European Thematic Network on assistive information technology

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Summary of the activities carried out in the first two years

This Thematic Network is aimed at facilitating and co-ordinating – over a period of three years – the implementation of a European Web Portal able to provide information on ICT-based Assistive products and e-Accessibility solutions which are available in Europe, and on related organisations and services. The intended audience includes various stakeholders, such as end-users, professionals, manufacturers/suppliers, researchers/developers and policy-makers.

Assistive technologies (AT), especially those based on Information and Communication Technologies (ICT), are a powerful driver for inclusion and quality of life for people with disabilities. By providing compensation for functional limitations or allowing access to mainstream products or services, ATs play an increasingly central role in equalising opportunities for people with disabilities in all aspects of life, as they help to cope with barriers in all types of environment.

However, ensuring access to ICT assistive equipment, systems and services is not straightforward: information is patchy, not well distributed or simply absent; knowledge and expertise are unevenly distributed in Europe and often scattered throughout highly specialised Centres; the ICT AT market is still a niche dominated by highly specialised SMEs. In this context, communication between different environments plays a fundamental role, both for improving knowledge exchange among the various stakeholders (especially taking into account the end-users’ views), and for a wider circulation of information on the products available, in a more transparent and easily accessible way.

In order to tackle this issue, the ETNA and the ATIS4ALL networks are jointly working at the creation of a European Web Portal able to connect and disseminate all information and expertise in this field. 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 (www.eastin.eu). 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 ETNA, while the community is responsibility of ATIS4ALL.

To date the ETNA network involves 23 European leading Organisations, each with acknowledged commitment in the ICT and in the AT area, in 13 Countries. It is coordinated by the CITT (Centre for Innovation and Technology Transfer) of the Don Carlo Gnocchi Foundation (Milano, Italy).

During the first two years of the project, all Consortium partners were involved in an extended and valuable exchange of ideas, knowledge and expertise, which contributed to the achievement of all the planned results within deadline, and eventually led to the implementation of the first release of the ETNA information system. This involved – in order to facilitate the flow of relevant information among differently indexed sources – the creation of a common language (the ETNA taxonomy) able to describe and classify the web resources related to AT products and e-accessibility solutions.

Key events in 2011 were the first and the second technical workshops, held respectively in Milan, Italy (24-25/03/2011) and in Maastricht, The Netherlands (29-30/08/2011). The first workshop investigated the information needs of the various stakeholders, and set the ground for the achievement of the 1st ETNA milestone – the map of information needs (described in the public deliverable D2.2 “Synopsis of the information needs”). The second workshop explored the web resources available in Europe in relation to ICT AT products and e-accessibility solutions, and addressed the work that led to the achievement of the 2nd
ETNA milestone – the map of resources (described in the public deliverable D3.2 “Synopsis of the existing resources”).

In the course of the 2012, all partners’ involvement was quite demanding, as the project focus moved to implementation issues involving inter-disciplinary dialogue and complex technical decisions. The ontology issue (how to describe this domain of knowledge in such a way to be properly managed by an information system) was the main subject of the third and the fourth technical workshops, held respectively in Taastrup, Denmark (25-26/01/2012) and in Linz, Austria (9-10/07/2012). The third workshop included lectures, plenary discussions and team-work aimed at identifying common methods to classify the key features of ICT AT products and e-accessibility solutions. It was understood that a taxonomy (identifying/naming concepts and arranging them into classifications) was sufficient to describe the ETNA domain model and inform the design of the Portal search engine. It was the opportunity to look at the theme from different viewpoints and start a consensus-building procedure, that created the basis for further elaboration.

Between the third and the fourth workshop, the ETNA 1st year Review took place at the Commission offices in Brussels (27-28/03/2012). The progress was judged satisfactory; the project was allowed to proceed without modifications; some recommendations were issued and the Consortium carried out all actions needed to fulfil them.

Once the roadmap was clearer – also thanks to several internal consultations and dedicated technical meetings – and some assumption that had been initially done in the ETNA Description of Work had been reformulated, the foundations of the taxonomy were refined in the fourth ETNA workshop. In order to better achieve the overall ETNA objectives within deadline and within the planned resources, the workshop re-defined the scope of two Workpackages – whose title was changed from “Ontology of products” and “Ontology of components”, respectively into “Taxonomy of resources” and “Taxonomy management tools” – and started the consensus process that led (through several iterations) to the achievement of the 3rd ETNA milestone. Accordingly, this milestone was re-named Taxonomy of resources (described in the public deliverable D4.2 “Taxonomy of resources”).

The production of the various deliverables usually proceeded by e-mail circulation of drafts in several iterations, with collection and discussion of all partners’ feedback until achieving consensus. Besides the workshops, in the course of the year eleven webinar meetings were held, that gave all partners the opportunity to illustrate in detail to the whole Consortium their activities, projects and achievements in the sector, and strengthen mutual collaboration. The “virtual room” of the webinar platform was also used for several management meeting and technical meetings.

The paper dissemination material (a leaflet) was produced in collaboration with ATIS4All, in order to convey a public image of a unique cluster, reflected by the similar graphic layout of both the paper flyers and the networks’ websites. The graphics were designed by ATIS4All, while the contents were of course under responsibility of each network. At the end of 2012 a new version was produced with revised design, contents and terminology, also in order to involve external supporters and followers.

