

IST-2001-38786 IDCnet Inclusive Design Curriculum Network

<http://idcnet.info/>

Summary

IDCnet was a Thematic Network funded by the Fifth Framework Programme of the European Commission. The network was born originally as a support to the eEurope Action Plan,¹ which stated the need to create a European curriculum for designers and engineers in Design for All (DfA). The project evolved into an initial support to the activities of the European Design for All e-Accessibility Network (EDeAN²) related to curriculum. The network has successfully completed its objectives, producing recommendations for an optimal graduate profile for DfA, a taxonomy for core knowledge and skill sets for model curricula, and a set of recommendations on DfA-related higher education and research policies and strategies. These results will be developed further by the Special Interest Group on Curriculum of the EDeAN, which will take over the work of IDCnet.

Background

In December 1999, the eEurope initiative was launched by the European Commission to bring the benefits of the Information Society to all Europeans. In June 2000, the eEurope 2002 Action Plan was agreed by the Heads of State and Government in Feira to set out a roadmap to achieve eEurope's targets.

Among the goals of the Action Plan was "By the end of 2002 [...]. Ensure the establishment and networking of national centers of excellence in design-for-all and create a European curriculum for designers and engineers."

With that objective in mind, IDCnet was born, as a joint effort of some European universities, research centres and user organisations. Before its launch, IDCnet evolved into an initial support to the

activities of the European Design for All e-Accessibility Network related to curriculum.

Network objectives

The strategic goal of IDCnet was to integrate information and identify core knowledge sets and skills for model curricula in DfA for Information and Communication Products, Systems and Services. IDCnet situated its activities in the multidisciplinary area of design, especially design for, and supported by ICT.

The Design for All or Universal Design philosophy embraces a wide range of design artifacts, including the built environment and landscape architecture, biomedical and rehabilitation engineering. IDCnet focused on the design of information & communication products, systems and services.

The objectives of IDCnet were to:

- Integrate information to understand the ICT design education culture and the industry needs in Europe.
- Identify knowledge sets and skills that should be part of a curriculum for DfA in ICT.
- Influence education and research policies.
- Mainstreaming DfA in the education sector.

Approach

IDCnet has tried to fulfil their objectives via different means: literature review, workshops, participation in conferences and other events, scientific publications, and contacts with experts of the academic community and from industry.

The main events of the project have been the two workshops organised in Helsinki in February 2003, and in Sankt

1 http://europa.eu.int/information_society/eeurope/

2 <http://www.e-accessibility.org/>

Augustin in January 2004. The first workshop, “Assessing industry needs and identifying core knowledge and skills for curricula in DfA Information and Communication systems, products and services,” gathered experts from industry and academia to discuss industry needs in regard to graduate profiles. The result was a taxonomy of core knowledge sets and skills that would be necessary for curricula in this area. The second workshop, “DfA Education and Research Policies and Strategies,” was focused on the continuation of the previous work, plus some brainstorming sessions on education and research policies and strategies that will facilitate the adoption of DfA in European curricula.

IDCnet also sought to extend its membership during its lifetime, to incorporate organisations that could contribute to different aspects of the project.

Teaching pilots

As part of the project, the members of IDCnet, along with founding members of the EDeAN SIG on curriculum, documented a wide range of courses that were recently taught in various higher education institutes in Europe. The common link between these is the teaching of DfA and the use of the taxonomy to categorise the material being taught. The diversity of levels, disciplinary backgrounds of students, of teaching

methods and of types of higher education institutes forms a rich picture of the situation, as well as a statement of the usefulness and completeness of the taxonomy. It remains to carry this work on curriculum design further. A good point for discussion is dealing with the multidisciplinary aspect of the teaching, and a start has already been made on this by the EDeAN SIG on curriculum. We believe the document on teaching pilots, will be a useful basis for providing factual input into the discussion.

Results and achievements

Among the main results of the project, we highlight:

- An overview of the needs of the industry in the area of ICT, a review of future technological landscapes, and how they can influence the optimal graduate profile.
- A taxonomy of core knowledge and skill sets for model curricula based on the previous considerations and a survey of the present state of teaching DfA worldwide.
- A proposal for an optimal graduate profile for DfA.
- A set of recommendations on DfA-related higher education and research policies and strategies in EU countries.

