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<td>P Public</td>
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<td>C Confidential, only for members of the consortium and the Commission Services</td>
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Revision History

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Statement of originality

This deliverable contains original unpublished work except where clearly indicated otherwise. Acknowledgement of previously published material and of the work of others has been made through appropriate citation, quotation or both.

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Executive Summary

The overall goal of the ETNA thematic network is to establish a European Web Portal able to provide information on assistive products based on ICT (information and communication technologies) and e-accessibility solutions which are available in Europe, and on related organizations and services. The Portal will be developed in collaboration with ATIS4all (Assistive Technologies and Inclusive Solutions for All) – another Thematic Network belonging to the same cluster.

The Portal – expected to be released at the end of 2013, in agreement with the EASTIN Association with the name “EASTIN 2.0” – will evolve from the current EASTIN system. It will include the ETNA information system – a search engine that aggregates information from various providers and repositories – and a community connecting all stakeholders. Implementing the information system is responsibility of the ETNA network, while the community (more properly called collaborative portal) is responsibility of ATIS4all.

This deliverable describes the interfaces and functionalities of the first prototype of the ETNA Information System, which has been released at http://test.eastin.eu/. This prototype has been designed according to the specifications defined in deliverable D1.5 “Search engine and interface specifications”.

The first chapter (Introduction) synthesises how this prototype is positioned in the development process that will gradually lead to the future EASTIN 2.0.

The following chapters describe how the various functionalities have been implemented:

- The Assistive products search section, allowing to search any products (in broad sense: including either stand-alone or non-stand-alone products, resources for development, e-services, good examples of accessibility solutions);
- The Product review and comment facility, allowing registered users of the community to express personal views on products and to see other users’ reviews;
- The Organisations search section (in turn including the following sub-sections: companies, service providers and projects);
- The Associate Info search section (in turn including the following sub-sections: articles, case descriptions, ideas, frequently asked questions, forums, news and regulations).

Finally, the resources upload tool is described. This has been purposely designed to allow authorized data providers to manually upload in a central EASTIN database any of the above resources according to the ETNA taxonomy.

According to the definitions provided in Deliverable D3.2 “Synopsis of the existing resources”, these providers are called “type B providers”, as opposed to “type A providers” who are those providing data by means of webservices-based automatic procedures.
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Introduction

This deliverable describes the main functionalities of the first prototype of the ETNA Information System that has been published at http://test.eastin.eu – the webspace devoted to the ETNA developments related to the future EASTIN 2.0 Portal. The prototype has been designed in compliance with the specifications defined in D 1.5 “Search engine and interface specifications”.

In this first release, the ETNA information system and the ATIS4all collaborative portal work as two independent web portals, that communicate with each other only in relation to one functionality - the user rating facility - that will be described later in this deliverable. In the future releases, the two portals will be gradually merged with each other to actually achieve the joint EASTIN 2.0 web portal.

The first prototype of the ETNA Information System was not built from scratch but has been created by extending and improving the existing EASTIN website. Even if the overall graphical appearance of the EASTIN portal has been provisionally maintained in the ETNA prototype (Picture 1) – while waiting for agreements with the ATIS4all network in relation to the future common graphical layouts – the ETNA and the EASTIN information systems (Picture 2) greatly differ in their domain model.

In the ETNA system, the domain model has been extended to encompass the new categories of resources identified by deliverables D3.2 “Synopsis of resources” and D4.2 “Taxonomy of resources”; likewise, the user interfaces have been improved to include the new datasets and search functionalities depicted by these deliverables.

Picture 1 - Homepage of the ETNA prototype
Like the current EASTIN website, the ETNA portal is designed to accommodate multiple language interfaces (31 language layers are currently available).

In this first release, the prototype has been fully implemented in two languages, English and Italian, in order to demonstrate the multiple language layer facility at least through a couple of languages. For all the other 29 European languages, the new “labels” introduced by ETNA are still in English and will be translated over time by the EASTIN partners and National Contacts.

In the following chapters, the different sections of the ETNA Information System are described, highlighting the new functionalities that have been added to the current EASTIN website.

