CNIPA and legislative XML: an update on projects and new initiatives

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Abstract. In the last two years CNIPA has been involved in several projects related to Legislative XML. Some of them directly adopt NormeinRete standards, while others are influenced by NormeinRete results. Currently, CNIPA’s projects mainly focus on back office issues, in order to make information systems effective in supporting the whole laws management process. In this paper we illustrate current and forecast CNIPA’s initiatives in the field of Legislative XML.

Keywords: Italian national projects, e-Leges, CNIPA, NormeinRete, Legislative XML

1. Introduction

The Italian National Centre for Information Technologies in the Public Administration (CNIPA) was established in 2003, from the merger of the Italian National Authority for IT in the Public Administration (AIPA), which had been operating since 1993, and the Italian National Technical Centre. Its tasks are the promotion, the coordination, the planning and the control of the development of information systems within Government central organizations and agencies, through standardization, interconnection and integration.

Some CNIPA’s projects on legislative XML achieved notable results over the last years. They concern both standardization and system architectures in order to manage legal document processes at different stages in their life cycle.

The first important CNIPA’s project on legislative XML was NormeinRete. Starting from this experience, CNIPA took part to several other projects, enlarging its interests from front office (e.g., services to citizens) to back office (e.g., enactment process). Currently, an important initiative in which CNIPA is involved is the Italian National “ex 107” program.

In this paper some CNIPA projects are briefly described. The paper is structured as follows: Section 2 is dedicated to a description of NormeinRete project; in Section 3 the “107” program is illustrated. Section 4 describes the new proposal for NormeinRete project, a short
summary of other CNIPA relevant projects is provided in Section 5. Finally, in Section 6 there are some final considerations.

2. NormeinRete initiative

The project NormeinRete (Lupo and Batini, 2003) (i.e. Norms in the net) has been promoted since 1999\(^1\) by Italian Authority for information technology in Public administration (AIPA - now CNIPA) and Ministry of Justice. Its main objective was to improve the access to legislative and regulatory acts (laws, decrees, rules) by citizens and professionals through the Internet, adopting a federative approach. Moreover, it allows to fulfil the citizens’ right to acquire knowledge of norms and to support Public Administration in managing legislative documentation life-cycle efficiently.

During the last years, the project has achieved lasting and shared results:

− a standard for XML representation of norms (AIPA, 2002). It has been defined a specific format for Italian legislation, with particular regard to the peculiarity of legislative documents structure, metadata representation and other significant information useful to provide advanced automatic functions. Moreover, the availability of documents marked-up according to shared formats allows the creation of advanced search and retrieval functions operating on distributed databases effectively.

− A standard for norms persistent identification (AIPA, 2001; Spinosa, 2001), based on IETF Uniform Resource Name specification (Masinger and Sollins, 1994) that allows to identify each document regardless of its physical address (e.g., URL) and to automatically hyperlink resources through a resolution system.

− A portal as a unique point of access to the Italian legislative corpus. [www.normeinuerete.it](http://www.normeinuerete.it) provides search and retrieval functions operating on all the Italian laws from 1904, published on more than 50 different web sites. It also provides utilities to automatically transform references contained in the laws into navigable links. The portal contains the entire project documentation (in Italian) and other information related to the project. It includes e-learning tools on technical matters, a software download section and a best-practices section to encourage experiences sharing, in

\(^1\) At the beginning as experimental project
order to create a virtual space for knowledge sharing within the public administrations community.

− An infrastructure for identifier resolution and management. Currently, the mechanism to resolve identifier is provided within the portal itself, by means of a CGI component.

Both XML standard and URN derived standard are adopted by a growing number of private operators in addition to the majority of Italian public administration. European institutions and other countries have also shown interest in them.

