ISO/TC 211 Control Body for the Geodetic Registry Network

Development of the registry for Geodetic Codes and Parameters

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... building the foundation of the geospatial infrastructure, brick by brick ...
Scope

- **ISO Geodetic Registry Implementation**
  - Open Source Software for management and publication of Geodetic Codes & Parameters.
  - Compliant to ISO 19135 (Model, Roles, Procedures).
  - Providing Item Classes for ISO 19111.
  - Implemented as a service interface (REST, SOAP).
  - AJAX based web application (Spring Framework)
Conceptual Model
Conceptual Model

Coordinate Reference System
(example: ETRS89)

is comprised of

Datum
(example: European Terrestrial Reference System 1989)

and

Coordinate System
(example: ECR geocentric)
Core Model ISO 19135
Scope

- **Management Procedures**
  - Submission of a Proposal.
  - Approval process.
  - Withdrawal.
  - Appeal.
Scope

- Types of item proposals
  - Addition.
  - Clarification.
  - Supersession.
  - Retirement.
  - (Invalidation).
## Scope

### Roles

<table>
<thead>
<tr>
<th>Role</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Register Owner</td>
<td>Organization that establishes a <em>register</em></td>
</tr>
<tr>
<td>Register Manager</td>
<td>Organization to which management of a register has been delegated by the register owner</td>
</tr>
<tr>
<td>Control Body</td>
<td>Group of technical experts that makes decisions regarding the content of a register</td>
</tr>
<tr>
<td>Submitting Org.</td>
<td>Organization authorized by a register owner to propose changes to the content of a register</td>
</tr>
</tbody>
</table>
Model Extension

ISO 19135:2005 Procedures for Registration

+ RE_AdditionInformation
+ RE_AlternativeExpression
+ RE_AlternativeName
+ RE_AmendmentInformation
+ RE_AmendmentType
+ RE_ClarificationInformation
+ RE_DecisionStatus
+ RE_Disposition
+ RE_FieldOfApplication
+ RE_ItemClass
+ RE_ItemStatus
+ RE_Locale
+ RE_ProposalManagementInformation
+ RE_Reference
+ RE_ReferenceSource
+ RE_Register
+ RE_RegisterItem
+ RE_RegisterManager
+ RE_RegisterOwner
+ RE_SimilarityToSource
+ RE_SubmittingOrganization
+ RE_SubregisterDescription
+ RE_Version

(from ISO 19135-All Procedures for Registration)

ISO 19111 - All

+ ISO 19111 Referencing by Coordinates
+ ISO 19111-2: 2009 Extension for parametric values

(from ISO TC211)

GC&P

Coordinate Reference Systems
 coordinate operations

Coordinate Systems

Datum

Identified Objects
Model Extension
Registry Persistence

ISO 19111 - All
- ISO 19111 Referencing by Coordinates
- ISO 19111-2: 2009 Extension for parametric values

GC&P
- GCP_ItemClass
- GCP_Register
- GCP_RegisterItem

ISO 19135:2005 Procedures for Registration
(from ISO 19135-All Procedures for Registration)

XML - Schema

MDA Process

Hibernate

Java
Architecture

GUI

Registry Services

Register API

Register Business Logic

- REST
- SOAP
- CSW/ebRIM

- Addition
- Clarification
- Supersession
- Retirement

CRS
CS
Datum
Operation

Geodetic Codes & Parameters
ISO 19111
Submission
Approval
Appeal
Live Demo...
ISO Registry of Geodetic Codes and Parameters

The ISO Registry of Geodetic Codes and Parameters is a structured database of coordinate reference systems and transformations that is accessible through this on-line registry system. The registry includes only systems and transformations of international application. It does not include all possible coordinate reference systems and transformations.

This registry is provided under the auspices of ISO Technical Committee 211 on geographic information/ geomatics and conforms to ISO standards ISO 19111:2007 (Spatial referencing by coordinates), ISO/TS 19127:2005 (Geodetic codes and parameters), ISO 19135:2005 (Procedures for item registration) and its soon to be published revision ISO 19135-1 (Procedures for item registration - Part 1: Fundamentals), and ISO 19135-2:2012 (Procedures for item registration - Part 2: XML schema implementation).

The registry may be used free of charge but its use is subject to acceptance of the Terms and Conditions of Use. Users of the registry may query and view data and generate reports via anonymous guest access. Users may also submit proposals for new additions or clarifications to the registry.

The registry also provides a web service interface, allowing geospatial software to query and retrieve information from the register. Information on using the web services is available in the registry user’s guide.
### Geodetic Codes & Parameters

#### Overview

<table>
<thead>
<tr>
<th>Item ID</th>
<th>Name</th>
<th>Item class</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>4171</td>
<td>RGF93</td>
<td>Geodetic CRS</td>
<td>valid</td>
</tr>
<tr>
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<td>ED50</td>
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<td>valid</td>
</tr>
<tr>
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<td>ETRSS9</td>
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<td>valid</td>
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<tr>
<td>4275</td>
<td>NTF</td>
<td>Geodetic CRS</td>
<td>valid</td>
</tr>
</tbody>
</table>