Publications

Dissemination of results has been very important for IDCnet. As a result of this effort, we have published 20 papers in conferences and workshops. As part of our dissemination policy we have deliberately sought to reach audiences who are not familiar with DfA, or if they are, are not aware of the efforts to have it included in the curriculum.

- Darzentas J S, Darzentas J (2004). 'Design for All': Socially Responsible Design or just good sense? In: Bynum T W, Pouloudi N, Rogerson S, Spyrou T (eds), Challenges for the Citizen of the Information Society (Vol. 1 of Proceedings of the 7th International Conference Ethicomp 2004, 14-16th April, Syros, Greece), pp. 237-249. Aegean: University of the Aegean Press.
- Darzentas J S (2003). Design for All: Designing for Diversity. In: Kameas A, Streitz N (eds), Tales of the Disappearing Computer (Proceedings of the Disappearing Computer Conference, 1-4 June Santorini, Greece), pp.165-176. Patras, Greece: CTI Press.
- Darzentas J S, Darzentas J (2003). Design for All Key Knowledge and Skill Sets for Information and Communication Products, Services and Systems. In: Stephanidis C (ed), Universal Access in HCI, Inclusive Design in the Information Society (Volume 4, Proceedings of the 2nd International Conference on Universal Access in Human - Computer Interaction, 22-27 June, Crete, Greece), pp. 53-57. New Jersey: Lawrence Erlbaum Associates.

- Darzentas J S, Darzentas J (2003). Teaching Design for All in Critical Motivations and New Dimensions. In: Proceedings of 2nd Educational Design Conference, ICSID (International Council of Societies of Industrial Design), Hannover, September 5-7, pp. 69-73. Hannover, Germany: IF International Forum Design GmbH.
- Degouzon F, Macias Y (2004). Understanding Design for All : an introduction. In: Cahier Handicap, Fondation Internet Nouvelle Génération (to appear; in French).
- Dekker M, Nicolle C, Molenbroek J (2004). GENIE workshop for curricula with user involvement and inclusive design. *Gerontechnology*, 3, 1.
- Engelen J, Strobbe C, Darzentas J S (2003). Teaching Design for All: the needs and expectations of industry from a DfA curriculum. In: Stephanidis C (ed), *Universal Access in HCI, Inclusive Design in the Information Society* (Volume 4, Proceedings of the 2nd International Conference on Universal Access in Human - Computer Interaction, 22-27 June, Crete, Greece), pp. 73-77. New Jersey: Lawrence Erlbaum Associates.
- Engelen J, Sandhu J (2003). An Overview of European Developments in ICT, eEurope and eInclusion. eInclusion conference, Maastricht, June 11, 2003.
- Engelen J (2003). The next hot item for Assistive Technology and Design for All: standardisation. In: Proceedings of the AAATE 2003 Conference (Dublin, Ireland), invited speech to the special session on DfA Standardisation.
- Engelen J (2003). Hybrid books, an easier read. *Ability*, March 2003, pp. 16-17.
- Engelen J (2003). eAccessibility and eEurope. Contribution to the background information section of the CENELEC website, <http://www.cenelec.org/> (July 25, 2003).
- Mohamad Y, Velasco C A (2003). IDCnet - A thematic network for Inclusive Design Curricula: aims and objectives. In: Stephanidis C (ed), *Universal Access in HCI, Inclusive Design in the Information Society* (Volume 4, Proceedings of the 2nd International Conference on Universal Access in Human - Computer Interaction, 22—27 June, Crete, Greece), pp. 133—137. New Jersey: Lawrence Erlbaum Associates.
- Nicolle C, Dekker M, Molenbroek J (2002). The GENIE Design Workshops and their contribution to curricula for inclusive design. *Gerontechnology 2002*, Miami Beach, Florida, 9-12 November 2002.
- Nicolle C, Maguire M (2003). Empathic Modelling in Teaching Design for All. In: Stephanidis C (ed), *Universal Access in HCI, Inclusive Design in the Information Society* (Volume 4, Proceedings of the 2nd International Conference on Universal Access in Human - Computer Interaction, 22-27 June, Crete, Greece). New Jersey: Lawrence Erlbaum Associates.
- Nicolle C, Darzentas J (2003). The IDCnet approach: Educating students and professionals in "design for all". In: Proceedings of ICAT 2003 (International Conference on Assistive Technology), 2-3 December 2003. London: British Computer Society Disability Group.
- Noirhomme-Fraiture M, Nicolle C, Kotzé P, Abascal J (2003). Including Accessibility and Inclusive Design in the Curriculum for Human Computer Interaction. Joint Workshop of IFIP WG 13.1 on Education in HCI and HCI Curriculum and IFIP WG 13.3 on HCI and Disability. INTERACT 2003, the IFIP TC13 International Human-Computer Interaction Conference, Zurich, Switzerland, 1-5 September 2003.
- Romero R, Alcantud F (2003). A Pilot Experience Teaching Design for All as an Optional Module in ICT-related Courses at the University of Valencia. In: Méndez-Vilas, Mesa González (eds), *Advances in Technology Based Education: Towards a Knowledge Based Society* (Proceedings of the II International Conference on Multimedia and Information & Communication Technologies in Education m-ICTE2003, Badajoz, Spain, December 3-6), pp. 1425-1428. Badajoz, Spain: Consejería de Educación, Ciencia y Tecnología.
- Romero R (2003). El Currículo de Diseño para Todos (Design for All Curriculum). VII Jornadas SIDAR. Más Accesibilidad: Mejor Accesibilidad. Lisboa, Portugal, November 3-5 2003 (in Spanish).
- Romero R (2003). Conjuntos básicos de contenidos y habilidades para el modelo de currículum europeo en Diseño para Todos y TIC. Resultados del proyecto IDCnet. In: Primeras Jornadas sobre Diseño para Todos en la Comunidad Valenciana (Red REDeACC, Valencia, 27-28 November, 2003). In Spanish.
- Velasco C A, Engelen J, Strobbe C, Darzentas J, Tahkokallio P, Nicole C, Romero R (2004). IDCnet: Inclusive Design

