

**CALL FOR EXPRESSION OF INTEREST (EOI)
FOR THE REQUEST FOR PROPOSAL (RFP) N° PTD/10/053**

**MAPS and DMAPS Service-Oriented Architecture (SOA) deployment
MAPS Modernization Project – Phase II**

BACKGROUND INFORMATION

1. BACKGROUND

1.1 The MAPS modernization project

http://www.wipo.int/export/sites/www/madrid/en/docs/wipo_maps_dmaps_report.pdf

In 2007, WIPO commissioned an external company, Sogeti, to review the systems (MAPS, DMAPS and IMAPS) used to process International Registrations of Trademarks and Industrial Designs, and to propose a roadmap for their modernization.

Sogeti's proposed plan was subsequently approved by WIPO's member states assemblies in September 2007.

http://www.wipo.int/edocs/mdocs/govbody/en/mm_a_38/mm_a_38_www_84052.pdf

http://www.wipo.int/edocs/mdocs/govbody/en/mm_a_40/mm_a_40_2.pdf

http://www.wipo.int/edocs/mdocs/govbody/en/mm_a_42/mm_a_42_2.pdf

http://www.wipo.int/edocs/mdocs/govbody/en/mm_a_42/mm_a_42_1.pdf

1.2 Key findings of the Sogeti Report

- MAPS and DMAPS are well designed, building efficient and effective business functions based upon integrated workflow tools, interactive programs and modular programs for the elaboration of business and data logic.
- MAPS and DMAPS support the business activities of the International Bureau for the administration of procedures under the Madrid and Hague systems, effectively and with low operational risk. The IBM mainframe platform, on which MAPS and DMAPS operate, is inherently scalable and robust with respect to internal operations.
- Operation managers and internal users are satisfied with the features available in MAPS and DMAPS, for the internal activities related to their operational responsibilities. However, some functional weaknesses have been identified in specific areas, such as translation, classification, text handling and e-Business.
- MAPS and DMAPS are not well positioned to implement mainstream e-Business functionality (for example Web Services) and present a number of technical constraints for improving translation, text management, data analysis and search tools. The existing IBM mainframe platform also presents difficulties for the integration of standard office automation tools and document management products.

1.3 MAPS modernization project – Phase I

- The IBM platform has been replaced by a UNIX environment running the Adabas/Natural application.

1.4 The SOA software selection and Proof of Concept (POC) project

To allow WIPO to address the functional weaknesses of its applications whilst opening them progressively to e-Business, Sogeti recommended the adoption of a Service-Oriented Architecture (SOA).

As a first step towards building this architecture WIPO launched, in June 2009, a request for proposal for the supply of SOA software and services for a Proof of Concept (POC) project. The Swiss firm Elca was retained to carry out this assignment using Oracle/BEA software.

The POC project was completed by the end of April 2010 and it was decided to proceed with the SOA venture.

1.5 Key findings of POC

POC's key findings can be summarized as follows:

- The MAPS Natural code developed in the early nineties doesn't conform to the modern MVC model. The separation between data access, business logic and presentation layers isn't clear enough to allow an extensive reuse of the legacy code. The use of Natural code would therefore be restricted to data access objects, if ADABAS is to be retained as DBMS. The business logic would either be written using Java, or implemented in a rules engine.
- MAPS data and index structures had been designed nearly 20 years ago with limitations imposed by the technology that was then available. A major investment such as the modernization on MAPS & DMAPS should make an optimal use of today's technologies. This would indeed result in a leaner, more reliable and easier to maintain system.

1.6 Full SOA deployment

The Sogeti plan proposed an initial ("phase II") deployment of SOA on the assumption that the services of the legacy application code could be reused extensively. The subsequent migration ("phase III") to a modern DBMS system and the complete phasing out of the Natural were proposed as a last, optional, phase.

Two facts lead WIPO to review somewhat this approach:

- POC revealed that most of the legacy MAPS/DMAPS code is not suitable for SOA deployment.
- Difficulties experienced in recruiting Natural/Adabas expertise, which becomes rare in a niche market.

Therefore, the SOA deployment will occur as one project, at the conclusion of which MAPS and DMAPS will be based on an Oracle Database engine. However, risk analysis may lead to two main project iterations, where the first iteration would deliver an SOA architecture based on an Adabas/Natural data layer. In such case the use of Natural would be strictly limited to building data access objects.

