

# Accessibility Legislation and Codes of Practice: an Accessibility Study of Web Sites of French and Belgium Local Administrations

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## ABSTRACT

This paper presents a case study of accessibility evaluation which reports the main drawbacks concerning the accessibility of Web sites of French and Belgium local administrations. We measure the accessibility of information published on Web pages, acceptance of standards of accessibility (i.e. W3C's WAI) and availability of services provided on-line. Our results allow the identification of the most frequent accessibility problems on these Web sites and measure the maturity concerning the accessibility by local administrations in France and Belgium.

## Author Keywords

Accessibility, automated evaluation, e-government, local administration.

## INTRODUCTION

In more recent years Accessibility became a legal requirement as many countries have enacted for Accessibility responsibility of content published on the Web. Despite important improvements on accessibility legislation (both Europeans and Nationals spheres) and incentives to make e-government Web sites accessible, there is a slow progress on the design practice of administration Web sites. In Europe, the European Council encourage state members to enact laws for accessibility of public Web sites at all levels of government. Many member states such as France [8], Germany [2], Portugal [4], and UK [7], among many others, have created laws for the accessibility of digital content. However, according to the most recent Capgemini [3] survey of EU member's e-government Web sites, there are still slightly differences on the maturity of service offered to citizens. A more remarkable effort to provide accessible content is visible at higher administration spheres (e.g. related to ministry and national agencies) even though local administrations offer a greater variety of services (e.g. inscriptions on schools, reporting problems on traffic, declaration of birth/death, request of identity card and passport, and so on) which have a huge impact on daily life of citizens.

In this paper we focus on Web sites of French and Belgium public administrations. We review the current regulations and regulation mechanisms (i.e. recognized standards) in France and Belgium. By the means of a

case study of accessibility evaluation we compare the maturity level concerning the accessibility of local administration Web sites in these countries. In particular, we measure the accessibility of information published on Web pages, acceptance of standards of accessibility (i.e. W3C's WAI) and availability of services provided on-line.

## OVERVIEW OF LEGISLATION ON ACCESSIBILITY

One of the five priorities for the new i2010 EU e-Government Action [3] concerns the "advancing inclusion through eGovernment so that by 2010 all citizens benefit from trusted, innovative services and easy access for all" (i.e. *no citizen left behind*). By this priority the EU Council emphasizes the importance of accessibility of content and services provided by administrations. Despite EU recommendations, EU country members implement their own regulation and mechanisms for promoting accessible Web sites. Hereafter we examine the case of France and Belgium regulations.

### French legislation on accessibility

In France it started slowly in 1999 with an internal recommendation based on W3C/WAI standards and stipulating that "people in charge of Web sites should pay attention to provide accessible content for all users, in particular for impaired users". This recommendation was not voted earlier than February 11<sup>th</sup> 2005, law number 2005-102 ("for equal rights and equal opportunities, participation and citizenship of impaired people" <sup>7</sup>). It is important to notice that it legislates on both physical accessibility and electronic accessibility. The original proposal stated that all public Web sites should be fully accessible within 3 years. Several decrees have been published since then but the parts concerning the electronic accessibility (articles 47 and 78) have not yet been officially published and still now they are subject of revisions! The most recent decree of the law (December 13<sup>th</sup> 2006) extends the deadline for making e-government Web sites to conform with 'international standards' of accessibility (2 years for

<sup>7</sup> Law N° 2005-102: "*pour l'égalité des droits et des chances, la participation et la citoyenneté des personnes handicapées*".

communication agencies, 3 years for administrative Web sites).

### Belgium legislation on accessibility

In Belgium, a law of February 2003 prevents “any kind of discrimination based on physical handicap”. This regulation clearly addresses furniture and services offered by public sites. However, there is no legislation addressing specifically the accessibility of electronic content. In April 2003, the Walloon government (one of the 3 major regions in Belgium) adopted a series of actions to make public Web sites accessible in the Wallonia region. It also has been stated that some Web sites considered critical should be accessible before 2006<sup>8</sup> according to the priorities below:

- Priority 1: public Web sites devoted to social action involving any kind of impaired users;
- Priority 2: Web sites devoted to information of citizens at the large or Web sites of Walloon government;
- Priority 3: Web sites devoted to job search.