**Assistive products**

The *Assistive Product* section allows users to search for information on products using one of the following methods:

- Search by *ISO product classification code*: users can browse the classification of assistive products and select the most appropriate code;
- Search by *keyword*: users can select the appropriate keyword from an alphabetically-ordered keywords list;
- Search by *product name*: users can specify the commercial name of the product they are looking for;
- Search by *manufacturer name*: users can specify the name of the company that produces the products they are looking for (or the authors that make these products available to the public);
- Search by *insert date*: users can search for products recently added to any of the
databases of the ETNA network.

Users also have the possibility to combine the search parameters above by using the advanced search mode.

Finally, users can enter search terms in the text box on the upper right corner and perform a global search on all the different kinds of resources included in the ETNA portal. When a term is entered in the global search text box the following results are returned:

- The product groups matching the search terms entered;
- The products matching the search terms entered;
- The manufacturers containing the search term in their names;
- The service providers containing the search term in their names;
- The projects containing the search term in their names;
- Any associated info (articles, case descriptions, ideas, FAQs, forums, news, and regulations) related to the search terms entered.

This Global Search functionality – a successful heritage of the previous ICT-PSP EASTIN-CL project – is currently available for the following languages: English, Italian, German, Danish, Latvian, Lithuanian and Estonian.

The search facilities described so far were not built from scratch but were derived from the functionalities developed within the previous EASTIN and EASTIN-CL projects and currently available in the EASTIN system.

Conversely, substantial changes have been made in the webpages that display the detailed information of an assistive product (Picture 3 and Picture 4).
The information included in the *product details* page can be divided into four parts:

- **Basic information**: including commercial name, ISO classification codes, manufacturer name, insertion date, last update, image, source database, text description, and link to further product details (e.g. the link to the original document in the information provider website);
- **Manufacturer contact data**: including name, address, phone, email, website and social networks;
- **Technical details**: including all technical characteristics of the product, according to the taxonomy defined within WP 4 and WP 5 (deliverables D 4.2 and D 5.1);
- **The cross links to other information resources** included in the ETNA portal related to the same typology of products.

This last part allows the user to search for *organization* and *associated information* related to the same ISO 9999 classification codes of the product that is displayed. For example, if I’m browsing the details of communication software product (ISO code 22.21.12), by clicking on the “Articles” link I can perform a search on all *articles* included in the databases of the ETNA network that deal with this subject.

**Products review and comments**

In this first release of the ETNA prototype, a first ETNA / ATIS4all joint facility has been implemented: the *product reviews and comments* functionality. While the ATIS4all collaborative portal will provide the user login tools, the data input form and reviews and
comments storage, the ETNA information system displays the data stored in both aggregated and analytic manners, in such a way that readers are guided to correctly interpret the contents and the soundness of the other users’ reviews.

For this purpose, two links have been added in the product details page (see Errore. L'origine riferimento non è stata trovata.) that allow 1) to read the existing reviews for the product and 2) to submit a new review.

By clicking on “Read the reviews for this product”, the user is taken to a set of pages where he/she can see the statistics of the product ratings and read the comments posted by all users. In the first page a summary is presented with the diagram of the overall statistics, the overall average rating, and the rating of each user, along with the name of the reviewer and the preview of the comments1 (Picture 5).

![Picture 5 - Summary page of the product review](image)

By clicking on “see statistics in more details”, a webpage opens where the overall ratings are divided according to six categories (Picture 6): Actual users, Family members and primary caregivers, Professionals (in health care, social services or education), Manufacturers or suppliers, Researchers or developers, and Others.

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1 At the time this deliverable has been written, the product review functionality has not been extensively used by the ATIS4all community. Therefore, in order to give an impression of what the user rating interface would look like, fictitious data were used in the screenshots depicted in this deliverable.
By clicking on the reviewer’s name (or on see all), one can expand the details of each user’s review, including the profile of the user (i.e. the category he/she belongs to, and how much time he/she has been using the product), the score related to each of the 8
items of the rating questionnaire (effectiveness, ease of use, ease in adjusting, dimensions, weight, safety and security, durability, comfort) and the free-text comment, if any (Picture 7).

