EUSC Building on Open Architecture

The European Union Satellite Centre (EUSC) mission, as defined by the EU Council, is to support EU decision-making by providing information based on analysis of satellite and aerial imagery and collateral data. This involves supporting many crucial areas of activity. There is general surveillance within the field of security, support for verification of arms-control agreements and the applica-tion of treaties, control of proliferation of weapons of mass destruction, support for humanitarian and peace-keeping missions, maritime surveillance, and prevention and management of environmental crises. The original operational infrastructure for EUSC was provided by its predecessor organ-isation, the former Western European Union Satellite Centre. The combined experience, know-how and infrastructure of that organisation enabled EUSC to provide a solid begin platform for decision-making support services.

But to meet increasing EU demand for information derived from earth imaging and to take advantage of new technologies, the EUSC is now putting in place the EUSC Reference Facility (EUSC-RF), a modern information architecture designed to provide the basic framework for all present and future EUSC information-system needs. It is the result of rigorous analysis of EUSC operations and data-sharing requirements and consideration of the ways in which modern internet technologies can support EUSC workflows. The EUSC-RF increases the operational capacity and efficiencies of the EUSC through adoption of modern interoperability approaches that are compatible with Web and internet technologies.

EUSC has recently awarded a contract for design and support of the EUSC-RF to a consortium led by ACS (www.acsys.it/en/index.php) with Ionic, LuraTech and Digital Video. A prototype (implemented by GALDOS, Spectrum Graphics, and ILOG) has already been made available for review and testing by EUSC and other agencies whose operations mesh with its own. The Request for Quotation specified that the architecture was to be based on mainstream information-technology devel-opments, including open standards such as those of the International Organization for Standardization (ISO), the Open Geospatial Consortium Inc (OGC), the World Wide Web Consortium (W3C) and the Organization for the Advancement of Structured Information Standards (OASIS). In addition, the EUSC has adopted the ISO JPEG 2000/GML profile, ISO19115/19139 geospatial metadata, and MIL-STD 2525B symbology sets based on the IDSS (Interoperability Design Study for Symbology) study organised by OGC.

Overall, this approach helps the EUSC and its partner organisations leverage their investments in geoprocessing systems and data. Sharing and reusing data helps decrease costs and results in more and better information. Open standards also enable selection of the best software tool for each job; they reduce technology and procurement risk (risk of being bound to one vendor) and they provide an opportunity to participate in the consensus standards processes that produce the standard interfaces and encoding that make this interoperability possible. EUSC has been active in OGC for many years, which has helped to ensure that OGC standards meet EUSC needs.

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