# Governmental Collaboration and Infrastructural Standards in Belgium

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**Abstract:** The Belgian federal government's June 2004 decision to promote the use of open standards has been reinforced by the launch of BELGIF [BELgian Government Interoperability Framework], launched by the ICEG working group of the Belgian government in May 2005, and the 2006 decision to mandate ODF as the standard office document exchange format by September 2008.

This paper discusses the issues surrounding the BELGIF implementation and ODF mandate and the challenges still to overcome, given that interoperability defines how technical systems, people and organisations work together, in a country with three languages and five layers of government.

**Keywords**: e-government, collaboration, standards

## 1. Interoperability in an e-governmental context

Interoperability is technologically defined as "the ability of two or more systems or components to exchange information and to use the information that has been exchanged" (IEEE, 1990). We also define interoperability within e-government, as it is an important issue to determine how technical systems, people and organisations can work together, both within and across country boundaries. The definition of interoperability is modified slightly for the e-government context. e-government is defined (EU 2003) as: "the use of ICT in public administrations combined with organizational change and new skills in order to improve public services and democratic processes, and strengthen support to public".

For e-government, the concept of interoperability goes beyond the notion of just technical standards for data exchange, and includes issues such as legal constraints, inter- and intra-organizational workflows amongst disparate organizations, and an understanding of the data ontology. This is all, in theory, designed for users as the main stakeholder beneficiary. Therefore, interoperability in the context of e-government can be defined as: *"the ability of information and communication technology (ICT) systems and of the business processes they support to exchange data and to enable sharing of information and knowledge." (IDABC 2004)*

The European Interoperability Framework (EIF) segments how it views interoperability into three domains (IADBC 2004):

- Technical aspects. Technical interoperability "…covers the technical issues of linking computer systems and services".
- Semantic aspects. Semantic interoperability ensures that "…the precise meaning of exchanged information is understandable by any other application that was not initially developed for this purpose. Semantic interoperability enables systems to combine received information with other information resources and to process it in a meaningful manner".
- Organizational aspects. Organizational interoperability is concerned with "…defining business processes and bringing about the collaboration of administrations that wish to exchange information and may have different internal structures and processes, as well as aspects related to requirements of the user community."

There is also the overall coordination, or governance, of interoperability, as introduced by the European Public Administration Network (EPAN) e-Government Working Group (2004), as another important consideration to be investigated. Governance of interoperability is concerned with political, legal and structural conditions, which are relevant for developing and using interoperable applications.

Given this interoperability structure, we now examine the context of how the European Union addresses e-governmental interoperability, and how that is implemented on a country specific level, particularly in Belgium.

## 2. European Interoperability Framework (EIF)

The EU directive 98/34 based on the article 95 of the Treaty is aimed at ensuring a smooth functioning of the Internal Market by fostering transparency on national activities in the area of technical regulations and standards, and promoting the harmonization of such technical regulations and standards at European level. 98/34 EC contains a definition of a standard by stating that it must be "a technical specification approved by a recognized standardisation body for repeated or continuous application, with which compliance is not compulsory and which must be adopted and made available to the public." No mention of the notion of "open standards" is made in the Directive, even if provision 24 mentions the need for openness[1]. (ETSI 2005)

Directive 98/34 EC organizes an information exchange procedure on national standardization activities and provides the legal basis for addressing some requests called mandates to the European standardization organizations (CEN, CENELEC and ETSI). Member States have standstill obligations with regards to national standardization activities in those areas when European mandates have been entrusted to these organizations and the 98/34 committee provides follow-up on these mandates. (ETSI 2005)

The European Interoperability Framework (EIF) was developed as the reference document on interoperability for the IDABC[2] program, and supports the pan-European delivery of electronic government services. An Interoperability Framework can be defined as a dynamic document with an overarching set of policies, standards and guidelines which describe the way in which organisations have agreed, or should agree, to do business with each other (EU 2004).