Local administration is not addressed by these priorities.

### ACCESSIBILITY STANDARDS AND CERTIFICATION

One of the drawbacks of current legislation is the lack of official referential for accessibility. W3C/WAI is the most recognizable standard for accessibility worldwide but different EU countries have proposed their own standards. Figure 1 present the logo used to identify currently used standards in this survey. Hereafter we provide a view at glance of these standards



Figure 2. Logos of some accessibility standards.

#### W3C/WAI

The World Wide Web Consortium (W3C) is at the origin of the Web Content Accessibility Guidelines (WCAG 1.0) [11]. The recommendations published on May 5<sup>th</sup> 1999 contained 14 guidelines and 65 checkpoints having 3 levels of priorities. The level of conformance with these priorities levels (known under the labels A, AA and AAA) have been widely followed by other standards. WAI certification is often associated to technology compliance certification (e.g. XHTML and CSS) which can ensure cross-platform accessibility. The certification at some level is free of charges using automated tools developed for this purpose.

The WAI have been working on the development of the WCAG 2.0. However, this second version has been largely criticized by the community mostly because it introduced directives which cannot be automatically inspected (e.g. all content should be perceivable, content should be understandable, content should support current and future technologies). In some aspects these new directives are ambiguous and difficult to apply even by experts. So as far the WCAG 2.0 is under revision, only WCAG 1.0 remains the most universally recognized standard of accessibility.

#### AccessiWeb and RGAA

The AccessiWeb label (<http://www.accessiweb.org>) was created by the association BrailleNet<sup>9</sup> in France. In addition to the certification, the working group on accessibility proposes training for Web developers. AccessiWeb is based on WAI recommendations but it extends the evaluation to 92 checkpoints. Similarly to W3C/WAI, AccessiWeb certification includes three levels named *Gold*, *Silver* and *Bronze*. The certification process consists in 2 steps: a pre-audit performed by the applicant and an evaluation performed by AccessiWeb experts. The cost of the certification ranges from 1900 € (*Bronze*) to 2600 € (*Silver* and *Gold*). Although the certification is not free AccessiWeb provides tools and guidelines in order to help obtaining the certification. These resources are freely available from AccessiWeb Web site.

Recently, another initiative called RGAA (Référentiel Général d'Accessibilité pour les Administrations) has arisen from french accessibility experts and local administrations' users. This set of guidelines is based on WCAG 1.0 guidelines and the Unified Web Evaluation Methodology (UWEM 1.0) [9, 10] which aim is to provide a set of guidelines and a standard procedure for manual and/or automated accessibility inspections. The particularity of RGAA 1.0 is that each guideline is associated with unit tests. These tests are easier to verify even for non experts and solve the problems of some high level guidelines in other existing set of guidelines. However, as this is a recent initiative the RGAA 1.0 document is still a working draft.

#### AnySurfer and BlindSurfer

The label AnySurfer (<http://www.anysurfer.be/>) is awarded by the Belgium association “*Oeuvre National des Aveugles*” (ONA) after audition by certified experts on accessibility. The costs of AnySurfer certification varies according to the size of the Web site (e.g. 120 € for a Web site of 100 pages). Both French-spoken and Flemish-spoken communities of Belgium agreed to this label. From a technical point of view, AnySurfer is strongly based on the W3C/WAI recommendations. Since July 1<sup>st</sup> 2006 the label AnySurfer replaces the label BlindSurfer conceived for the same purposes.

