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## WEB INTERFACES DESTINED FOR PEOPLE WITH DISABILITIES

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**Abstract:** *One of the main characteristics of the world that we live in is the access to information and one of the main ways to reach the information is the Internet. Most Internet sites put accessibility problem on a secondary plan. If we try to define this concept (accessibility) we could say that accessibility it's a way to offer access to information for the people with disabilities.*

*For example blind people can't navigate on the Internet like usual people. For that reason Internet sites have to put at their disposal ways to make their content known to this people. Accessibility does not refer only at blind people the web accessibility refers to all people who lost their ability to access the Internet sites.*

*The web accessibility includes every disability that stops people with disabilities to access the web sites content like hearing disability, neurological and cognitive. People that have low speed Internet connection or with low performance computers can use the web accessibility.*

**Keywords:** *Accessibility, Adaptability, Adaptable interfaces, Interactive database*

**ACM Classification:** *H 5.2. Information interfaces and presentation (e.g., HCI): Miscellaneous.*

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### Introduction

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"A society that eliminates some of his members it's a poor society"

In the entire world exists over 500 millions people with disabilities that are in-title to have the same rights like normal people. The first article of the Universal Declaration of the Human Rights says that all human beings are free and equal in dignity and rights.

The web accessibility is a different procedure to structure and organize a web page after strict accessibility criteria for people with disabilities. And like this people with disabilities can easily navigate on web and understand their content.

The Internet represents a important information source in most of our life aspects like commerce, health, education and job finding. From this point of view web accessibility helps disability people to integrate more easily in to the society.

Expediently – induced by user satisfaction and navigation facility and retain the structure of the site. Expediently is a quality: you realise her absence only when is not available anymore.

Accessibility and Expediently they are in strong relationship because both improve the efficiency and the satisfaction of the viewer. While the accessibility tends to make a product more accessible to the visitor, Expediently targets to please only a category of visitors that use that service or product.

The transformation of a web site that didn't respect the aspects related with accessibility into a site that respects those aspects could be an easy task or a hard one depending of the complexity of the site.

The interactive data base- represents a model of the real world and can only represent a limited number of characteristics necessary in different applications. No matter how perfect this application is, there are some applications that we can conceive that could not be satisfied by the database.

For building a database corresponding with a real system we must make a general appreciation of the system. This appreciation contains information regarding the structure of the system and essential system elements that are contained in a sketch.

For the relation model of the data base choosing the relations that are contained in the data base it's very important. The information contained in the database cannot be randomly chosen from the domain associated with their attributes. This kind of errors can be detected imposing some restrictions over the data. There are two kinds of restrictions:

- that depend on semantics of elements domain's
- produces by comparative values.

## The realisation of the web interface

### Starting page

An web site well made is loading very fast, and offers to the visitors a very well functionality, a complete content, the architecture of the information what is simple and clear and assures a intuitive navigation, quick access to the information that you were looking for. A quality design means a pleasant look that shows the site functionality. Will use for exemplification the site of the National Authority for People with Disabilities site made by this team, [www.anph.ro](http://www.anph.ro)

The first page must contain links to the main sections of the site; those are most interesting for the user and permit the user to detail in other pages the wanted sections.

That's way is preferred that the structure of the database based on hierarchical decomposition. For example divisions like Categories – under category –Details were the category represents the main entity and contains the under categories and the detail represents the lowest entity and is a part of under category.

The first page must contain links to the main sections of the site; those are most interesting for the user and permit the user to detail in other pages the wanted sections as we can see in figure 1.

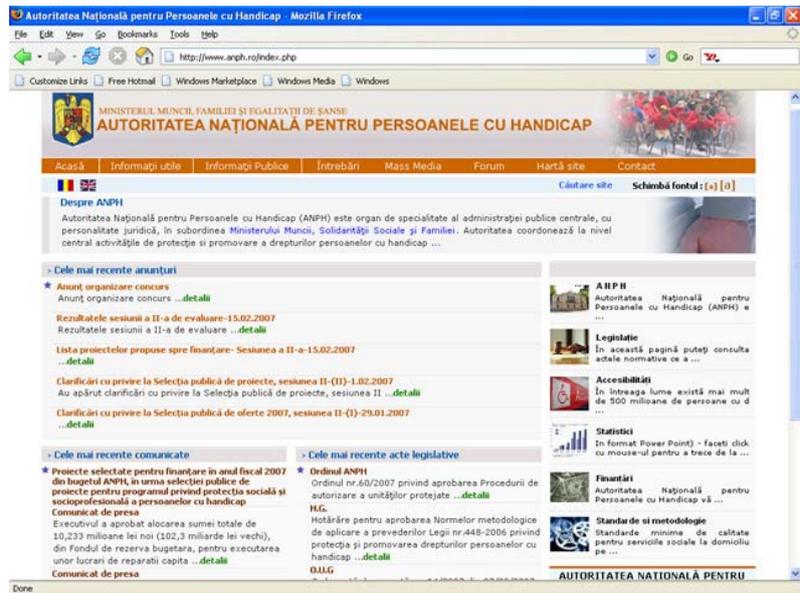


Figure 1. Starting Page

On the first page we have to find most recent information, for example last minute regulations announcements, press communicates and anything that is new for the site visitor.

