

Design for All: een overzicht

VSP event Design for All
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What is design for all?

- Design for All (Europe) / Universal design (US)
 - Universal design is the design of products and environments to be usable by **all** people, to the greatest extent possible, without the need for adaptation or specialized design. (Ron Mace, Center for Universal Design at NCSU)
- Inclusive Design = less categorical with respect to the user group
 - [inclusive design is] the design of mainstream products and/or services that are accessible to, and usable by, as many people as reasonably possible on a global basis, in a wide variety of situations and to the greatest extent possible without the need for special adaptation or specialised design. (Quoted in Gill, 2003)
- Other terms: “barrier-free design”, “lifespan design” and “accessible design”

A few other approaches to Design for All

- **Design for All:**

is at the same time a philosophy and a movement. It can be seen as an extension of HCI, but it should not be seen as a discipline. This is neither a new genre of design, nor a separate topic. It is a general approach to designing in which designers ensure that their products and services address the needs of the widest possible audience irrespective of age or ability.“

(from IDCnet document 3.2)

- **Design for all in the information society:**

an approach whereby systems, services and applications are not designed to be the same for all users but to have enough intelligence to adapt themselves to the requirements of potential users or to allow a smooth interfacing with special adaptations (from assistive technology).

(from <http://www.edean.org>)

Changing attitude towards 'Disability'

- Formerly: **disability** as attribute of a person
- Current view: **disability** is situation-specific!
 - “the product of the interaction between the individual and their environment”
e.g. building access with heavy luggage
 - Benefits of DfA: not just for persons with disabilities
e.g. pushchairs for children
 - (Input) device independence (W3C)
e.g. using voice input in a car

Future Technology Landscapes

- Design for all will undoubtedly be needed in forthcoming new technological approaches such as:
 - Design for All and the Web Accessibility Guidelines
 - Device independence
 - User and Device Profiles
 - Semantic Web and Metadata
 - Multimodality
 - User Interface Design and the Software Development Process

(source: IDCnet 2.1)

7 Principles

1 PRINCIPLE ONE: **EQUITABLE USE**

The design is useful and marketable to people with diverse abilities.

2 PRINCIPLE TWO: **FLEXIBILITY IN USE**

The design accommodates a wide range of individual preferences and abilities.

3 PRINCIPLE THREE: **SIMPLE AND INTUITIVE**

Use of the design is easy to understand, regardless of the user's experience, knowledge, language skills, or current concentration level.

4 PRINCIPLE FOUR: **PERCEPTIBLE INFORMATION**

The design communicates necessary information effectively to the user, regardless of ambient conditions or the user's sensory abilities.

7 Principles

5 PRINCIPLE FIVE: TOLERANCE FOR ERROR

The design minimizes hazards and the adverse consequences of accidental or unintended actions.

6 PRINCIPLE SIX: LOW PHYSICAL EFFORT

The design can be used efficiently and comfortably and with a minimum of fatigue.

7 PRINCIPLE SEVEN: SIZE AND SPACE FOR APPROACH AND USE

Appropriate size and space is provided for approach, reach, manipulation, and use regardless of user's body size, posture, or mobility.