The objectives of the European Interoperability Framework are:

- To support the European Union's strategy of providing user-centered eServices by facilitating the interoperability of services and systems between public administrations, as well as between administrations and the public (citizens and enterprises), at a pan-European level.
- To supplement national interoperability frameworks in areas that cannot be adequately addressed by a purely national approach.
- To help achieve interoperability both within and across different policy areas, notably in the context of the IDABC program and any other relevant Community programs and initiatives.

The rationale of having a structure such as the EIF is that as Europe's citizens move more freely between Member States and firms do cross-border trade across Europe's borders, they both will need to transact business electronically with Europe's public administrations. Both citizens and firms may well need to interact with public administration IT systems in other Member States the same way as national public administration bodies. Therefore, member states must co-operate in the provision of e-government services at the national level (EU 2004). As we can see in the case of BELGIF, this also trickles down to regional and local implementation.

## 3. BELGIF [BELgian Government Interoperability Framework]

### 3.1 Introduction to BELGIF

BELGIF [BELgian Government Interoperability Framework], launched by the ICEG working group of the Belgian government in May 2005, is the result of a cooperative project between the federal government and the federated entities (two regions and three linguistic communities). The aim of BELGIF is to promote interoperability both at national and European (EIF) level, and to enforce the federal government's June 2004 decision to promote the use of open standards. The Belgian Interoperability Framework (BELGIF)[3] approved a first list of standards on May 2nd, 2005, and some feel this was clearly inspired from a similar understanding of what "open" means. The proposed process was considered quite original since the original standards list was opened to contributions for 3 months.

[1] "Whereas the European standardization system must be organized by and for the parties concerned, on a basis of coherence, transparency, openness, consensus, independence of special interests, efficiency and decision-making based on national representation."

[2] *Decision 2004/387/EC "Decision of the European Parliament and of the Council on Interoperable Delivery of pan-European Services to Public Administrations, Businesses and Citizens (IDABC) (http://europa.eu.int/idabc/)*

[3] http://www.belgif.be/

BELGIF is also unique in that it uses the free software MediaWiki – used by the famous web-based encyclopedia Wikipedia – to enable collaborative work on the definition of standards. BELGIF is expected to ensure the interoperability of e-government applications developed by the Belgian regions, communities, and federal authorities. However, given the complexity of the Belgian situation, technology alone will not make collaboration happen, and the other two elements of interoperability (organizational and semantic aspects) will also need to be addressed.

### 3.2 Standards process in BELGIF

A possible standard goes through a qualification process to move from proposed to recommended to mandatory in the BELGIF scenario:

- Proposed is the weakest in terms of obligation. It is meant to provide awareness to the community about a new or emerging standard.
- Recommended implies that the standard should be used in all cases except from those for which it is definitely impossible to conform.
- Mandatory implies that the standard has to be used in all cases without exceptions.

When a new standard is proposed in the list, the ICEG Technical Working Group decides to change the standard to the recommended status, after public consultation. The ICEG Technical Working Group decides to change this recommended standard to the mandatory status, when conformance is no more an issue.

After the first two rounds ended in September 2005, the ICEG Technical Working Group has planned to meet every three months in order to apply the qualification process on a regular basis.

The current list of recommendations includes two areas:

- Recommendation on web accessibility : Web accessibility cluster
- Draft recommendation on the realisation of XML schemas : Recommendation XML schema

At present, the current list of standards is categorized around four areas:

1. data presentation and exchange
2. data integration and middleware
3. interconnection services
4. security services

Because the use of some these standards impact the use of others, certain standards are grouped into *clusters*, and the current list of clusters includes:

- Web accessibility cluster: HTML, XHTML, CSS, WCAG
- XML cluster: data exchange via XML
- Document cluster : formats of documents to use between organisations
- Network cluster: XML implementations

BELGIF has been noted as unique in its approach to the open standards process (via a Wiki), its active participation in using standards in e-government, and the participation of Belgian governmental groups in the process.

