ESCWA SDMX Workshop

Session: SDMX Registry
Registration of a Data Set
Data or Metadata Structure Definition

Data or Metadata Flow

Provision Agreement

Registered Data Source or Metadata Source

Data Provider

Data Provider Scheme

Content Constraint

Category

Category Scheme

Categorisation

Registered Data Source or Metadata Source references

Data or Metadata Source

Story So Far
Objectives of the Session

• At the end of this session you will
  – Understand how the registry is used to support applications requiring access to data and metadata
  – Be able to set up provisioning metadata
  – Be able to register a data set
  – Be able to query for data
SDMX Registry

• Purpose
  – Repository: a shared resource that is used to store, maintain and retrieve structural metadata
  – Registry: a shared resource that is used to register the existence of data and reference metadata so that it can be discovered

• Mechanism
  – Registry interface for submission and query
  – REST interface for query only

• Do you need a Registry?
  – No, but if you collect or disseminate data then it is extremely useful for maintenance of and access to structural metadata
  – It is probable that you will either run a Registry or access other Organisations’ registries
  – If you do not have a Registry you can open your database to structural metadata queries
Registry Architecture: Conceptual

Applications Using the SDMX Registry
- Structure Maintenance, Query and Visualisation
- Data and Metadata Registration Maintenance
- Data Reporting, Web Dissemination, Table, Graphing, and Charting
- Database Table Creation, Data and Metadata Loading

SDMX Registry Services
- Structure Submission and Query
- Data and Metadata Registration
- Data and Metadata Discovery
- Event Notification

SDMX Registry Content
- Provisioning Metadata Repository
  - Data and Metadata Registrations
- Structural Metadata Repository
  - Data and Metadata Structures, Item Schemes, Constraints, Data and Metadata Flows, Process, Provision Agreements, Structure and Item Scheme Maps

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SDMX Artefacts: Registry Contents

Structure Definition
- uses specific data/metadata structure

Data Flow
- can get data/metadata from multiple data/metadata providers
- categorisation

Data Set Registration
- URL, registration date etc.

Provision Agreement
- registers existence of data and metadata sets

Data Provider
- can provide data/metadata for many data/metadata flows using agreed data/metadata structure

Registered Data and Metadata

Structural Metadata
Registry Interfaces V 2.0

The RegistryInterfaceMessage is used to conduct all interactions with the SDMX Registry Services.

- register dataset
- query for data
- add structural metadata
- add provision agreements
- query provision agreements
Specific to the Registry

- Notify Registry Event
- Submit Subscription Request
- Submit Subscription Response
- Submit Registration Request
- Submit Registration Response
- Query Registration Request
- Query Registration Response
- Query Subscription Request
- Query Subscription Response
- Submit Structure Request
- Submit Structure Response

Structure Query – same query for non-registry repositories

This can be the REST interface or a structure query message for one of:

- StructuresQuery
- DataflowQuery
- MetadataflowQuery
- DataStructureQuery
- MetadataStructureQuery
- CategorySchemeQuery
- ConceptSchemeQuery
- CodelistQuery
- HierarchicalCodelistQuery
- OrganisationSchemeQuery
- ReportingTaxonomyQuery
- StructureSetQuery
- ProcessQuery
- CategorisationQuery
- ProvisionAgreementQuery
- ConstraintQuery
SDMX Artefacts: Registry Contents

Data Provider -> Provision Agreement

Provision Agreement (URL, registration date etc.) -> Data Source

Structure Definition

IAEG:MDG

IAEG:MDG_STATS_WEB

IAEG:DATA_PROVIDERS.UN
Data Source Registration

- The data set is “registered” against the provision agreement
- The registry stores metadata (e.g. URL) about the data set: it does not store the data set

Data Flow

Structure Definition

Data Provider → Provision Agreement

Provision Agreement ← Data Source

URL, registration date etc.
Registry Interface: Data Set Registration v 2.1

Action is “replace”, “append” etc.

Identifies the Provision Agreement

A file is a simple datasource

A database is a queryable datasource
Exercise

Objective
To create a Data Provider and link this to a Dataflow so that a data set can be registered.

Exercise Overview

In this exercise you will:
1. Create a Data Provider.
2. Link the Data Provider to a Dataflow in a Provision Agreement.
3. Register a queryable Data Source (a database).