera (HRC) is one of the instruments aboard the Project for On-Board Autonomy (Proba) (more info here) satellite. The objective of HRC is to demonstrate a high-resolution imager, primarily intended for technology, educational and general public information purposes. HRC has a field of view of 0.358 degrees, and from the current orbit of Proba at an altitude of about 600km the HRC provides images of approximately 4km by 4km with a pixel resolution of 8m. The data are grey scale images, an image contains 1026 x 1026 pixels. From this collection you may order products of the following types: - PROBA HRC Level 1A (PROBA.HRC.1A) |

Results 1 - 2 of 2

➤ Open-source client

- Shares DAIL/SSE source code for Catalog clients (same stylesheets)
- Same source code as Task 3 Catalog client, different configuration files.
- Endpoints/bindings configurable by user

```
<service>
  <id>1</id>
  <name>FEDEO Collection Catalogue</name>
  <icd>ogc-07-038-v11</icd>
  <operation name="Search">
    <xsl>FEDEO_Collection_Catalogue_Search.XSL</xsl>
    <binding>
      <soap action="GetRecords">http://projects-eu.erdas.com/erdas-georeg/wrs/SPB</soap>
    </binding>
  </operation>
  <operation name="Present">
    <xsl>FEDEO_Collection_Catalogue_Present.XSL</xsl>
    <binding>
      <httpget>http://projects-eu.erdas.com/erdas-georeg/wrs/SPB?request=GetRepositoryItem&service=
    </binding>
  </operation>
  <aoiRequired>>false</aoiRequired>
</service>
```

➤ Open-source servers

- Update of Buddata Catalog (Intecs) available on <http://rssportal.esa.int/tiki-index.php?page=Open Software>

Buddata catalogue

Buddata ebXML Registry/Repository (or ebRR in short) is an open source implementation of the OASIS ebXML Registry and OGC Catalogue Service. Much experience has been drawn from the OMAR ebXML Registry open source project (also known as "freebXML"). Extensions of the OASIS ebXML Registry have been implemented to support geospatial capabilities.

The project has been funded by the European Space Agency (ESA) in support of the cataloguing activity for the Heterogeneous Mission Accessibility - Interoperability program (HMA-I) via the ESA ERGO project.

Buddata ebRR put's a strong focus on its geospatial capabilities and the goal of the project is to include all so-called "ebRIM Profiles" or "extension packages" as defined by the OGC Catalogue Service, but also to support any other ebRIM profiles.

Natively it implements SOAP Web Service interfaces based on the OASIS ebXML RS 3.0 and OGC Catalogue Service specifications. Its main other features are (1) a harvesting component with transformation capabilities to translate XML-based metadata in GML and ISO formats to ebXML RIM (with OGC geospatial extensions) and (2) a Java API to access the ebRR directly from Java code.

- Update of CIM to INSPIRE Bridge (con terra) available on <http://rssportal.esa.int/tiki-index.php?page=Open Software>

HMA Collection Discovery to INSPIRE Discovery Conversion

This component contributed by the SMAAD Project implements Web service façade which translates CIM EP CSW [RD3](#) requests into INSPIRE Discovery or ISO AP CSW [RD2](#) requests according to [RD1](#). The CIM EP CSW protocol is proposed for HMA Collection and Service discovery.

- (RD1) INSPIRE Conformance Class of OGC Cataloguing of ISO Metadata (CIM) using the ebRIM profile of CS-W - CIM EP Protocol Binding of INSPIRE Discovery Services – OGC 08-197r1.
- (RD2) OpenGIS Catalogue Services Specification 2.0.2 – ISO Metadata Application Profile, OGC 07-045, Version 1.0, 19/07/2007, http://portal.opengeospatial.org/files/?artifact_id=21460
- (RD3) OGC Cataloguing of ISO Metadata (CIM) – Using the ebRIM profile of CS-W, OGC 07-038r3, Version 0.1.12, 14/12/2009.

➤ Outputs:

- D5000.1: Open-source Demonstrator
- D5000.2: Demonstrator TN including
 - Description of native interfaces
 - User Manual