<sup>8</sup> At: <http://egov.wallonie.be/accessibilite/>

<sup>9</sup> Available at: <http://brailletnet.org/> (in French)

### EuraCert

The Euracert label (<http://www.euracert.org/>) is an initiative of the European Council initiatives for promoting the accessibility in EU countries [4]. Web site can be awarded the Euracert label in addition to a label issued locally in a European country. ONA and Blindenzorg Licht en Liefde (Belgium, AnySurfer label), Association BrailleNet (France, AccessiWeb label) and Fundosa Teleservicios (Spain, Sello de Accesibilidad) are authorised to issue the Euracert label. To be eligible, Web sites should follow the UWEM 1.0. Whilst UWEM 1.0 and EuraCert represent important steps forward measurement and certification of Web sites in EU, from a technological point of view they are similar to W3C's Web Accessibility Initiatives [2]. The cost of EuraCert certification differs according to EuraCert partners in the EU countries (e.g. AccessiWeb which is the EuraCert partner in France sets the price to 1000 €).

### EVALUATING LOCAL ADMINISTRATION WEB SITES

Local administrations offer a great variety of services which have a huge impact on daily life of citizens. For example inscriptions on schools, reporting problems with traffic, declaration of birth/death, request of identity card and passport, and so on. In addition to these sources local administration could be considered primary sources of information about tourism, social activities, demographic data, and general public services provided to the community. Currently there is a lack of information concerning local administrations Web sites. On one hand there are few studies assessing the maturity level of online services such as information, one-way interaction (i.e. download all forms), two-way interaction (i.e. online forms), and transaction (i.e. full electronic case handling). On the other hand we don't know how accessible these services are. Hereafter we present the preliminary results of two studies of assessment of local administration Web sites in France and in Belgium. Although the instruments used for the survey are different, both highlight the maturity level of these Web sites.

#### Evaluation of French local administration Web sites

Sixty-four (64) local administration Web sites were inspected by master students on Human-Computer Interaction. Both manual inspection (i.e. human judgment of Web sites) and automated inspection by tools (i.e. CSS and HTML validator<sup>10</sup>) were employed. The inspection was limited to 10 different Web pages of each Web site, which in most case covers all the major sections available. The checklist is composed of the following main sections: i) General questions, ii) Conformance with W3C/WAI guidelines, iii) Cognitive legibility of information, iv) Adoption of labels and v) Availability of online public services.

Checkpoints	N. of sites	%
<b>General questions</b>		
Is the language clearly stated in the main page?	6	9,4
Is the Web site multilingual?	5	7,8
Does the Web site propose different presentations?	1	1,6
Is there human assistance proposed to deaf users?	1	1,6
<b>Conformance with W3C/WAI</b>		
Are CSS style sheets employed for presentation?	32	50,0
Do CSS style sheets follow W3C guidelines? *	5	7,8
Are (X)HTML pages in conformance with W3C guidelines?*	2	3,1
Is alternative text provided for all images? *	6	9,4
Are tables misused for the layout?	24	37,5
Are pages equally visible with different navigators? *	54	84,4
<b>Cognitive legibility of information</b>		
Are summaries provided for long texts?	27	42,2
Does layout group similar/related information?	47	73,4
Do paragraphs present a single idea?	49	76,6
Are keywords clearly visible?	35	54,7
Is it possible to zoom in complex graphics?	16	25,0
Does links' label reflect the content of referred page?	50	78,1
<b>Adoption of labels</b>		
Is the Web site awarded by a label? Which one?	0	0,0
Are W3C guidelines respected but not referred?*	0	0,0
Are there other standards taken into account?	3	4,7
<b>Availability of online public services</b>		
Does the Web site provide some kind of online interaction?	10	15,6
Is the number of steps in transactions always informed?	4	6,3
Do labels provide meaningful information to fill in form fields?	16	25,0
Are the form fields automatically checked?	7	10,9

\* Checked with help of automated tools.

**Table 1.** Checklist used on the survey of 64 French Web sites.

The results of the survey demonstrate a huge lack of accessibility of Web sites. Half of Web sites use CSS style sheet for presentation and only 5 of them (7,8%) follow the corresponding W3C recommendations. One of the most basic guidelines concerning the use of alternative text for images is strictly (all pages on the Web site) respected by no more than 9,4%. The results are even worst when looking at Web sites that do not provide meaning labels for links (78,1% don't).

It is noteworthy that none of 64 Web sites was awarded by a label but 2 of them follow optimize the design for technology-oriented standards (i.e. FireFox and Internet Explorer 6.0) and a third one implement language of signal standards for deaf users (i.e. WebSourd LSF).

