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**EUROPEAN COMMISSION  
STATISTICAL OFFICE OF THE  
EUROPEAN COMMUNITIES (EUROSTAT)**

**ORGANISATION FOR ECONOMIC  
COOPERATION AND DEVELOPMENT (OECD)  
STATISTICS DIRECTORATE**

**Joint ECE/Eurostat/OECD Meeting on the Management of Statistical Information Systems (MSIS)**  
(Bratislava, Slovakia, 18-20 April 2005)

Topic (iii): XML and web services

## **SDMX Open Data Interchange (SODI)**

### **Invited Paper**

Submitted by Eurostat<sup>1</sup>

#### **I. BACKGROUND**

1. SDMX (Statistical Data and Metadata eXchange) is an initiative sponsored by the Bank for International Settlements (BIS), the European Central Bank (ECB), Eurostat, the International Monetary Fund (IMF), the Organisation for Economic Cooperation and Development (OECD), United Nations (UN) and the World Bank (WB), aimed at fostering more efficient processes for exchange and sharing of statistical data and metadata among international organizations, their constituencies and users. Full information on the SDMX standards and organization is available on <http://www.sdmx.org>. The SDMX Standards (Version 1.0) are in the process of being submitted to ISO for acceptance as a Technical Specification.

2. SODI is proposed as an alignment project under SDMX, as a proof of its concept of data sharing, within the European Statistical System. The project is lead by Eurostat; the national statistical institutes of Germany, France, the Netherlands, Sweden and the UK participate in the pilot phase, which started in November 2004. OECD and ECB participate as observers in the project.

#### **II. OBJECTIVES**

3. The SODI project has been designed to test a new approach for collecting and disseminating short-term statistics from EU Member States, aimed particularly at:

- Making short-term statistics at EU available more quickly, ideally at the same time as they are available at national level;

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<sup>1</sup> Prepared by Leonhard Maqua and Georges Pongas ([georges.pongas@cec.eu.int](mailto:georges.pongas@cec.eu.int)).

- Making these statistics easily accessible to users in formats that facilitate further use.
4. The project is centred on the concept of data published at national level by EU Member States being made available simultaneously through a common dissemination environment at EU level.
  5. The project will investigate not only technical issues but also the issues related to divergence between national and EU versions of the same indicators.

### **III. APPROACH**

6. The SODI project will investigate various approaches, based on SDMX standards and tools, for streamlining the collection of these indicators. The project will address, among other issues:
  - The data model and metadata standard to be used. It will prove that the SDMX-EDI (EDIFACT-based) and the SDMX-ML (XML-based) messages are compatible and suitable for the transmission of economic and financial statistics, including those based on complex concepts like the Gross Domestic Product (GDP).
  - The interface to be used: "push" or "pull": The "push" interface is the traditional way of transmission; Member States send the data (normally via the internet) using the transmission programs provided by Eurostat (STATEL, STADIUM, eDAMIS) to Eurostat. The "pull" interface means, that Eurostat fetches the data from the websites of the National Statistical Institutes
  - Implementation of the "pull" mechanism: Several times a day, a requestor application in Eurostat will check the RSS feeds generated by the national statistical institutes. These RSS feeds contain information on new data and on revisions. In case of new or revised data available, the requestor application then issues – via the SOAP protocol – an SDMX request message to the web server of the national statistical institute, which in turn will send back on the same the actual data as an SDMX-ML message.
  - Legal questions (relation of SODI with the reporting obligations of the Member States).
  - Questions of validation and seasonal adjustment by Member States and by Eurostat.
  - Integration of the SODI concept into the data life cycle concept of Eurostat, including the implementation of proper follow-up of received data.
7. There will be a regular exchange of experience with the OECD NAWWE project, in order to ensure the coherence of technical developments in the two projects.
8. The SODI concept requires a by far higher degree of harmonization of statistical dissemination in the Member States (at least in the form of a "European" area in their dissemination database) than the current data transmission methods.
9. SODI is expected to receive financing from the IDABC (Interchange of Data between Administrations, Businesses and Citizens, see <http://europa.eu.int/idabc/en/home>) programme, a Commission programme led by the Directorate General "Enterprise and Industry". In this context, it forms part of a general statistical project proposed by Eurostat, called X-DIS (XML for Data Interoperability in Statistics).

### **IV. EXPECTED OUTCOME**

10. The special benefits of SODI would be:
  - A single European source for up-to-date economic data from all participating Member States;
  - A dissemination format based on the SDMX standard. With special modules for visualisation, this will improve the readability for citizens, but at the same time give the chance to automatic data analysis for business users;

- Decreased reporting burden to international organizations, as the SDMX standards used are accepted by all stakeholders.

11. SODI shows the need for standards in data and metadata, and the need for concepts understood the same way everywhere in Europe. It will demonstrate the need for a discipline in publishing; national dissemination has to be simultaneous with European dissemination. This will mean revising transmission procedures and aligning our treatment processes, for instance in seasonal adjustment.

## V. THE SODI PILOTS

12. As mentioned above, Eurostat has started a pilot phase for the SODI project, with the national statistical institutes of Germany, France, the Netherlands, Sweden and the UK as partners.

13. These pilots are characterised by the following technical and organizational environment:

- No external financing, the pilots are carried out with internal resources both in the Member States and at Eurostat;
- Restricted to quarterly gross domestic product (GDP) and monthly industrial production index (IPI);
- Data formats for the transmissions are SDMX-EDI (corresponding to GESMES/TS) and SDMX-ML;
- “Push” transmission via STADIUM or EDAMIS, “pull” transmission via SOAP web service on the web site of the National Statistical Institute, triggered by an RSS feed on the same web site;
- “Publication” of the received data is done on CIRCA (restricted area, but accessible to all National Statistical institutes);
- Results available mid-2005.

14. The objectives of this pilot phase are:

- Proof-of-concept for the SDMX data formats of the Principal European Indicators (not trivial, as National Accounts data are currently not available in GESMES-TS);
- Proof-of-concept for the “Pull” data transmission method;
- Proof-of-concept for the publication of SDMX-ML data (visualisation with CSS or XSL);
- Proof of the ability of the Member States to provide data in SDMX format for Eurostat at the same time as national data;
- Obtain a feasibility study for the SODI Project;
- Obtain an issue paper covering open technical and non-technical (i.e. organisational, statistical, legal, political, etc.) questions.

15. The current status of the pilots is, that three countries are using "push" technology, and two are preparing for the "pull" method. Two countries are already sending SDMX-EDI data, two others provide SDMX-ML. Eurostat is able to verify the data and uploads all data received on the CIRCA web site in SDMX-ML format.

16. The first version of the issue report mentioned above will be discussed at the next meeting of the SODI pilots task force, which will take place on 22 April 2005 in Luxembourg.

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