The first release of the ETNA website, www.etna-project.eu, was published in March 2011; since then, it was continuously updated by reporting on progress and making available for download all public material produced. Now it is composed of 13 pages that provide public project information as well as tools for project management and communication among partners (i.e. partners’ contacts, webinars recordings, workshops documents).
In the **second release** – published at the end of 2011 – two new components were experimentally deployed: a new re-engineered EASTIN **search engine** (EASTIN 1.1, developed in collaboration with the ICT PSP project “EASTIN-CL” and with the EASTIN Association), and the first prototype of a **user ratings and comments tool** (developed in collaboration with ATIS4All) intended to allow end-users from the “virtual community” to review the products retrieved through the search engine.

These components represented the first steps of the hard work that followed and gradually led – at the end of 2012 – to the implementation of the **first prototype of the ETNA Information System** (published in January 2013 at [http://test.eastin.eu](http://test.eastin.eu), described in detail in the public Deliverables D1.6 “TN Portal - Search engine and interface 1st release”). This prototype marks the achievement of the **5th ETNA milestone** – the **Thematic Network Web Portal 1st Release**.

The findings of workpackages WP2 (Mapping info needs), WP3 (Mapping existing resources) and WP4 (Taxonomy of resources) inspired the specifications of this first release, which was created by extending and improving the EASTIN website. Major changes were carried out in the **domain model** (internal data representation) – extended to encompass the new categories of resources identified by WP3, and to deal with the new taxonomy created by WP4 – and in the **search interfaces** – improved and extended so as to deal with the new datasets, and to include new search functionalities meeting the information needs of the various stakeholders as identified by WP2.

The system fully exploits some unique features of the EASTIN system, such as the **full multilingualism** and the ability to integrate an unlimited number of different information systems even if based on different technological platforms. Like EASTIN, the ETNA system is designed to accommodate for an unlimited number of different **language interfaces**, although in the first release this facility is limited – for demonstration purposes – to just two languages (English and Italian).

Concerning graphic appearance, the same layouts of the current EASTIN system have been maintained. Although in the future it is planned to achieve a common “**look & feel**” for both ATIS4All and ETNA – so that users have the feeling to move around within a single Portal – and graphical proposals have been already produced and discussed in both networks, at this stage the great amount of technical work involved in the development of the ETNA information system required to give priority to the “**engine**” rather than to graphics. The “**common look & feel**” issue will be tackled in the next releases, after the first prototypes of the ETNA information system and of the ATIS4all collaborative Portal have proved to properly work and efficiently perform.

In order to achieve a wide coverage of the Internet resources to be encompassed by the ETNA search engine, linking strategies have been identified. Two methods are going to be implemented. Partners who operate web-based databases and are technically able to deploy **web services** compliant to the ETNA specifications (described in deliverable D6.1 “**Partners’ webservices 1st release**”), will link their databases to the ETNA search engine through automatic procedures (**providers type A**). Conversely, partners who don’t avail the needed technical skills or simply have little amounts of information resources that aren’t worth the technical investment, will load their data on a new central database by means of a purposely developed **upload tool** (**providers type B**).

The first release will initially work with data coming from the current EASTIN partners. These include over 10,000 products in the ICT field. In the first semester of 2013 – within workpackage WP6 “**Unified access to all resources**” – all ETNA partners and also external organizations will work at extending coverage by providing further information resources, some as **providers type A**, some others as **providers type B**. Thus the second release, scheduled June 30, 2013, is expected to encompass an impressive amount of information on
products (both AT products in strict sense and e-accessibility solutions), organizations (companies, projects, and service providers) and associated information (articles, case descriptions, ideas, FAQs, Forums, News, and Regulations).

Information is indexed according to the already-mentioned ETNA taxonomy. For each type of resource, the taxonomy includes a basic dataset (i.e. the minimum amount of data that are needed to uniquely identify a resource; to understand what it is about; and to make it retrievable by the search engine). For products, the taxonomy also includes a detailed dataset that describes technical and functional characteristics in detail. As the detailed dataset will be evolutionary in itself – due to the fact that the assistive technology world continuously evolves, especially in the ICT domain – the detailed dataset will need continuous maintenance. That's why a taxonomy maintenance tool is needed: this will be the re-scheduled 4th ETNA milestone, to be achieved in September 2013.

Overall, the ETNA Thematic Network is proceeding - with minor deviations of the original schedule - towards the achievement of its specific objectives, that can be summarized in the following points:

- Make information on available AT products and e-accessibility solutions more transparent and easily available to everybody, in such a way to contribute 1) to the empowerment of citizens with disability in relation to the knowledge and the choice of assistive technologies, and 2) to the advancement of the AT market, which will have to respond to a wider audience of informed, demanding and responsible consumers across the whole European Union;
- Connect developers, providers and suppliers of AT solutions from all over Europe, by improving exchange of knowledge, ideas and open source tools, overall contributing to the advancement of R&D and help companies to benefit from a wider market potential.
- Connect researchers, developers, professionals, and end-users of AT; in this way, the network will help inject the users’ viewpoint, and also help improve public service delivery systems, by making transparent across Europe the variety of regulations, standards and procedures, and bringing to light best practices that can be adopted and localized;
- Support mainstream developers in the development of ICT products intended for the general public, enabling them to find information and resources instrumental for creating more accessible products, or products that are compatible with current and future AT products.

The ETNA Consortium in Linz, July 2012

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