**John Smith, Manchester (Great Britain) (07/01/2013)**

*Personal profile:*
I experienced this product for more than one day
I am looking at this product as a caregiver

**Rating details:**
- **Effectiveness**: ★★★★☆ (2, not very satisfied)
- **Ease of use**: ★★★★★ (4, quite satisfied)
- **Ease in adjusting**: ★★★☆☆ (3, more or less satisfied)
- **Dimensions**: ★★★☆☆ (3, more or less satisfied)
- **Weight**: ★★★★☆ (3, more or less satisfied)
- **Safety and security**: ★★★☆☆ (3, more or less satisfied)
- **Durability**: ★★★☆☆ (3, more or less satisfied)
- **Comfort**: ★★★★☆ (4, quite satisfied)


*This rating system takes inspiration from the eight 'product items' of the QUEST questionnaire (Customer Use Evaluation of Satisfaction with Assistive Technology, D. A. Cums, R. Wegs-Lambosch & B. Sida, 2000, with permission). Scores range from 1 (not satisfied at all) to 5 (very satisfied). Intermediate scores are 2 (not very satisfied), 3 (more or less satisfied) and 4 (quite satisfied). For software products that don’t include any hardware, usually only the following items have been scored: effectiveness, ease of use, ease of adjusting.*

**Picture 7 - Details of an individual user’s review**

By clicking “Review this product” on the upper right corner of the product details page (see again Picture 3), the user will be taken to the Product Review webpage on the ATIS4all collaborative portal where he/she will have the possibility to add his/her own ratings and comments.

**Organizations**

The Organizations section includes three categories of resources: Companies, Projects and Service Providers. Companies include the manufacturers of products in strict sense. Service providers include organizations offering services related to AT provision. Projects include temporary organizations, such as research and development projects. Indeed there may be products considered in the Assistive Products section of the Portal – especially in the ICT domain – that don’t have a manufacturer in strict sense, but are made available by other kinds of organizations, such as service providers or projects.

The Organizations search interfaces allow to search: by ISO classification code, by ICF classification code, by Keyword, and by Name (Picture 8).
Similarly to what happens in the assistive product section, the guided search by ISO classification code allows the user to browse the ISO 9999 classification of assistive products and select the most appropriate code (Picture 9).

The search by ICF classification codes allows users to select the fist-level ICF code along any of the four axes: Body Function, Body structure, Activities and Participation, and Environmental factors.

With the Keyword Search, users can select the appropriate keyword from an alphabetically-ordered keywords list.

Finally the Search by name allows users to specify the name of the Organization to be searched.
ASSISTIVEWARE B.V.

English name: ASSISTIVEWARE B.V.

Original name: ASSISTIVEWARE B.V.

Insert date: 24/02/2012
Latest update: 24/02/2012
Source database: Sva (IT)

Subject (according to the ISO classification of assistive products):
Face-to-face communication software (ISO 22.21.12)
Reading materials with audible output (ISO 22.30.03)
Input software (ISO 22.36.18)
Audible computer displays (ISO 22.39.07)
Special output software (ISO 22.39.12)

Subject (according to the ICF classification of Functioning, Disability and Health):
Mental functions (ICF b1)
Voice and speech functions (ICF b3)
Neuromusculoskeletal and movement-related functions (ICF b7)

Contact data
Contact body: NIEMEIJER CONSULT
Town: AMSTERDAM
Country: NL
E-mail: info@assistiveware.com
Website: http://www.assistiveware.com/

Link to further details:
Original document: Sva (IT)

See if other related items are available:
Assistive Products
Projects
Service Providers
Articles
Case Descriptions
Ideas
Frequently Asked Questions
Forums
News
Regulations

Picture 10 - Organization detail page (in this case a Company)

Picture 10 depicts an example of a Company details page. Information includes the name
of the company, the insertion and latest update dates, the source database (which is the external database, where this information comes from), the subject the company is involved in (in term of ISO 9999 categories of assistive products, and ICF categories of disability-related topics), a concise free-text description, the contact data, and any link to further details, such as e.g. the deep link to the original document in the information provider’s website.