3. Italian National “ex 107” program

One of the most important recent initiative concerning the use of information and communication technologies in the legal field is the Italian National program for free access to in force laws. The program was set up by the Italian law n. 388/2000 (i.e., financial act 2001) in the article number 107 and therefore it is commonly named “ex 107” program. The main objectives are:

− to produce the in force version of the whole Italian legislative corpus;
− to allow free access to in force legislation through the Internet;
− to support mark-up, legislative process, classification and consolidation.

The “ex 107” program is managed by a Steering Committee composed by general Secretaries of the Italian Senate, the Chamber of deputies and the Prime Minister office. Moreover it involves the Italian Ministry of Justice, Supreme Court of Cassation and CNIPA.

The “ex 107” program and NormeinRete project, despite of deep differences in architectural and organizational philosophy, have some relevant points in common. In fact the program adopts both NormeinRete standards and the NormeinRete cooperation registries will be linked to the infrastructure that will be implemented to fulfil the program objectives. Moreover, the document repository of the program will use the navigation facilities provided by NormeinRete resolution service.
3.1. CNIPA PROJECTS FOR THE “EX 107” PROGRAM

Within the above mentioned program, CNIPA proposed a project named e-Leges (where “e” stands for electronic), composed by several sub-projects, which aims to increase the effectiveness of normative processes. The sub-projects are s-Leges, x-Leges, p-Leges, c-Leges and r-Leges. Each sub-project concerns a very specific aspect; nevertheless all together concur to improve the way laws are enacted and managed in their life cycle. s-Leges, x-Leges and p-Leges projects are briefly described in the following:

s-Leges The s-Leges project (“s” stands for standards) regards standardization of formats and the providing of tools for supporting legislative processes. The project directly supports the enrichment and the extension of CNIPA’s XML and URN standards. In 2006 the project activities mainly focused on formats able to manage bills and also to identify documents not enacted yet.

x-Leges The objective of x-Leges project (De Santis et al., 2006) (“x” stands for eXchange) is to implement a system that will support legislative production processes through i. the exchange of documents (e.g., draft of the laws to be discussed, accompanying documents, etc.) by means of Certified email, ii. the management and the exchange of added-value information related to the overall process and its phases and iii. the possibility to receive notifications when relevant events happen.

p-Leges The p-Leges project (“p” stands for portal) concerns the implementation of a web site providing access to in force version of laws. The site will inherit some infrastructure elements from NormeInRete in order to support consolidation activities.

The e-Leges project achieved notable results, especially concerning standardization. New standard versions have been released both for XML document format (version 2.2 of DTD and XML Schema) and URN law identification (version 1.3). Moreover, the web site of the program is in the implementation phase and it is going to be on line within 2007.

As a result of x-Leges project, a call for tender for the implementation of a system enabling electronic documents exchange within normative process has been published, arousing much interest (16 proposals). The end of implementation phase is foreseen by the end of 2007.
4. NormeinRete evolution

NORMEINRete project is facing up a deep reorganization, both for its long-term objectives and for the services it will provide. As illustrated in the previous section, some architectural elements have been taken up by p-Leges project while part of standardization effort has been delegated to s-Leges project.

However, besides these elements, NormeinRete and “ex 107” program are clearly complementary, because of their different architectural approach and main aims. As a matter of fact, the first adopts a completely decentralized architecture that is clearly more coupled with local administrations and can easily deal with sectorial and specialized legislation. On the other hand, the former adopts a centralized architecture and limits its field of action to National laws.

In the last months, CNIPA has been involved in the definition of NormeinRete new outlook and in the re-engineering of online services. Effort has been mainly focused on the implementation of a new version of:

- Norms repository, in order to support laws consolidation and re-order;
- mechanisms for URN resolution and services for URNs registration;
- NormeinRete portal, with specific regard to accessibility, in accordance with the Italian law.

Concerning URN standard, a new distributed resolution architecture, abstractly depicted in Figure 1, is currently under design. In this architecture each official normative web site should have its own resolution table and should be responsible of registering the norm URNs of its competence. The architecture potentially allows integration with information sources different from those of Public Administration, for example the ones of private publishers.

