BUSINESS PLAN

CEN TC 353

INFORMATION AND COMMUNICATION TECHNOLOGIES FOR LEARNING, EDUCATION AND TRAINING (ICT for LET)

EXECUTIVE SUMMARY

Scope of CEN TC 353:

Produce standards in the field of information and communication technologies (ICT) relating to learning, education and training (LET).

The European Standards (EN), Technical Specifications (TS) and Technical Reports (TR) that are developed will have a well-defined European scope. These may include:
- Development of CWAs and other specifications into standards, if appropriate
- Development of national standards into European standards

Learning, education and training in Europe relies heavily on the growing use of information and communications technologies.

The European society, application sectors, markets, national and regional education and training systems are sufficiently mature in the usage of ICT for LET to require European specific standards.

The CEN Technical Committee (TC) 353 focuses on standards for European policies, competences, quality, interoperability and frameworks.
1 BUSINESS ENVIRONMENT OF THE CEN TC 353

1.1 Description of the Business Environment
The business environment is information and communication technologies (ICT) for learning, education, and training (LET). The application sectors involved may include:

- education and training authorities (national as well as regional);
- universities, schools and other educational establishments;
- providers of professional and vocational education and training;
- software and system providers that support educational contexts;
- publishers and broadcasters of educational content.

1.2 Quantitative Indicators of the Business Environment
The following list of quantitative indicators describes the business environment in order to provide adequate information to support actions of the CEN TC. The uptake of Technology Enhanced Learning (TEL), education and training is undeniable. Almost all learners in schools and many adults undertake learning, education or training that involves the use of ICT. This is an area that affects most of the population of Europe.

For example:
A survey, published by the European Commission, shows that 96% of all schools in Europe have internet access today, and 67% already have a broadband connection. Over 90% of classroom teachers use computers or the internet to prepare lessons. 74% also use them as a teaching aid, Commission (http://www.egovmonitor.com/node/7871)

Most adult learners (54%) already make use of the Internet as it increases flexibility about when, where and how to learn. Policy recommendations to the EU and Member States include:

1) Increase transparency on the eLearning market through implementation of an integrated system of portals at regional, national and European level;
2) Develop awareness raising initiatives which let people try out eLearning in real-world settings;
3) Create innovative ICT-enriched ways of providing skills which avoid resemblance to traditional types of teaching/learning;
4) Raise awareness of the benefits of lifelong learning for everybody, and the opportunities which exist;
5) Develop a concerted effort (involving all key stakeholders) to communicate the benefits and feasibility of lifelong learning to older Europeans. (http://www.egovmonitor.com/node/7774)

1.3 Sustainability Aspects
Despite originally understood in a more restricted environmental sense, the concept of Sustainability has evolved to consider other critical non-environmental issues, such as economic crises, poverty and social disparities. It now encompasses three interdependent and mutually reinforcing dimensions: Economic, Environmental and Social – and refers to an holistic system in which the needs of the present are met without compromising the ability of future generations to meet their own needs.

It is undeniable that our failure to address Sustainability effectively, has led to the deterioration of our environmental, social and economic wellbeing. The balance between the environmental, social and economic systems is therefore considered essential for achieving Sustainability, which is now recognized as the most fundamental requirement in every human endeavor and activity.

The standards developed at TC 353 can contribute, even if indirectly, to the achievement of Sustainability, as they relate to testing, products, procedures, services, terminology, management systems and auditing in the field of information and communication technologies relating to learning, education and training. The standards development process provides the opportunity for TC353 Delegates to contribute to Sustainable Development by taking responsibility for the impacts of their decisions and activities on society and the environment and, therefore, assure the most sustainable outcomes of their work. The (currently under development) ISO guide 82 provide powerful insight and useful guidance for standard writers and TC 353 Delegates will use its content in the course of their standardization work.

1.3.1 Environmental Aspects
The standardization work developed at CEN TC 353, allows energy savings and pollution reduction by facilitating the design and realization of Technology Enhanced Learning (TEL), such as e-Learning, m-Learning and other types of distance learning, which avoid unnecessary travel. In addition CEN TC353 successfully use virtual meetings and other virtual tools as a complement to face-to-face meetings, therefore avoiding the travelling of its delegates. As standard writers, CEN TC 353 delegates will also analyze the environmental aspects and impacts of the outputs of their work, to assure a conscious and effective control of the identified aspects and the best possible mitigation of any negative impacts.

