Chapter 5
Standards for Achieving Interoperability of eGovernment in Europe

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ABSTRACT

E-government interoperability frameworks in Europe and the standards they reference are diverse, often reflecting different legal and policy priorities across the continent. Selected examples from a number of member states illustrate how legal interoperability impacts the choice or creation of e-Government standards. It looks at the situation of technical interactions, especially the use of web service standards, then at two data exchange standards, two metadata standards, and the current work on linked open data. The examples discussed represent different use cases (Government to Government / G2G, Government to Business / G2B, Government to Citizen / G2C), allowing an overview over the current situation in Europe.

INTRODUCTION

eGovernment standards in Europe are set by very different players across the continent, including a multitude of public sector organizations that very often act as de facto standardization bodies. Unlike eBusiness standards in many other domains eGovernment "standards" are typically defined in the context of regional, national and pan-European eGovernment frameworks, which often reflect very specific national or regional priorities.

Much like businesses, actors in the government domain come in all sizes. They range from small local authorities to actors like national states and the European Union. What is more, their structure especially of national players is very different from country to country. Some countries like Germany have regions ("Länder") as key players with a lot of decisional powers and hence a lot of activities of their own. Others like Estonia, Luxembourg or

Malta have national governments on the one side and local authorities on the other.

Not surprisingly, also the degree of standardization between those players is very different from country to country and even from region to region. Also, states are more than administrations. They are active in a wide variety of sectors of economy and society – virtually everywhere states are the single biggest procurers also of business products and services and therefore also directly impacted by eBusiness standards. The degree of standardization can furthermore differ by sector and by specific domain. We might have a high standardization, let's say, in the medical domain or for pension schemes, to just name to arbitrary sectors, yet have much less normalization for classical administrative tasks – or the other way round.

For these reasons it is impossible to describe "the" situation of eGovernment standardization – and hence of corresponding research questions – in Europe in the scope of a single chapter or for that matter a single book. That said, the diversity in European eGovernment is in itself probably the single biggest practical and research challenge in the domain.

The diversity exists to a degree on the level of pure technical interoperability, the first aspect that this chapter will look at. It is far more pronounced, however, in the field of semantic interoperability. In the context of this article the author selects a few examples from the administrative domain taken from the variety of countries and settings. In particular the chapter is going to look at the standards used in Germany and France for the registration of citizens – changing addresses online, exchanging the place of living etc. – as an example for content exchange formats for eGovernment exchanges.

Following that the chapter will take a look at the Dutch example of metadata standards applied to all websites that are published by the public sector in the Netherlands. On a much larger scale domain specific metadata standards in the geographic domain are being specified on the European

level. In fact, for geodata we are in the singular situation that a European directive, 2007/2/EC aka INSPIRE, for geospatial data sets imposes a regulatory framework that players across Europe must respect. For those fields where at present no such interoperability regulations exist, a number of activities have been set up at various levels to improve interoperability across Europe. This chapter will look in particular at the European interoperability framework, which specifies the standard methodologies for technical semantic and organization interoperability in Europe. It will present the European set of specifications belonging to the CEN eGov Share suite of European specifications on rules for the exchange of semantic descriptions of government-related resources across Europe before looking at more general aspects of linked open data.

In order to get a more quantitative idea of the eGovernment standards landscape, the chapter will terminate with a brief view at organizational standards and a quantitative comparison of selected national interoperability frameworks.

Much of the present chapter builds on the "report on government standards" (Küster, Dekkers, & Moore, 2008) prepared in 2007/2008 by the then CEN/ISSS eGovernment focus group and of which the present author had the honour of being the editor. It has naturally a perspective originating from pan-European standardization world. Of course, in a number of fields the findings have been updated to capture the developments in the last two years.

The chapter ends in a short list of key terms and their definitions.

BACKGROUND

Very much the seminal document on eGovernment standards and their use on the European level is the *European interoperability framework* (EIF), which in its first version was published in 2004. This document introduces or at least popularizes

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