## 4. Examples of use of BELGIF framework

### 4.1 Interworking - CINAPS

The need for integration of the public services requires an adaptation of the information systems. Interoperable systems working in a coherent way and without barriers through all the public sector are impossible to circumvent to provide better services, meeting the needs for the citizens and the companies and with lower cost.

Several BELGIF recommendations have been prepared in the field of the Web sites, and therefore It is necessary to widen the range of these recommendations to interworking. The recommendations of Wall-

One-Line (Wallonia Online[4]) as regards interworking bear the name of CINAPS (for Cadre of Interworking, NormAlisation, Politiques and Structuring) and are under development.

"Wall-One-Line" is the name given to the electronic project of Government of the Walloon Area. Adopted in June 2001 by the Walloon Government, this project is carried out under the authority of the Minister President, currently Elio di Rupo.

The objective general of the project Wall-One-Line is to implement the concept of counter single at multiple accesses, commonly run with all the administrations. It is organized in manner set of themes or according to the intentions of the users, of the events of the life of the citizens and the needs for the companies/organizations (what one calls the lifelines). The single counter seeks to reconcile and integrate the point of view of the user and that of the public services. To achieve this goal, the Walloon Government chose a team of 11 people with varied profiles. This structure is attached administratively to the Ministry for the Walloon Area but its missions extend to the unit from the Walloon administrations.

For the initial version of CINAPS, Wall-One-Line decided to use an existing framework of interworking that of the United Kingdom, in order to as soon as possible has recognized foundations. This framework of interworking (the e-GIF - for e-Government Interoperability Framework) is with its fifth revision and strongly influenced the European framework.

Other Member States also followed this step. As the EIF envisages providing a generic model for the national executives of Interworking, this could be used as an interworking basis by the Member States. When this model is available, CINAPS will be re-examined to conform to it.

CINAPS is broken up into four parts:

- Part 1: Structuring, contains the context, the policies key and described the support of implementation, the rules of management and adhesion.
- Part 2: Specifications, contains the technical specifications and a contextualized glossary. This document is named CINAPS-SPEC.
- Part 3: Metadata, contains the rules of production and edition of the metadata. This document is called CINAPS-META.
- Part 4: Taxonomy, indexes the official terms of denomination of the topics and the elements of the lifelines. This document is called CINAPS-TAXO.

Wall-One-Line wants to guarantee that CINAPS remains aligned on the changes of the needs for the public sector and the technological development. CINAPS will thus continuously be re-examined. Moreover, the form adopted for the drafting of this document will be directed towards the easy taking into account of the note: each point (or article) will be seen allotted a number, facilitating referencing.

## 4.2 BELGIF and municipal websites

As part of the web accessibility cluster, an external study for the working group, done by a Swiss consultant in November 2006, showed that the accessibility of 587 web sites of Belgian municipalities were checked for use of standards, with only 2,7% being compatible to BELGIF. The four Federal sites checked did not have full compliance either. This moves the BELGIF discussion of having a framework to having a policy of how the framework is used and adopted. This seems to be more active at the regional level than at the Federal level. Case in point would be the 'Anysurfer' project in Wallonia.

The Wallonian government introduced a new accessibility 'label' aimed at encouraging further improvements in the accessibility of the region's public administration web sites to blind, sight-impaired and handicapped internet surfers. The new label, 'Anysurfer', will replace the existing 'Blindsurfer' label introduced in 2003. The Walloon government has been actively committed to making the region's web sites accessible to blind and sight-impaired people since 2002. This policy was integrated into the regional component of the National Plan to combat the Digital Divide in 2005 and has been supported by a series of grants to the National Foundations for the Blind who have taken charge of the 'labelling' operations. An accessibility 'audit' was carried out on all regional web sites, and 19 sites were granted the 'Blindsurfer' label and all regional webmasters received training on web accessibility (IDABC 2007).