1.3.2 Social and Economic Aspects
TEL has the capability to open education resources to target groups that would have no access to them otherwise, due to the lack of financial resources. CEN TC 353, through the standardization work that carries out, contributes to the continue development of TEL, to enable it to reach even wider audiences with less resources in the future. The same applies to the participation in the standardization work: Virtual attendance to the CEN TC 353 meetings and work carried out by virtual means will allow more participation from members with less financial resources and will attract new members. This will increase the manpower of the TC and improve the quality of its standardization outcomes, starting a positive cycle of Sustainability. As standard writers, CEN TC 353 delegates will also analyze the Social and Economic aspects and impacts of the outputs of their work, to assure a conscious and effective control of the identified aspects and the best possible mitigation of any negative impacts.
2 BENEFITS EXPECTED FROM THE WORK OF THE CEN TC 353

Sharing of data, content, tools and services for learning, education and training can only be achieved when clear technical agreements are made between all parties concerned. The more global this agreement is, the greater the benefit. On the other hand different communities have their own identity, language, and vocabularies which are important to express exactly what is meant. For instance the educational system in North America is differently structured than in Europe and it uses different terminology. Even in Europe great differences exist between different sectors. For example, a thesaurus applicable for vocational education is different from the one for schools. These naturally grown differences make the application of standards more complex and often less effective. In addition vocabularies are created again and again sometimes with differences that are not essential but that inhibit interoperability.

The main benefits of the CEN Technical Committee 353 are expected to include:

- There will be greater consensus amongst National Bodies that provides a consolidated European perspective. This can be supported, for example, by forwarding European specifications and standards to ISO/IEC JTC1 SC36 for international standardization or by undertaking parallel development;
- Increased interoperability across member states between digital learning content, learner related information, management systems to deliver learning and other information technology tools;
- Increased interoperability of European e-learning products with international systems so reducing developments costs and opening potential markets but localised for European stakeholders. This will also have the benefit of increased inclusion;
- Increased quality of European e-learning products, services, processes and methods;
- Common multicultural and multilingual exchange formats, for example a European well defined data model capable of expressing competency information and associated metrics in a standardized way;
- A common understanding of terms and concepts through the development of vocabularies and frameworks around which software vendors, tool producers and content authors may work in order to provide a greater level of interoperability and application of tools;
- Increased understanding and use of international standards – for example by providing multilingual guidelines or application profiles of common specifications and standards from ISO/IEC JTC1 SC36 or IEEE LTSC;
- A wider range of national bodies and experts will participate and the audience for any outputs will increase;
- Outputs from CEN WS-LT and other CEN workshops have a place where they can be considered for standardization;
- A contribution to sustainable development, as described on 1.3.
3 ACHIEVED RESULTS OF THE CEN TC 353

CEN TC 353 has developed, approved and published the following European Standards (European Norm = EN):

1. EN ISO/IEC 19796-1:2009 (RFDQ)
   Adoption of the ISO/IEC quality standard ISO/IEC 19796-1:
   Adoption of ISO/IEC 19796-1 Information Technology- Learning, Education and Training –
   Quality Management, Assurance and Metrics- Part 1: General Approach as Information
   Technology- Learning, Education and Training- Quality Management, Assurance and Metrics
   The quality standard ISO/IEC 19796-1 was developed by ISO/IEC JTC1 SC36 WG5.
   This European Norm EN ISO/IEC 19796-1 was approved and published in 2009.

2. EN 15981 (EuroLMAI)
   European Learner Mobility - Achievement Information (EuroLMAI)
   This standard is a data model for the expression and exchange of European Learner Mobility
   information as defined by the European transparency instruments. This standard supports the
   interoperability of European-wide IT systems that manage and exchange Europass related
   information. The standard builds on existing learning technology specifications and takes into
   account related national application profiles
   This European Norm EN 15981 was approved as NWI in 2007 and published in 2011.

3. EN 15943 (CEF)
   Curriculum Exchange Format (CEF)
   Technical standard for a Curriculum Exchange Format (CEF) intended to be used for
   exchanging and mapping curriculum information for use in controlled vocabularies for:
   • metadata schemes
   • Navigation structures in user interfaces
   • Providing mappings between terms
   The standard will complement guidelines on exchanging curriculum information that are
   expected to be published as a CWA via the CEN Workshop on Learning Technologies.
   Outcomes will be:
   • A data model
   • At least one informative binding
   This European Norm 15943 was approved as NWI in 2008 published in 2011.