Like the Assistive Product details page, there is also a section including cross links to other resources included in the ETNA portal related to the same typologies of products. For example if I’m browsing a company that produces input software (ISO code 22.36.18), by clicking on “Case descriptions” I can perform a search on all case descriptions included in the databases of the ETNA network, that deal with this subject.

**Associated Information**

The Associated Info section - already-existing in the EASTIN website, however extended to include all resources defined by deliverables D 3.2 and D 5.1 - includes six categories of resources: Articles, Case Description, Ideas, FAQs, Forums, News, and Regulation.

For each category, the search interface allows to search by ISO classification code, by ICF classification code, by Keyword, by Title, and by Author (Picture 11).

A functionality to search on all documents has also been included.

![Picture 11 - Search interface for Associated Information (in this case for resources “Articles”)](image)

The functionalities Guided search by ISO classification codes, Search by ICF classification code, and Keyword search work in the same way as described for the Organizations section.

The functionalities Search by title and Search by author allow to specify the text to be searched in the “title” and “author” fields respectively.
**Authors:** Caracciolo A  
**Title in English:** Powered wheelchairs and outdoor mobility assistive products  
**Original Title:** Carrozze elettroniche e ausili per la mobilità esterna  
**Publishing details:** Milano: Portale Siva, 2003  
**Publication year:** 2009  
**Insert date:** 13/03/2009  
**Latest update:** 13/03/2009  
**Source database:** Siva (IT)  
**Subject (according to the ISO classification of assistive products):**  
- Electrically powered wheelchairs with manual steering (ISO 12.23.03)  
- Electrically powered wheelchairs with powered steering (ISO 12.23.06)  
- Propulsion units for manual wheelchairs (ISO 12.24.09)  
**Description:**  
Technical aids that allow independent and quick movements are more and more required as a complement or an alternative to the manual wheelchair. The market offers an increasing number of products matching these requirements. In this case, like every time you choose an assistive device, evaluating the features that can fully meet the specific needs is extremely important.

**Link to further details:**  
**Original document:** Siva (IT)  
**Further information:**  
http://www.portale.siva.it/Files/107_1_Caracciolo_Carrozze_Elettriche_EN.pdf

**See if other resources are available on the above subjects:**  
- Assistive Products  
- Companies  
- Projects  
- Service Providers  
- Case Descriptions  
- Ideas  
- Frequently Asked Questions  
- Forums  
- News  
- Regulations

**Picture 12** depicts an example of an Article details page. Information include the title of the Article in English and in its original language, the authors, the publishing details, the publication year, the insertion and last update dates, the source database (which is the external database where this information comes from), the subject the article deals with (in term of ISO 9999 categories of assistive products, and ICF categories of disability-related topics), and links to further details such as e.g. the link to the original document in the information provider’s website.

Similarly to the Assistive Product details page, there is also a section including cross links to other resources included in the ETNA portal related to the same typologies of products. For example, if I’m browsing an article that deals with **Input software** (ISO code 22.36.18), by clicking on the “Assistive product” link I can perform a search for all the
products, included in the databases of the ETNA network which belong to the typology
*Input software.*

**The upload tool**

In order to allow authorized users to upload new resources into the Central Database of the ETNA web portal, an *upload tool* has been purposely developed. The upload tool is a web based interface that guides the user in entering (or editing) the data needed to describe each resource according to the ETNA taxonomy.

After logging-in, the authorized user should choose what kind of resource he/she wants to add or edit (*Assistive products*, or *Organizations*, or *Associated Info*) *(Picture 13).* A list of the resources already entered by this user is presented in each of the three sections (products, organizations and associated info). The user may wish to select a resource from the list, modify its description, or delete it; or may enter a new resource.

*Picture 13 - Screenshot of the upload tool homepage*

The upload tool includes automatic controls over the completeness of data for each mandatory field and the accuracy of the format for some particular types of fields (such as dates, integer and decimal, URLs, email addresses, etc.).