[4] Wall-One-Line (http://egov.wallonie.be)

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## 5. ODF mandate for document exchange

In June 2006, the Federal Council of Ministers approved a memorandum on the use of open standards, specifically ODF, for creating and exchanging office documents . Open Document Format (ODF) is an XML format for making and saving text documents for use in office applications. This decision fits in with the federal government's strategy of promotion of open standards (Persdienst, 2006).

The Federal Council of Ministers therefore proposed establishing ODF as the standard for exchanging office documents such as texts, spreadsheets, presentations within the Civil Service as soon as the format is definitively approved by ISO (Persdienst, 2006).

As a first step, each of the federal government agencies is to ensure that the ODF format can be read. All federal government agencies must from September 2007 ensure that they can receive and read ODF documents. This does not exclude the use of other formats. It is up to each agency to determine the way in which the functionality of reading is guaranteed.

A transition period will be put in place, allowing all agencies to take the necessary measures without compromising the continuity of services. Depending on the results of an impact analysis carried out by FEDICT (the government department that coordinates the ICT policy of the Belgian Federal government), ODF will from September 2008 be the standard format used for the exchange of office documents.

Commentary at the time of this announcement focused on the impact of this mandate on providers such as Microsoft, since many predicted that this announcement increased the pressure from governments worldwide on Microsoft to embrace open standards. Earlier drafts of the Belgian proposal had put ODF and Microsoft's own Open XML format on equal footing. The final mandate only specifies ODF, as a draft of ODF was accepted by the International Standards Organization (ISO).

## 6. Collaboration and interoperability: Importance for Belgium

Why is there such a need for common office document standards and an interoperability framework? Because Belgium has five layers of government: federal, regional (three regions: Flanders, Wallonia and Brussels), community-wide (three linguistic communities: Dutch, French and German), provincial and municipal. Given this complex, multilayered and multilingual, situation, BELGIF and ODF are addressing the need to have all layers of government collaborate with each other, and with the citizen.

Up until now, for example, the Brussels region had great difficulty in integrating IT systems in use with the 19 municipalities that make up the region[5] . BELGIF is, hence, much needed to be able to transmit through different layers and to communicate efficiently with the citizen.

Using open standards is, however, no panacea. To start with, the notion of 'open standards' has been, however so slightly, differently translated[6]. If open standards, as a notion, are meant to be non-proprietary, then several issues arise. What, for example, to do with proprietary applications built on a BELGIF platform? The issue is not a theoretical one, as has been experienced with the e-ID card, which, based on open standards, has attracted proprietary applications, on which the government is not certain how to react. There is no viral effect of non-proprietary software - free software - guaranteed through BELGIF as it is through GPL[7]. What, then, is the solution to interoperability issues arising from using BELGIF or its MediaWiki-based software? Moreover, what to make of liability for non-functioning due to the software, and of liability for imported building blocs? Last but not least, is there a controller for privacy purposes or any checks on use and utilisation built in?

While BELGIF may be a necessity for a complex governmental structure in Belgium, it cannot escape the issues arising from its open standards use. BELGIF's introduction is not without issues or questions as regards to its use with Belgian levels of government. As can be seen by the website assessment, it has not necessarily flowed through all levels and institutions. Indeed, "open standards", as a notion, remains a challenge to define both conceptually and in practice, ensuring free access to platforms and applications

[5] See http://www.cibg.irisnet.be/site/nl
[6] See e.g. the nine definitions used in http://www.google.be/search?hl=en&defl=en&q=define:Open+Standards&sa=X&oi=glossary_definition&ct=title , consulted on 26 February 2007
[7] cfr. http://parallax.blogs.com/parallax_calculating_tech/2005/12/platos_software.html , consulted on 26 February 2007

derived from these platforms. Hence, BELGIF has proven to be a competitive necessity, albeit a start for integration of governmental communication and the ensuring of collaboration, both externally and internally.