4. EN 15982 (MLO-AD)
   Metadata on learning opportunities (MLO) - Advertising
   This European Norm was approved as NWI in 2008 and published as in 2011.

The current status of all achieved results and standards developed, approved and published by
CEN TC 353 can be found in a separate document that is updated on a regular basis after each
CEN TC 353 plenary.
4 STRUCTURE OF THE CEN TC 353

CEN CT 353 has got a Chair, Vice-Chair and a Secretariat.

The current Chair is: Christian M. Stracke (Germany).
The current Vice-Chair is: Cleo Sgouropoulo (Greece).
The current Secretariat is: Massimo Actis Dato (Italy)

CEN CT 353 has got a Plenary and currently two Working Groups (WG).
The Plenary of CEN TC 353 is taking place two times in a year.
The WGs meeting are taking place at the same dates.

Currently the WGs of CEN TC 353 are:
1) WG1: "Interoperability"
2) WG2: "Business Planning, Communications and Prospectives"

CEN TC 353 has got national standardization bodies as national members with voting rights and liaison organization as associated members without voting rights.
Currently CEN TC 353 has got:
- 28 national standardization bodies as national members,
- 4 liaison organizations.

Currently the national standardization bodies as national members of CEN TC 353 are from the following countries:
1) Austria
2) Belgium
3) Bulgaria
4) Croatia
5) Cyprus
6) Denmark
7) Estonia
8) Finland
9) France
10) Germany
11) Greece
12) Hungary
13) Italy
14) Latvia
15) Lithuania
16) Luxembourg
17) Malta
18) Netherlands
19) Norway
20) Poland
21) Portugal
22) Romania
23) Slovakia
24) Slovenia
Currently the liaison organizations of CEN TC 353 are:
- CEN WS Learning Technologies (since launch of CEN TC 353);
- ISO/IEC JTC1 SC36;
- CEN WS ICT Skills;
- ADL.

5 PARTICIPATION IN THE CEN TC 353

All the CEN national members are entitled to nominate delegates to CEN TC 353 and experts to Working Groups. Participation as observers of recognized European or international organizations is also possible by establishing a liaison with the TC.

Liaisons with the liaison organizations are mutually approved and will be maintained to provide additional indirect participation and collaboration. More liaisons will be established in the future as considered relevant and possible.

6 OBJECTIVES OF THE CEN TC AND STRATEGIES FOR THEIR ACHIEVEMENT

6.1 Defined objectives of the CEN TC 353

Encourage the effective development and use of relevant and appropriate standards for European information and communication technologies for learning, education and training.

The strategies of the TC will work according to the following priorities that are not exclusive and are in no particular order.

European Policies
- Development of European standards for the realization, dissemination, implementation and exploitation of European policies such as European Qualifications Framework (EQF), the Europass documents.
- Development of European standards for the realization, dissemination, implementation and exploitation of European key strategies such as European mobility and lifelong learning expressed in EU2020 and other communications by the European Union.

Competences
- Development of a well defined European data model and guidelines for expressing, referencing and capturing measurable characteristics of simple and complex competences.
• Identification of existing competence maps and taxonomies and development of guidelines on taxonomies and vocabularies. Including harmonization and mapping of vocabularies used to express European curricula and competences. Every organisation that is engaged in the fields of formal education, technical, vocational or corporate training or workforce development is creating its own competence definitions and structures. Many of them are involved in the design and implementation of digital repositories in order to support the storage, search, retrieval and management of these definitions, thus dealing with issues ranging from learning resource discovery to accreditation or skill gap analysis, depending on the context of the application. However, the use of different information models or assumptions makes the exchange, between such repositories and the referencing of competence and skills definitions by relevant systems, an impossible task.

Quality
• Develop frameworks, specifications and guidelines to improve the quality and transparency of organisations, processes, products and services.
• Develop guidelines for stakeholders to improve the transparency of educational processes (e.g., identifying and choosing e-Learning offers).
• Localizing international standards (e.g., ISO/IEC 19796-1).
• Providing guidance to stakeholders involved in quality development.
• To improve quality competencies for European stakeholders.

Interoperability and Frameworks
• Development of European learning, education and training vocabularies and frameworks around which software vendors, tool producers and content authors may work in order to provide a greater level of interoperability and application of tools.
• Provide interoperability specifications for the exchange a range of European curriculum information initially aimed at school systems, but also applicable in a wider inclusive lifelong learning context.
• Development of a practical approach towards interoperability between existing and future repositories for learning whose purpose is the safe storage or delivery, and also administration and configuration management for learning objects. This will consider the European needs for the interoperability of repositories for learning, systems to support the creation of a viable, sustained infrastructure for exchanging learning objects and the associated metadata. This will be based on the experiences of successful EC-funded projects and other European initiatives.
• Integration with systems e.g. knowledge management systems.
• The sharing of education related data, services, content and tools achieved through clearer technical agreements between all parties, without losing the value of expression typical of each European community’s language and culture.