### Site menus

In this case in the horizontal menu we find the links that goes to the main sections that very important for the user, Useful Information, Public Information, Frequent Questions, Forum, Site Map. In the vertical menu are sections that are not very important and they are addressing to a restrained area of users and contains the to the Legislation, Statistics, Financings, Standards and Methodology, Accessibility and General information about National Authority for People with Disabilities.

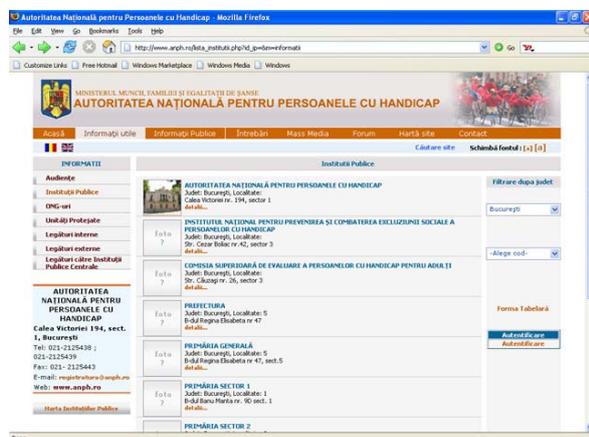


Figure 2.a. Useful Information

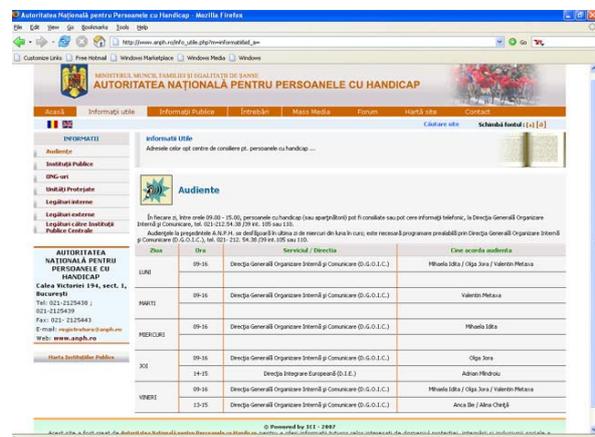


Figure 2.b. Useful Information

## Sections

By accessing from the menu of useful information the user can find information about the units and institutions all over the country that the main occupation to treat people with disabilities, and they access information for every unit as we can see in figure 2.a.

Beside all this lists and units details, the visitor can find out the schedule for audiences contact addresses for the personal of this units and other links for same category sites as we can see in the figure 2.b.

In every page of this site there exists a box that contains National Authority for People with Disabilities contacts and a link to a sensitive map for every unit in the country.

In the Public Information sections we find petition models, forms and other documents of this type

and information about all kind of documents that National Authority for People with Disabilities elaborates and those are public interest information (figure 3).

Forum sections is very important for the visitors of the site because you can use it to find out useful information and you can discuss on every subject with other visitors

## Specific Facilities

During the development of this project we respected all the accessibility and usability rules that a site for people with disabilities must obey.

For blind people the applications must supply equal access of all content and visual aspects of technology wherewith we wish to transmit the information. We used the description of the text (alternative text) of all static pictures for example (pictures, logos).



Figure 4. ALT Option

text attached attribute compliance "alt" and "title". We used a long description of the images that are very important we have left a considerable space between all the items we avoided to use ostentatious colours. Another facility of this site is that you can make fonts larger.

People that have sight deficiency can make fonts larger on every page of this site but in any moment they could turn back to normal size fonts as we can see in the picture below (figure 5.b).