The validation of the entered data is performed each time the user clicks on the previous/next button in one of the wizard interfaces. If the validation fails, the user is forced to stay on the current interface and is prompted with the appropriate error messages, indicating the specific fields of the form containing the errors. If the validation is successful the user is allowed to move to the previous/next step of the wizard.

All forms of the Upload Tool are designed to be fully compliant with the *WCAG 2.0 level AA specifications for accessibility.*

**Assistive Products upload**

When accessing the upload tool for the first time, before the user is enabled to insert a
new product in the ETNA central database, he/she must enter at least one record in the Organizations section (i.e. a Company, a Project, or a Service provider). This is due to the fact that the information on the manufacturer of a product won’t be entered manually in the assistive products upload form, but will be extracted from the list of Organizations previously entered by the user.

By clicking on “New” in the Assistive Products section, a set of forms is presented to the user where he/she has the possibility of adding the details of the product he/she wants to enter.

In the first webpage (Picture 14) the user enters the basic information: product name, manufacturer (selected from the list of Organizations previously entered in the Organizations section), the primary ISO 9999 classification code which the products belongs to, a free text description in original language and in English, and the URLs where additional information is available (image, thumbnail image, user manual, download web page, multimedia material and further relevant information).

In the second webpage – accessible after the data entered in the first webpage have been saved and successfully validated – the user can browse the ISO 9999 classification to enter possible additional classification codes (in the case of multi-function products that fall within more ISO categories).

In the third webpage, a list of features – corresponding to the items of the ETNA taxonomy – is presented, so that the user can decide which of them to apply to the product he/she is entering. On the basis of the primary ISO code entered by the user, the system first presents the features that are more likely to be applicable to the specific type of product (Primary Features) (Picture 15).

In case the product description needs also other features that are not included among the Primary Features, by clicking on the “expand secondary features” button at the bottom of the page (Picture 16), the entire list of items of the ETNA taxonomy will be presented.

At the end of the process the user clicks on the Save button and the record is added to the ETNA central database.
Picture 14 - Products upload tool: entering the basic information

Picture 15 - Products upload tool: entering primary technical features
Organizations upload

In the Organization section the user can enter or edit information on Companies, Projects and Service providers. The interface is similar to the one described above for Assistive Products. When entering a new Organisation, the user has to select the type of organization (Company, or Project, or Service provider) and fill in the basic information fields (Name, description, contact details, etc…).

When this is done, the user has to indicate what are the subjects the Organisation is involved in, by selecting the appropriate ISO 9999 products classification codes (Picture 17) and the ICF disability-related domain codes (Picture 18).
Picture 17 - Indicating the subjects (assistive products ISO categories) the organisation deals with

<table>
<thead>
<tr>
<th>ISO Code</th>
<th>Code description</th>
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<tr>
<td>22.03</td>
<td>ASSISTIVE PRODUCTS FOR SEEING</td>
</tr>
<tr>
<td>22.03.03</td>
<td>Light filters (absorption filters)</td>
</tr>
<tr>
<td>22.03.06</td>
<td>Spectacles and contact lenses</td>
</tr>
<tr>
<td>22.03.09</td>
<td>Glasses, lenses and lens systems for magnification</td>
</tr>
<tr>
<td>22.03.12</td>
<td>Binoculars and telescopes</td>
</tr>
<tr>
<td>22.03.15</td>
<td>Assistive products for extending and adjusting range and angle of the field of vision</td>
</tr>
<tr>
<td>22.03.18</td>
<td>Image-enlarging video systems</td>
</tr>
</tbody>
</table>

Associated info upload

In the Associated information section the user can enter or edit information on Articles, Case descriptions, FAQs, Forums, Ideas, News, and Regulations.

Again the interface is similar to those described above for Assistive products and Organizations.

When entering a new Associated Information the user has to select the type (Article, Case description, FAQ, Forum, etc…) and then fill in the basic information fields (Title, Authors, Abstract, Publishing details, Links to further info).

When this is done the user has to indicate what are the subjects of the Associated info by selecting the appropriate ISO 9999 products classification codes and the ICF disability-related domain codes.