Locations Project

04.09.2014
Overview & Status
for the Naming Conventions Sub-committee
Locations Overview

Locations Project

• Collaboration with CERN’s GI Service (ISP)
• Three parts
  • Define scope and raise awareness among stakeholders
  • Define new unified Location data repository
  • Provide new Location services
    – E.g. Location groupings to define and maintain facilities
Where did it start?

Route de Meyrin 385 in 1954
And now CERN looks like ...

Challenges

Location data is

• Obtained from different places
• Interpreted differently by consuming systems

Inter-system communication is difficult

Missing geographical representation

• TSO partitions
• Secondary sigles (synonyms)

Correlation w. other location aware data
Organisational challenges

Many different stakeholders and requirements
Historic baggage
Necessity to keep legacy systems running
Lack of resources in ISP & AIS
Locations Project - Goals

Talk the same language

Define a unique central location repository

Correlate with location specific information

Enable location groupings / custom locations

Solve existing issues

• Synonyms
• Building partitions
• Missing history

Requires help and collaboration from DSOs/TSOs, EN-EL, GS-ASE etc.
Locations Project - Goals

Talk the same language

Define a unique central location repository

Correlate with location specific information

Enable location groupings / custom locations

Solve existing issues

• Synonyms
• Building partitions
• Missing history

Importance of Naming Conventions!
Definition

A location is any object/place that is persistent in space, has physical (e.g. walls) or logical (e.g. borders) boundaries and generally cannot be (easily) moved around.

Note: An equipment is not a location!
Definition

A location is any object/place that is **persistent in space**, has physical (e.g. walls) or logical (e.g. borders) **boundaries** and generally **cannot be (easily) moved** around.

**Note:** An equipment is not a location!

**But:** Locations are necessary to identify a fixed position for an equipment and to locate it back.
What has been done?

Raise awareness & fight scepticism
  • Importance of locations for the Organization
  • In the past: similar unsuccessful initiatives

Analysis and prioritization of requirements

Identify location consumers’ needs

New GIS abstraction layer
  • Together with ISP (Site Information & Patrimony)
Separation of Responsibilities

Geographical information & measurements

• Geographical Information Service (ISP)
• Is the main data source
• Provides cartography/map services

Data distribution, enhancement, correlation

• Foundation Team in AIS
• Makes location data centrally available
• Provides possibilities to add domain specifics
• Ensures coherence between AIS applications
Data Flow

Source: Presentation from GS-SE (ISP: N. Lambert-Cart, Y. Robert) / Location Status Meeting 31.01.2014
Locations at CERN

- WORKS (3087)
- BUILDINGS (759)
- UNDERGROUND WORKS (469)
- BARRACKS (308)
- ROADS (1160)
- ACRONYMS (4077)
- ROOMS (17970)
- GREEN SPACES (1398)

Source: Presentation from GS-SE (ISP: N. Lambert-Cart, Y. Robert) / Location Status Meeting 31.01.2014
What is currently done?

**ISP**
- GEOSIP restructuring
- Work on source data quality
- Integrate underground locations & TSO partitions

**AIS & ISP**
- GISFOUND abstraction layer

**AIS**
- Data validation (discover data quality issues)
- New Locations data repository in Foundation
- Conceptual work: *location groupings*
Data Validation

- Unique IDs
- Start Date
- End Date
- History Management
New concepts

Availability of historical information
- As from now, all changes are preserved

Unique location IDs
- Every location has a unique ID
- Avoid problems due to reuse of location names

Custom locations
- Non-standard domain specific locations
  - E.g. TSO partitions

Location groupings
- E-Groups for locations
  - E.g. for experiment facilities
Location Groupings

Impact Location Tree

AIS Location Application

Logical grouping
What will be done?

Data in GISFOUND available
- End of June, completed further afterwards

New Locations data repository accessible
- October 2014

Migration from GEOSIP to AIS Locations
- Work mainly by location consumers
- Support from AIS
- Fixed deadline (still to be defined)

Locations application
- Edit domain specific location attributes
- Maintain location groupings

Sub project not resourced so far.
Potential Future

Interactive GesLoc
Space Management simulation tools
Inside building / underground routing
Future introduction of third dimension
  • Increases custom positioning possibilities
Summary

Locations

• Focus on the data
• Single source for everyone
  • CERN wide meaning of what a location represents
  • Ensure compatibility between systems
• Enable location groupings