If one examines which regional government bodies have made the commitment to BELGIF, a more communicated commitment appears to come from the Wallonia side of Belgium, partly due to the visible efforts on e-government with Wall-On-Line. But if one looks at the statistical data offered at the start of November 2006, the more interesting information is which of the 16 websites were actually compatible, as most were smaller communes, but linguistically reasonably evenly split between Flemish and Wallonian towns, as well as two Flemish regional sites. This may imply it is not a linguistic communication issue, but a matter of priorization of the commune or region to be in compliance. In April 2006, the Belgian federal government, the regions and the communities signed a cooperation agreement on the principles of a seamless e-government implying the cooperation of all administrative levels of government (including the communes). This, however, is still in the implementation phase.

As indicated, BELGIF influences regional IT activity; at the same time, regional activity will increasingly influence BELGIF-oriented application development itself. By creating the BELGIF platform, Belgium ensures the principle of interoperability between different levels of government, and set standards for its five levels of government, and the three languages it uses to communicate internally and with its citizens. This communication has a beneficial effect on both transparencies of transactions within government, as well as transactions with citizens, at all levels. Hence BELGIF fulfils a needed standard setting role in e-government and should be instrumental in providing IT for substantive cooperation between levels of government and citizens.

The introduction of BELGIF is a single step to realise real innovation. Real improvement has to come from simplification of regulations, re-engineering of business processes and a change in the culture of the governmental service providers. The technology has to be seen as an enabler: it allows for the simplification of relationships between the different regions and entities.

The same can be said for the decision to use ODF for office documents, as it also allows for the simplification of relationships between the different regions and entities. This does not preclude using other proprietary formats (DOC, PDF, etc), but gives one consistent format to use between and within organizations. This is almost a lowest common denominator concept, as ODF is also the least cost option for a citizen in terms of licensing fees. And the citizen is what it is supposed to be about in the concept of e-government. But unfortunately, the note of the Council of Ministers on ODF holds only for federal government departments. This means that municipalities and provinces are not obliged to use open standards for document exchange, nor for communication between the government and citizens or companies. But it is a good first step for interoperability.

## 7. Conclusion

During the Brussels e-Government congress in November 2006, Belgian ministers responsible for e-government agreed on a resolution on a seamless e-government in order to implement the second cooperation agreement between the federal government, the regions and the communities. The resolution focused on close cooperation, including supporting current initiatives such as BELGIF (the Belgian Interoperability Framework) and decisions such as the ODF mandate.

The Belgian governmental structure being complex as indicated before, the roll-out of initiatives such as BELGIF depends on the dynamism of the different administrations, at different levels, towards interoperable governance. At present, that roll-out is uneven, and it should frankly not otherwise be expected. Still, the lack of a final arbiter and enforcer remains a problem, albeit one that is inherent to the complex structure of governance in Belgium.

The firm choice for an open standards approach, perhaps not entirely understood in terms of ultimate consequences, obliges those that want to supply goods and services to the governmental levels to look at this phenomenon. At the same time, this opens these suppliers' perspectives. The open standards model does not equate necessarily with a non-proprietary, at least not necessarily with a 'free for all' Richard Stallman type model. It remains to be seen what the decision of the Belgian government to use ODF for exchanging documents will yield, although it is an example being considered by other EU countries such as France and Denmark. But open standards are on the table in Belgium, and software companies have to address this if they want their products to be used by the government.

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The BELGIF system is more modest in that respect: by setting interoperability as the goal, it leaves considerable room for filling this in by suppliers and advisers at all levels of eGovernance. It will remain to be seen how in the next year this goal of interoperable government will be filled in, in a timely way, at all levels. As said, it will depend on the dynamism of those who govern at all levels, as well as on the creativity of those who supply the technical means and support to those in eGovernance at such levels.

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