1.7 WIPO's SOA software platform

Following the June 2009 RFP, WIPO has acquired licenses for the following software and will required proposals to be largely based on this platform.

- Oracle Business Process Management Suite (BPM Suite)
- Oracle Weblogic Suite
- Oracle SOA Suite for Oracle Middleware

- Oracle SOA Management Pack Enterprise Edition
- Oracle Service Registry
- Oracle Enterprise Repository
- Tomcat 6.0
- Oracle Server
- Trados (translation software).

1.8 The Pilot project

To gain experience with e-Business applications WIPO will undertake a Pilot project in cooperation with several National Offices.

The objective of the Pilot will be to provide Applicants and National Offices with a paperless process to file and transmit new trademark applications. This process and its supporting application will consume Web Services deployed both by WIPO and the National Offices.

The Pilot project should be completed by mid 2011.

2. OBJECTIVE OF THIS REQUEST FOR EXPRESSION OF INTEREST

To establish a list of pre-qualified suppliers of IT services that have the proven capability to build and deploy modern SOA systems, in the hardware and software environment chosen by WIPO.

Pre-qualified suppliers will subsequently invited to respond to the Request for Proposal for the MAPS & DMAPS SOA deployment that WIPO intends to issue during the first quarter of 2011.

3. SUMMARY OF THE UPCOMING REQUEST FOR PROPOSAL

3.1 The Legacy applications to be modernized

The bulk of the modernization will be to migrate the MAPS and DMAPS applications from Natural/Adabas to WIPO's new SOA platform. This migration may also affect other supporting systems such as IMAPS (Document Image Processing) or publications systems.

The following table gives an indication of the volumes involved in the migration.

Application	Lines of Natural code	N° of objects	UI programs	Business Logic (lines)	UI (lines)	Batch Programs (Lines)	N° of Workflows
MAPS	812,729	3,683	813	318,659	222,552	272,137	68
DMAPS	310,111	1,457	359	132,366	102,014	75,731	33
Total	1,122,840	5,140	1,172	451,025	324,566	347,868	101

MAPS and DMAPS benefit from an in-house developed workflow system. Currently MAPS is composed of 68 workflow classes and DMAPS of 33. The number of activities within one class varies from about 50 to 5 or 6. A large number of activities are shared between workflows.

3.2 Target system requirements

- Replace current MAPS & DMAPS systems:

The main objective of the project will be to transform the MAPS and DMAPS systems into a modern application operated on WIPO's new SOA software platform. This system will include all existing MAPS and DMAPS functions.

- Act as a back office system for the future e-Business system:

The new systems will allow quick and seamless integration of e-Business requirements. They must also open the way to end-to-end business process integration.

- Replace custom made facilities with "Best of Breed" commercial tools:

MAPS and DMAPS have several components (text processing, translation, XML production) that have been developed in the early nineties as an integral part of the mainframe application. Such components should be replaced by off-the-shelf tools; hence removing a significant amount of complex code from the applications.

- Rich Internet Application (RIA):

All user interfaces will be Rich Internet Applications. Ergonomic standards and templates will be defined early in the project.

- Provide strong tightly encapsulated business rules implementation:

Business rules will be deployed as services. Such services may be implemented via Java code or through a rules engine. The decision regarding the type of implementation will be based on risk analysis. Implementation may also be subject to two successive iterations.

- Managed register of all services provided:

At the completion of the project, SOA governance tools and practices will be firmly established. The register of services, preferably UDDI compliant, will be a cornerstone of the architecture.

- Provide a data structure that leverages the capability of modern DBMS and hardware:

The use of modern hardware and of a modern relational DBMS will remove many of the constraints under which the MAPS data structure was originally designed.

3.3 Project management and delivery

3.3.1 Time and materials versus fixed cost elements

WIPO will request fixed price offers for the delivery of the MAPS/DMAPS modernized systems.

3.3.2 Project Structure

The project structure will comprise resources from both the Supplier and WIPO.

3.3.3 Methodologies

WIPO expects suppliers to base their proposals on a robust set of project management and systems development methodologies.

Iterative Systems Development methodologies that offer sound risk management are likely to be preferred.

3.3.4 Production transition

In order to ensure a good transfer of skills between the Supplier and internal WIPO staff, the project plan may isolate a small subset of the overall project to be developed by WIPO under the tutoring of the Supplier.