Curriculum Network – First results. In: Miesenberger K, Klaus J, Zagler W, Burger D (eds). Proceedings of the 9th International Conference ICCHP 2004 (Paris, France, July 2004), LNCS 3118, pp. 110–116. Berlin-Heidelberg: Springer-Verlag.

Future work

The end of the network does not mean the end of our efforts to update the documents and disseminate the results to interested actors. The Special Interest Group of the EDeAN on curriculum, supported by the D4ALL.net project, will continue the activities of IDCnet, with the objective of increasing awareness about DfA in higher education institutions in Europe and enlarging the number of curricula that include DfA.

Time scale

August 2002 – May 2004
(22 months)

Budget

Overall cost: 400,000 €

EC contribution: 400,000 €

Key project participants

The network was co-ordinated by the Fraunhofer Institute for Applied Information Technology FIT, and the final list of members includes:

- Department of Product and Systems Design Engineering, University of the Aegean (GR)
- Katholieke Universiteit Leuven Research & Development (BE)
- Loughborough University (UK)
- Universitat de València Estudi General (ES)
- STAKES (FI)
- ISdAC International Association (BE)

- The Royal National Institute of the Blind (UK)
- Central Remedial Clinic (IE)
- University of Linz "integriert studieren" (i3s3) (AT)
- Hypermedia - L'Ecole de Design Nantes Atlantique (FR)
- Multimedia Campus Kiel (DE)
- City University London - School of Informatics (UK)

Project Manager

Dr Carlos A Velasco

Fraunhofer Institute for Applied Information Technology – FIT

Schloss Birlinghoven
D53757 Sankt Augustin
Germany

Tel: +49-2241-142609

Fax: +49-2241-142065

Carlos.Velasco@fit.fraunhofer.de
<http://access.fit.fraunhofer.de/>