The evolution of XML and URN standards will continue in being taken into consideration, for example to represent and manage local laws.

Finally, the possibility of integration with the Italian Public System of Cooperation (named SPCoop\(^2\)) has been examined. SPCoop aims to provide the technological infrastructure (based on XML and Web Services) for applicative cooperation, with the formal definition of rules and SLA, in order to make high quality services available to citizens.

\(^2\) Project documentations (in Italian) can be found on the web site http://www.cnipa.gov.it/
CNIPA is studying the possibility to integrate NormeinRete cooperation registries into the SPCoop system, in order to exploit both technological and organizational infrastructure.

5. Other relevant projects

CNIPA is involved in, and in some case directly conducts and funds, many other initiatives concerning legal documents management and access. Some of these projects are briefly described below, pointing out the opportunities of cooperation with NormeinRete and “ex 107” program.

ESTRELLA The ESTRELLA (European project for Standardized Transparent Representations in order to Extend Legal Accessibility) project\(^3\) aims at developing an open platform enabling citizens and businesses to easily access, understand and apply complex legislation and regulation. In this project CNIPA is leader of Standardization activities, which regard the definition of an XML format for legal documents and the proposal of an open source content management system to enable interoperability among different legal document formats. One of the main milestone expected is the publication of a proposal for an open XML standard for legal documents. The standard should take into account the standardization experiences made in several European countries, such as Dutch

\(^3\) Website: http://www.estrellaproject.org/index.php/Main_Page
METAlex and Italian NormeinRete. In particular, the project can effectively exploit NormeinRete standard in order to enrich metadata representation of the new format.

**African i-Parliaments** The African i-Parliaments is an initiative funded by the UN/DESA (United Nation Department of Economic and Social Affairs) with the objective to provide African Parliaments with the opportunity to modernise their information management capabilities. It consists of standardization activities, addressed by AKOMA NTOSO project\(^4\), and a project (named BUNGENI\(^5\)) which objective is to design and implement information systems for managing the whole legal documents life cycle in African countries. CNIPA has given a contribution at the first step of the project as consultant, providing know how in document formats standardization and best practice for cooperative architecture design, derived by both NormeinRete and “ex 107” program experiences.

**AUGUSTO**. The objective of AUGUSTO (Acronym for AUtomazione Gazzetta Ufficiale STOrica) project\(^6\) is to digitalize all the Italian Official Journal as images with basic indexing service. In the future it will be possible to link the XML text of a law produced by x-Leges system or available on p-Leges site with the image of the page of the Official Journal where the law has been published. In such a way, it is possible to provide a “certification” with respect to printed text. This is a very important issue, because in Italy the printed text on Official Journal is the only source with legal validity.

6. Conclusion

CNIPA’s effort is currently focused on several initiatives, both national and international, each regarding a specific aspect of the normative life cycle. Notwithstanding, CNIPA is trying to maintain a coherent and global vision over the projects, in order to simplify the scenario and to enable cooperation and results sharing.

Starting from a situation where several initiatives tend to overlap (see Figure 2), it is possible to identify three well defined areas that

\(^4\) [http://www.akomantoso.org/](http://www.akomantoso.org/)

\(^5\) [http://www.bungeni.org/](http://www.bungeni.org/)

\(^6\) [http://www.cnipa.gov.it/site/it-IT/In_primo_piano/Progetto_AU.G.U.STO/](http://www.cnipa.gov.it/site/it-IT/In_primo_piano/Progetto_AU.G.U.STO/)
can be used to categorize the projects that see CNIPA involved with respect to their main objectives:

− standardization;
− access;
− back office.

Figure 3 illustrates how projects place in the above-mentioned categories with respect to their main objectives.

Currently the main italian project in Computer science and Law is really the “ex 107” program. Several CNIPA initiatives are in their final stage. Moreover, in a short time other CNIPA projects should
start, specifically the analysis of automatic classification software tools for legal documents and the study of mechanism and tools to support normative reorder.

References