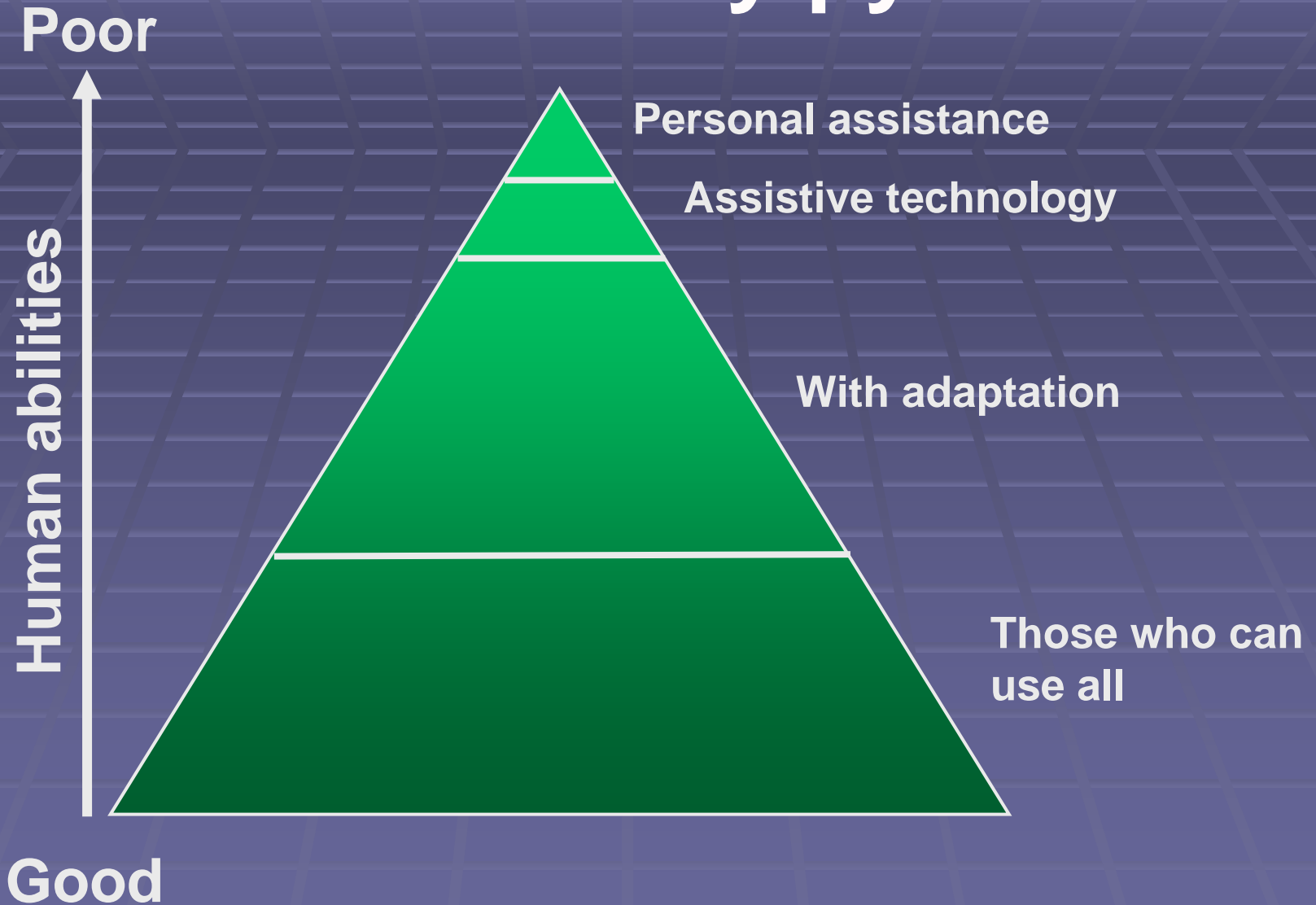
Scope of DfA in IST

- Growing awareness of web accessibility, but DfA is broader
 - Web applications: not just for public web sites, but also content / document / knowledge management
- Desktop applications: accessibility requires efforts
- New applications for newer devices
- New industry sectors and document formats
 - e.g. XML, VoiceXML & applications