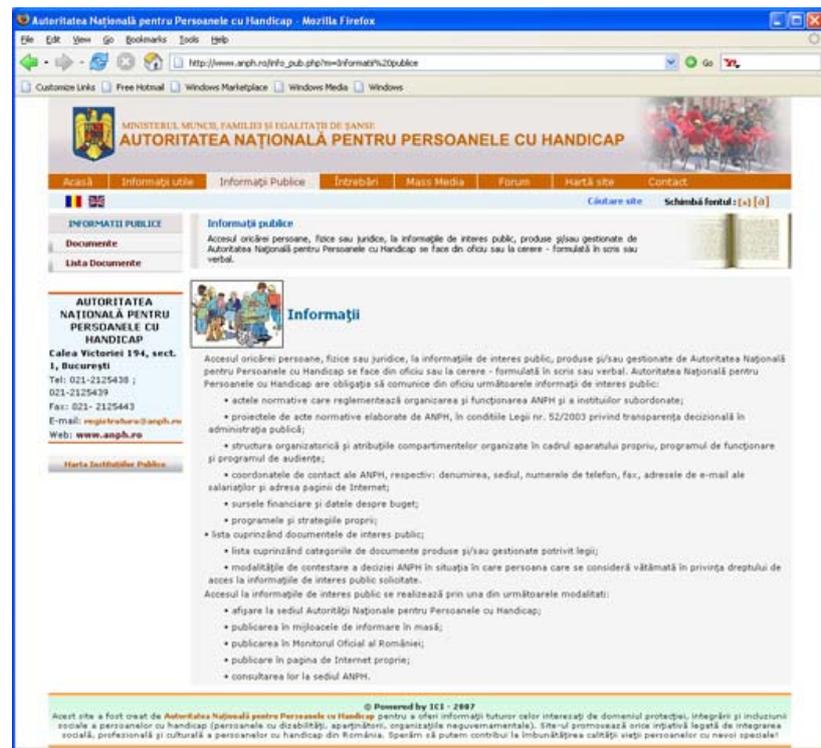


Figure 3.Public Information

Thereby the text can be read with screen readers and Braille machines (figure 4).

There are programs that synthesize the text and read the text with loud voice. The screen reader technology has limitations doesn't recognize graphic elements like buttons or other image elements without having a



Figure 5.a. Normal Fonts



Figure 5.b. Enlarged Fonts

**Administration page**

Represents an entire section of pages and web forms, used for introducing and for modification of the site content. The access in this section is restricted (see figure 6), divided on more levels and the access is based on a username and password. Some of the administrators have limited rights over the site.

**Data Insertion**

This section permits to right new information and data in the database. We can insert text type details for every category and we can upload files and images (see figure 7).

After we introduced the data it can be made actual from the section.

**Data modification**

This part is more complex accountable the data insertion section. Because assumes the partial or total change of already existent files (figure 8).

We can add additional data or we could eliminate certain data or we can totally erase a category from the database. We can modify the pictures that are attached to categories.



Figure 6. Administrator Authentication

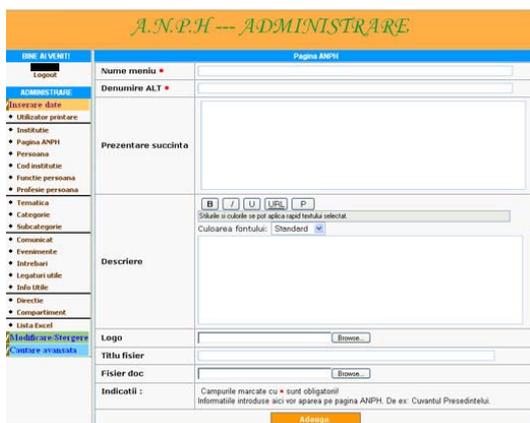


Figure 7. Data Insertion



Figure 8. Data Modification

**Conclusion**

Web interface must be made in such a way that will offer equal access to all the people, whatsoever if they are persons with disabilities or normal people. We noticed that the information is different understood.

Online navigation permits to every user to interact with the material and preferred way supporting his strong points and trying to reduce weal points.

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# ELECTRONIC PRESENTATION OF BULGARIAN EDUCATIONAL ARCHIVES: AN ONTOLOGY-BASED APPROACH

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**Abstract:** *The paper presents an ongoing effort aimed at building an electronic archive of documents issued by the Bulgarian Ministry of Education in the 40ies and 50ies of the 20th century. These funds are stored in the Archive of the Ministry of the People's Education within the State Archival Fund of the General Department of Archives at the Council of Ministers of Bulgaria. Our basic concern is not the digitization process per se, but the subsequent organization of the archive in a clear and easily-searchable way which would allow various types of users to get access to the documents of interest to them. Here we present the variety of the documents which are stored in the archival collection, and suggestions on their electronic organization. We suggest using ontologies-based presentation of the archive. The basic benefit of this approach is the possibility to search the collection according to the stored content categories.*

**Keywords:** *digitization, archives, history of education, ontologies, SWP.*

**ACM Classification Keywords:** *H.5 Information Interfaces and Presentation, H.3.3 Information Search and Retrieval, H.3.7 Digital Libraries*

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## Introduction

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Digitization of cultural and scientific content in European countries is important field of work which results should contribute to the development of The European Library portal (TEL)<sup>1</sup>. Currently, there are numerous ongoing digitization projects and initiatives in libraries, archives and museums.

Within this general picture, extensive work on digital capture and exposure of educational archives has not been undertaken so far, according to our research. In the educational field most attention is concentrated on the development of e-learning applications while historical documents of the educational institutions and the governmental bodies shaping the policy in education and research field are still not digitized on mass scale.

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<sup>1</sup> <http://www.theeuropeanlibrary.org/portal/index.html>, date of last visit March 21, 2006.