6.2 Identified strategies to achieve the CEN TC’s defined objectives

The TC will carefully examine and take into account the various effects on learning education and training technology standards due to the diversity of cultural background and languages that exists within Europe.
The TC encourages all National Bodies and Liaison Organizations (NBLOs) to submit and report on existing standards and well-recognised and proven practice.

The TC will maintain a liaison with the international committee ISO/IEC JTC1 SC36 to ensure that there is synergy and not duplication between the works done by the two committees and to ensure that European interests are considered in developing international standards.

The TC will publicize standardization activities to the liaison organizations, selected European projects, developers and end users.

The TC will focus on collaborating with selected partners in ensuring that their specifications they produce do not duplicate international or European standards activity, are appropriate for a broader audience and are suitable for European standardization.

### 6.3 Workplan

Following the scope of TC 353 and the work priorities which have been identified, the following NWI have been approved and are active today:

- **Simple Publishing Interface**
  
  Its scope is to develop a protocol that facilitates the transfer of metadata and content from tools that produce learning materials to applications that persistently manage learning objects and metadata. The NWI was approved in 2011.

- **Simple Query Interface**
  
  Its scope is to develop an application Programming interface (API) for querying learning objects repositories. The aim is to produce an abstract API together with a set of bindings to different technologies. The NWI was approved in 2011.

Other NWI are under consideration. Among them:

- submission of EN 15982 to ISO/IEC JTC1 SC36 for consideration as an ISO standard
- submission of EN 15981 to ISO/IEC JTC1 SC36 for consideration as a possible new work item in SC36
- adoption of ISO/IEC 19788-1:2011 and ISO/IEC 19788-2:2011 as European Standards, with the following rationale: MLR is an ISO standard dealing with metadata in the field of ITLET. Adopting MLR as a European Standard will propagate a common norm in place of uneven national standards for learning resources metadata. MLR introduces a semantic web-based approach to metadata. MLR can be used to describe any type of metadata, including Dublin Core and LOM. Thus, MLR ensures better interoperability between learning resources and learning opportunities. The adoption of MLR as EN will enable a better description of LET in Europe.
The current status of all ongoing standardization projects and NWI can be found in a separate document that is updated on a regular basis after each CEN TC 353 plenary.

6.4 Standardized Timeframe for the Workplan

According to Standardisation Work Timeframe (Resolution BT 34/2002 and complemented document BT N 6962) the standardisation work starts with the receipt of BT resolution approving the adoption of the mentioned new Work Items and continues with the following milestones:

- 6 months – Circulation of first working draft
- 6 months – Dispatch of Enquiry draft to CMC
- 2,5 months – Submission to Enquiry (ENQ)
- 5 months – Closure of Enquiry
- 8 months – Dispatch of Formal Vote draft to CMC
- 3,5 months – Submission to Formal Vote (FV)
- 2 months – Closure of Formal Vote
- 1 month – Ratification
- 2 months – Definitive text available (DAV)

Within a maximum of 36 months the new Standards will be available.
7 FACTORS AFFECTING COMPLETION AND IMPLEMENTATION OF THE CEN TC WORK PROGRAMME

Examples of factors that could negatively impact the completion or business community acceptance and use of the CEN committee's standards include:

- Expert resources may not be sufficiently available which could affect project development as well as the credibility of the resulting standard in the business community;
- Legal/regulatory issues such as uncertainties regarding a possible EC Directive, which in turn may necessitate modifications of the content and target dates for projects in the work program. This could include privacy legislation;
- Slow development of standards and lack of consensus;
- The market adopts proprietary specifications or standards produced by other organizations.

The risks of these factors affecting the work of the TC are considered to be low.

8 CONTACT AND MORE INFORMATION ABOUT CEN TC 353 ONLINE

For more information about CEN TC 353 you can contact the Chair Christian M. Stracke (Germany) and the Secretariat Massimo Actis Dato (Italy) via the contact form on the CEN TC 353 marketing website: http://www.cen-tc-353.eu

More information about CEN TC 353 is available online at the following official internet website: http://www.cen.eu/isss/TC_353.