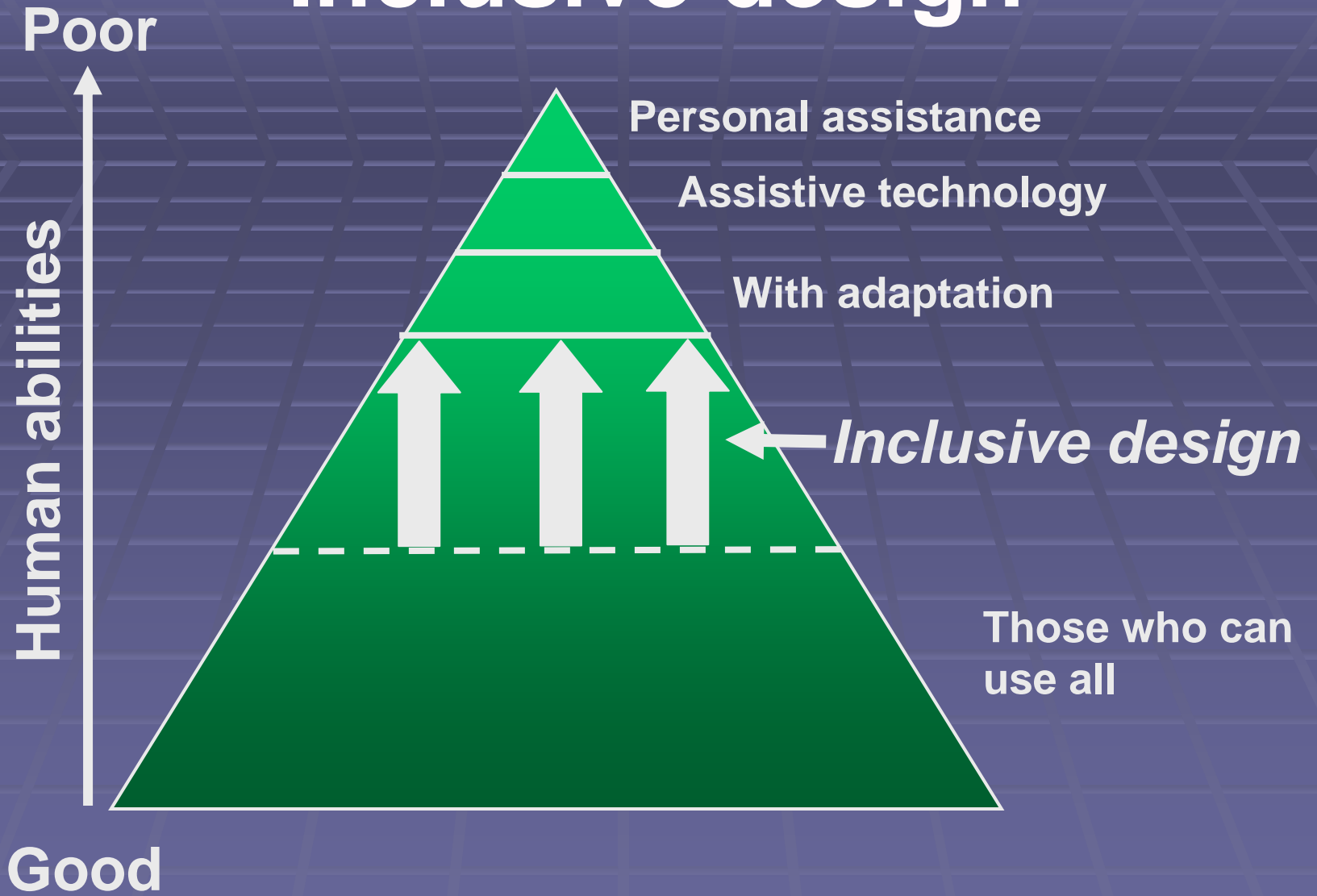
Cost of DfA

- Design-for-All advocates: it's cost free
- Industry: costs that are hard to justify, both internally in the struggle for resources and externally in the market
But: many resources spent on features without any obvious benefits...
- More precise statistics are needed for typical market sectors such as 17-24 year olds; also buying capacity of elderly is increasing enormously...

The usability pyramid



Inclusive design



EU Activities: research

The screenshot shows the 'Europe's Information Society Thematic Portal' website. The header includes the European Union flag and the text 'Europe's Information Society Thematic Portal'. Below the header is a navigation bar with 'Europa > Information Society' and a 'Home' link. A secondary navigation bar lists various categories: Policies, Activities, Culture & Society, Economy & Work, Education & Training, Quality of Life, IS Industry, Regions / World, and IS Research. The main content area is titled 'POLICIES :: eInclusion & eAccessibility :: Design for All' with a print icon. The page features a sidebar on the left with a tree structure of links: eInclusion & eAccessibility (with sub-links for Sitemap & links, Contacts, Implementation COCOM/INCOM, Public Procurement, 2005 Communication, Design for All (with sub-links for Curriculum & Centres of Excellence, Standards), Web Accessibility (with sub-link for WCAG adoption), and RTD (on CORDIS)). The main content area has a large heading 'Design for All' and a sub-heading 'Definition'. The text under 'Definition' explains that e-Accessibility is about integrating all users into the Information Society, including older people and those with disabilities. It defines 'Design for All' as an approach to create products and services accessible to as many users as possible. It lists several alternative terms: 'universal design', 'accessible design', 'universal access', and 'barrier free design'. Below the definition, it states that 'Design for All' consists of three principal strategies, which are listed in a bulleted format: 1) Design of IST products, services and applications which are demonstrably suitable for most of the potential users without any modifications. 2) Design of products which are easily adaptable to different users (e.g. by incorporating adaptable or customisable user interfaces). 3) Design of products which have standardised interfaces, capable of being accessed by specialised user interaction devices.

