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GML application schema made easy in GDAL/OGR and QGIS

Workshop

Francois Prunayre, Even Rouault, Christian Ansorge,
Sylvain Grellet, Hugo Mercier, Paul van Genuchten



Outline of workshop

Workshop outline

- Introduction (15')
- Tour de table
 - Workshop organizers
 - Participants
- Presentations / Q&A
 - Based on tour de table feedback
 - QGIS GMLAS plugin guided tour - use case on French Groundwater Information Network (GIN)
 - GML AS driver
- Hands-on (~3h)
- Wrap-up (15')



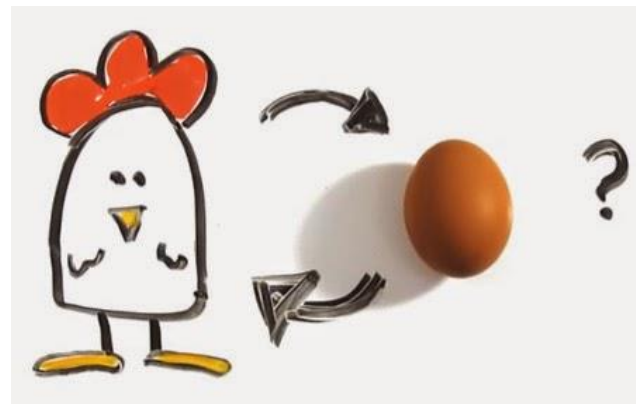
Introduction

Starting point and general issue:

- Complex feature XML import is still underdeveloped in GIS desktop clients
- Expected developments (over the course of time) have still not taken place

Side issue:

- “chicken-egg” / “data-server-client” problem?
- The server side is further developed
- Complex feature XML data available
- Still no sufficient client tools



INSPIRE context:

- Based on (mainly class) model oriented approach
- INSPIRE suggests complex feature GML as default encoding
- Data models are provided as UML/XSD only
- By Nov. 2017 all Annex I data is supposed to be provided harmonised and will be in the wide majority be provided as complex feature GML
- By Nov. 2020 Annex II and III are supposed to be fully implemented as well
- Annex I, II and III are currently >120.000 datasets across all Europe (trend is increasing)
- While countries are obliged to provide their data the user update due to missing client tools is staggering

Introduction

INSPIRE context:

Data-Service-Client problem

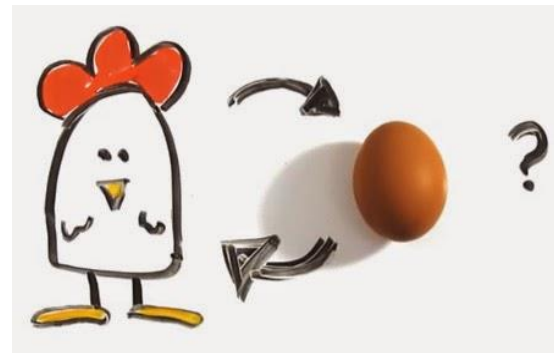
✓ Data

- Large amount of complex type XML data available

✓ Services

- Services providing for complex type encoded data available

☐ Clients ?!



Initial idea:

- Reuse information available in XML compliant to xsd(s) to handle this content with no hardcoded configuration
 - > XML aware mode and database generation on the fly

- Possibility to enrich the initial 'information seed' retrieved by implementing content negotiation on xlink:href
 - > retrieve codeList definitions, new feature instances linked to it



Introduction



Introduction

Run n° 1

QGIS 2.x GML application
schema toolbox ProofOfConcept


Run n°2


GML App Schema OGR Driver
and QGIS 3 integration

PyXB -> specific [OGR/GDAL GMLAS driver](#) (targetting GDAL 2.2), handling both reading and writing
Integration within QGIS 3

Run n°3
(now)

GML App Schema OGR Driver
and QGIS 3 integration
enhancements

 - **GDAL 2.2** GMLAS : addition handling specific SWE types based on GWML2 GW_GeologyLogCoverage and EU Air Quality Reportings (dataArray, dataRecord, ...)

 **3**: enhanced widgets for timeseries, and borehole logs + some commit to the trunk

