The new OGC Catalogue Services 3.0 specification – status of work

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We report on the work of the Open Geospatial Consortium Catalogue Services 3.0 Standards Working Group (OGC Cat 3.0 SWG for short), started in March 2008, with the purpose to process change requests on the Catalogue Services 2.0.2 Implementation Specification (OGC 07-006r1) and produce a revised version thereof, comprising the related XML schemas and abstract test suite. The work was initially intended as a minor revision (version 2.1), but later retargeted as a major update of the standard and rescheduled (the anticipated roadmap ended in 2008).

The target audience of Catalogue Services 3.0 includes:
• Implementors of catalogue services solutions.
• Designers and developers of catalogue services profiles.
• Providers/users of catalogue services.

The two main general areas of enhancement included: restructuring the specification document according to the OGC standard for modular specifications (OGC 08-131r3, also known as Core and Extension model); incorporating the current mass-market technologies for discovery on the Web, namely OpenSearch.

The document was initially split into four parts: the general model and the three protocol bindings HTTP, Z39.50, and CORBA. The CORBA binding, which was very rarely implemented, and the Z39.50 binding have later been dropped. Parts of the Z39.50 binding, namely Search/Retrieve via URL (SRU; same semantics as Z39.50, but stateless), have been provided as a discussion paper (OGC 12-082) for possibly developing a future SRU profile.

The Catalogue Services 3.0 specification is structured as follows:
• Part 1: General Model (Core)
• Part 2: HTTP Protocol Binding (CSW)

In CSW, the GET/KVP encoding is mandatory. The POST/XML encoding is optional. SOAP is supported as a special case of the POST/XML encoding.
OpenSearch must always be supported, regardless of the implemented profiles, along with the OpenSearch Geospatial and Temporal Extensions (OGC 10-032r2).
The latter specifies spatial (e.g. point-plus-radius, bounding box, polygons, in EPSG:4326/WGS84 coordinates) and temporal constraints (e.g. time start/end) for searching.
The temporal extent (begin/end) is added as a core queryable and returnable property.

Plenty of other changes are incorporated, including improvements to query distribution, WSDL and schema documents, requirements and conformance classes.
In conclusion, CS 3.0 is a long-awaited revision of the previous CS 2.0.2 Implementation Specification (approved in early 2007), whose requirements started to be collected as early as July 2007.
Various profiles of CS 2.0.2 exist, with related dependencies, and will need to be harmonized with this specification.