Projects

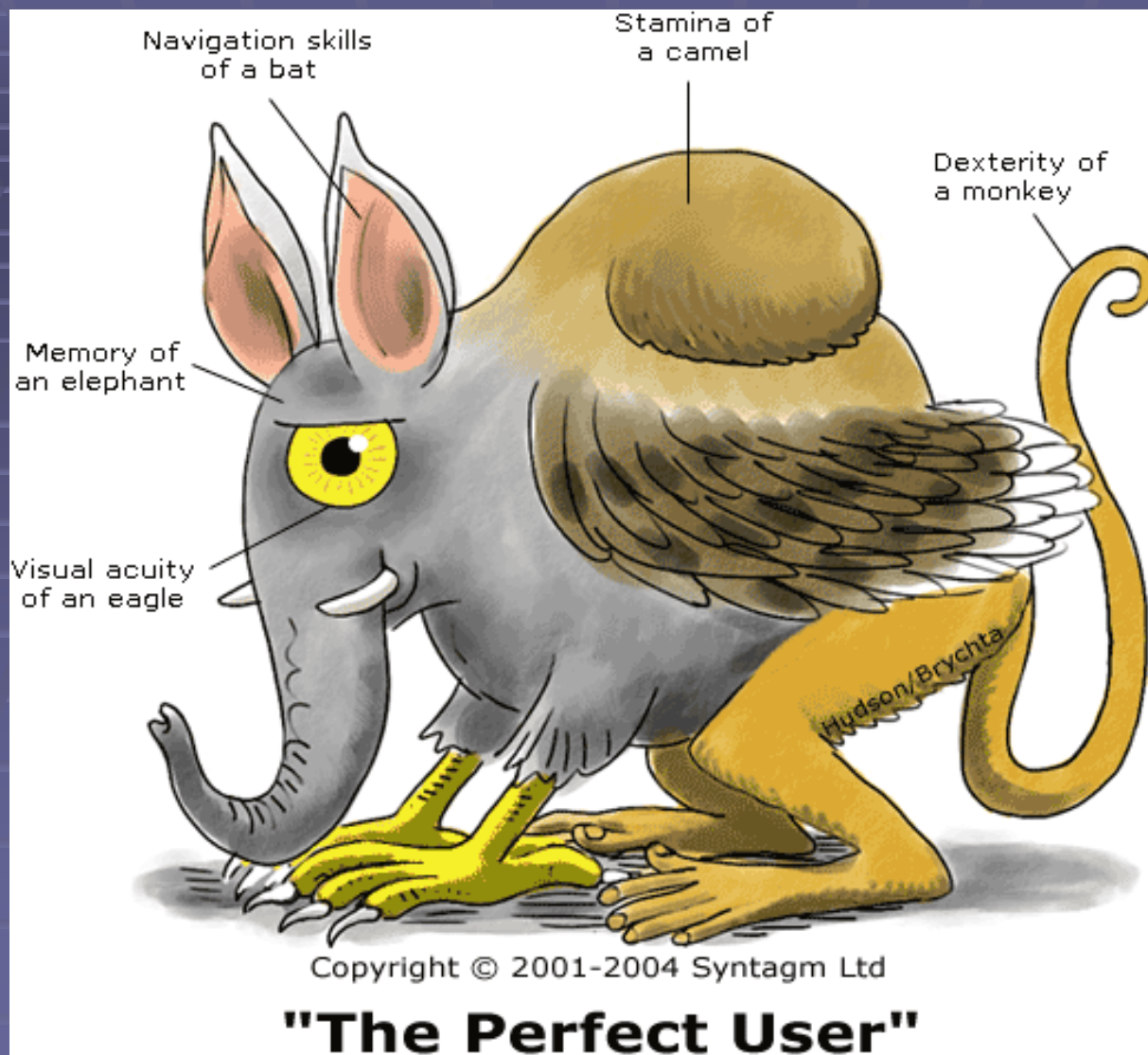
- **I~Design** project: workshop October 1999
- **DASDA**, promoting Design for All
- **IDCnet**, Curriculum design for DfA
- **EDeAN**, network of excellence
- **D4ALLnet**, supporting the EDeAN network via the Hermes (accessible) portal

