



Introduction

- Requirements to AQD e-Reporting
- Extension pattern used
- Benefits gained
- Reflection



- Air Quality Reporting under Directive 2008/50/EC
 & Implementing Provisions 2011/850/EU
- Requires yearly reporting of air quality data together with assessment methods and attainment of objectives
- Includes Up To Date (UTD) measurement data
- Requirement for provision of AQD data under INSPIRE 2007/2/EC. Implications:
 - Data models in accordance with INSPIRE, ISO and OGC Standards
 - Data made available via web services



Reporting Dataflows:

- **B.** Zones and Agglomerations
- C. Assessment Regime
- D. Information about Assessment Methods
- E. Primary data (both validated & UTD)
- F. Generated Aggregated Data
- G. Attainment of Environmental Objectives



Reporting Dataflows:

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No corresponding INSPIRE
Theme. Modelled in
accordance with INSPIRE
specifications & underlying
data models for data
model consistency



Reporting Dataflows:

B. Zones and Agglomerations





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Extension Pattern

Inheritance

class AQD_Station natlStationCode: CharacterString municipality: CharacterString [0..1] EUStationCode: CharacterString meteoParams: MeteoParametersValue [0..*] stationInfo: URL [0..1] areaClassification: AreaClassificationValue dispersionSituation: DispersionSituation [0..1] altitude: Distance reportedTo:ReportToLegalAct[0..*] :AbstractMonitoringObject :AbstractMonitoringObject inspireld :Identifier legalBackground :LegislationReference [0..*] + name :CharacterString [0..*] responsibleParty :CI_ResponsibleParty [0..*] + additionalDescription :CharacterString [0..1] beginLifespan :DateTime geometry :GM_Object [0..1] endLifespan :DateTime [0..1] ::EnvironmentalMonitoringFacility representativePoint :GM_Point [0..1] + measurementRegime :MeasurementRegimeValue + mobile :MobileValue resultAcquisitionSource :ResultAcquisitionSourceValue [0..1] ::AbstractMonitoringFeature + reportedTo :ReportToLegalAct [0..*] ::AbstractMonitoringObject + legalBackground :LegislationReference [0..*] responsibleParty :CI_ResponsibleParty [0..*] beginLifespan :DateTime endLifespan :DateTime [0..1]



Extension Pattern

Reasoning:

- Additional information tightly coupled with the class being extended
 - Relevant beyond European Reporting
- Less Features to deal with
- And we were still learning!



Benefits gained

Serve once, reuse often:

- Only one implementation fulfills both INSPIRE and EEA e-Reporting
- Full information available to all interested parties
- Reuse of both server and client technologies across INSPIRE, e-Reporting, other uses



Critical Reflection

Not just benefits, problems with derivation approach:

- New "unknown" feature types, requires understanding of derivation hierarchy to understand feature types provided
 - Hint in the Metadata would be valuable
- Not supported by all technologies
 - Some libraries do not support derivation



Conclusions

- Both approaches (derivation, new features)
 have their strengths and weaknesses
- Still learning, time will tell



Thanks for your Attention!

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