One can notice a small but meaning number of Web sites moving towards providing an online service (15,6%). Some ergonomic guidelines are taken into account such as providing meaningful labels to form fields (25%) but it is clear it is not enough for Web sites intended to a very large public.

#### Evaluation of Belgium local administration Web sites

The Wallonia's agency of Telecommunications (AWT) in Belgium started in 2004 to evaluate the 262 Web sites of Wallonia local administration. Their results

<sup>10</sup> <http://validator.w3.org/> and <http://jigsaw.w3.org/css-validator/>

shown that less than 5% of Web sites could be considered accessible<sup>11</sup>.

Different techniques were employed in the present survey, such as: i) Ergonomic inspection with the WAI set of guidelines, ii) Visualization of Web sites using the browser Lynx (for checking legibility for blind users), iii) Automated inspection using free available tools for accessibility inspection such as DESTINE [1] and tools made available by the label AnySurfer. The combination of manual and automated inspection allows covering both problems related to syntactic defects on HTML code and problems related to the meaning of content. Fifteen Web sites in Wallonia region have been inspected from April 15<sup>th</sup> 2007 to May 15<sup>th</sup> 2007 by master students.

The general accessibility of these Web sites is very disappointing. We have found serious problems with many labels on links not referring to the proper page. In most cases it is impossible to navigate using just the keyboard, which is a main requirement for blind users. The extensive use of JavaScript and Adobe Flash technologies only accentuates the accessibility problems with links. Surprisingly, only a few Web sites provide extensive use of multimedia documents and only 1 Web site could not be properly read using different browsers. The main results are presented in Table 2 and show the main defects found on Web sites.

Checkpoints	Number of sites
Size of Web site in number of pages	7 small 6 medium 2 large
Number of sites supporting online interaction	6
Web sites presenting problems with labels on links	10
Content presentation in different languages	13
Inaccessible forms	7
Inaccessible tables	8
Lack of support for navigation based on keyboard only	11
Lack of alternative text for images or dynamic objects (e.g. Applets)	13
Web sites judged quite accessible	1

**Table 2.** Survey of 15 Belgium Web sites.

Only 1<sup>12</sup> of 15 Web sites provides an average accessibility but it presents too many links on pages which reduce the legibility of content and the navigation using the keyboard. It is noteworthy that quality of the Web site has no relationship with the size of the city. Web sites of big cities such as Liege and Brussels have many serious defects.

The results of the survey demonstrate that most of Web sites (6 of 15 sites in the survey) provide at least one online service to citizens. The number of online services ranging from 1 to 14 per city. Most of the services, however, are limited to the download of forms. The main problem identified is that such forms are difficult to find in the hierarchy of the Web site.

<sup>11</sup> By an informal communication, the AWT said that another survey is in progress but by the time of submitting this paper the results have not been published yet.

<sup>12</sup> Sambreville, available at: <http://www.sambreville.be/>

## DISCUSSION

The survey presented is a first step towards a comprehensive study of accessibility and maturity of online services provided by local administration in France and in Belgium. Even if Web sites are including more and more online services, the lack of accessibility is evident in most visited Web site.

None of the Web sites of local administrations in Wallonia are awarded by the label AnySurfer. The absence of labels are also remarkable on French Web sites. The poor accessibility of Web sites is an strong evidence of the lack of training of Web developers on Accessibility and Ergonomic matters.

It is also clear that current legislation and official labels for accessibility have a minor (or none) impact on the design of Web sites. French regulation is more detailed compared to Belgium but no different impact has been observed on the Web sites in terms of conformance with labels.

However, the absence of a label does not mean lack of accessibility. On the other way round, the presence of a label does not itself ensure the accessibility of the Web site as labels are awarded over a short period of time when the site is audited. Inappropriate updates on content might include defects affecting the accessibility. Although labels give a good picture of the quality of the Web site its validity is limited to a short period of time. A more detailed study should be carried out to determine why designers are so few concerned by labels.

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