IDCnet: Employee/Graduate Profile

- Industry is pragmatic: results as good as possible instead of perfect
- Industry needs both pragmatic knowledge and hands-on advice and guidelines
- People should be sensitive for judging good and bad design
- HCI education for people who finally end up in supervisory or strategic decision making situations

(IDCnet Helsinki WS results)

But who is "the" user...



eEurope2002 - Participation for all



1. More effective co-ordination of policies at European level to avoid “info-exclusion”, through benchmarking and exchange of best practice.
2. Adoption of the Web Accessibility Initiative (WAI) **guidelines for public websites.**
3. Publication of "**Design for all**" standards for accessibility of information technology products, in particular to improve the employability and social inclusion of people with activity limitations.
4. Review relevant legislation and standards to ensure conformity with accessibility principles.
5. Ensure the establishment and networking of national **centres of excellence in design-for-all** and create recommendations for a European curriculum for designers and engineers.

European standardisation organisations

European Committee for
Standardisation



European Committee for
Electrotechnical
Standardisation



European
Telecommunication
Standards Institute



EU activities: Standardisation

- Producing a “standard” (*fr.* norme, standard; *de.* Norme; *es.* norma) is a voluntary action set up by commercial partners who believe that the standardisation will permit easier exchanges of products and goods.
- This implies very often that the acceptance of standards is also voluntary and based on expected commercial benefits.
- On the other hand, laws in many countries are referring more and more to the required acceptance of several standards (e.g. on safety or on ecological aspects).
- The net result of this need for standards is that nowadays **many standardisation initiatives are stimulated (= subsidised) by public bodies or, in Europe, directly and indirectly by the European Commission.**

Activities



Discussion group on forthcoming standardisation work



Consumer Requirements in Standardisation relating to the Information Society (2003 ANEC report)

EDeAN network

EDeAN European Design for All
e-Accessibility Network



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Home

EDeAN

European Design for all e-Accessibility Network

Welcome to the EDeAN "virtual" space!

Thank you for signing in to HERMES, the [EDeAN](#) portal. As a registered user, you can benefit of the following services:

- **Accessing the EDeAN NCC eForum.**
EDeAN National Contact Centres can use this space to express opinions and exchange information related to the European Design for All eAccessibility Network (EDeAN).
- **Accessing the EDeAN SIGs.**
If you have indicated the SIG(s) of your interest during registration, you will find them displayed in the navigation bar on the left hand side of this window. You can enter any of them and access its Message Board and Chat services.
- **Accessing ARIADNE, the EDeAN DfA Resource Centre.**
You may search for or browse through a broad range of information, such as results of SIG work, case studies, information about national or international projects related to DfA, best practice reports, design tools, benchmarking tools and results, product assessment reports and other DfA - related resources currently available.
- **Modifying your personal profile.**
You can modify the information contained in your personal profile by using the MyProfile option in the link bar above.

To quit this space, please use the "Sign out" option in the link bar above.

EDeAN network: Curricula

Special Interest Groups

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Curricula on DfA : Message Board

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Topic	Activity	Last modified	Messages
Core knowledge in DfA courses Discussions about core knowledge sets and skills in DfA courses	open	17 February 2005	1
Case studies of DfA courses Descriptions and discussions about existing courses on DfA.	open	06 June 2004	3
IDCnet information Note the questionnaire, answers due before end of March. Also note 4 new documents from IDCnet in Documents area.	open	02 April 2005	9
Other subjects information etc. For topics that has not yet been posted at top level.	open	17 May 2005	7
The role of different disciplines in curricula for... The aim is to get an understanding and guidelines for how to involve expertise in multiple disciplines in education on DfA. The discussion will be summarised by the moderators in early March 2004.	open	10 May 2004	7

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Questions / comments?

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9th ICCP International Conference on Electronic Publishing

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Challenges for the digital content chain

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