# Conference report

# The 6th Bielefeld Conference

5-7 February 2002, Stadthalle Bielefeld, Bielefeld, Germany

The 6th Bielefeld Conference, this year organized by the Library of the University Bielefeld jointly with the British Council and Ticer, was the farewell conference of Dr. Karl-Wilhelm Neubauer who is resigning later this year. Dr. Neubauer, a true innovator, wrote technological history in a traditional German library landscape. Respected and honoured abroad, but too advanced for many of his German colleagues.

This year's theme: High quality information for everyone and what it costs. An excellent programme with papers centered around knowledge management (examples of applications at the IICM in Graz, DaimlerChrysler AG in Stuttgart and Siemens AG in Munich), funding electronic resources from the point of view of governments or its agencies and the strategies developed by a scientific publisher (Elsevier Science), an aggregator (ISI) and a library resources service organization (OCLC PICA). Other topics have included IT for the public at large, e-learning, a snapshot from Slovakia about resources available to the academic world and the general public, search engines and digital library solutions (Endeavor Information Systems).

We have selected a number of presentations for a more extensive coverage and a complete programme of the conference has been presented at the end of this report.

Wissensmanagement – ein neuer Hype der Informatiker? (knowledge management – a new hype of the informatics specialists?). **Prof. Dr. Dr. h.c. Hermann Maurer**, Director Institut für Informationsverarbeitung und Computergestützte Neue Medien (IICM), Technische Universität Graz/Österreich (www.iicm.edu/maurer) did an excellent job as key-note speaker. Prof. Maurer held an eye-opening, refreshing and inspiring presentation about the value of knowledge management and its importance for the future with regard to the use of information systems or distributed data bases by introducing Maurer–Tochtermann model for knowledge management and a new software, called Hyperwave, to establish more reliable knowledge management applications.

**Derek Haank**, chairman of Elsevier Science, stressed the importance of electronic publishing, which creates high fixed/infrastructural costs with low marginal distribution costs for the publisher and enriches linking and searching capabilities for the user. He stated: Elsevier's goal: "every end-user to have unlimited, 24 hour a day access to enhance the role of literature in the research process" and not only in the developed world<sup>1</sup>. An access based on a business model, that encourage current customers to take more

<sup>&</sup>lt;sup>1</sup>Elsevier Science has announced, that it will make content freely available to developing countries. An example is an alliance with the African Virtual University (AVU), financed by the World Bank for Elsevier Science's journals in the area of mathematics, computer science and physics.

content and additional functionality under long term agreements/partnerships and with differential pricing. Haank stressed the importance of the relation between the access technologies and his content, by referring to Endeavor Information Systems (EIS), a full subsidiary of Elsevier Science<sup>2</sup>. Haank reminded his audience neatly, that universities still spend less than 1% for information procurement, as universities spend 2–4% on their libraries and the majority of library spending is for labour and operations jointly (roughly 30% is spent for content).

Michel Wesseling (OCLC PICA) stated, that "OCLC PICA will be organised along the lines of decentralisation and local autonomy. The library services divisions will initially have offices in Birmingham, Leiden and Paris. These regional offices will closely work together with local partners in individual countries. The library services network will gradually grow as we enter into new geographical areas". Furthermore "OCLC PICA aims at providing EUCAT: the pan European union-catalogue. We truly believe that the user community is best served with one single access point to the wealth of information that the joint libraries in Europe can provide the underlying concept is to provide a European wide access to European union catalogues with linked metadata for the patrons of European libraries with additional links to other regional hubs including OCLC WorldCat or the U.S. hub". EUCAT will be part of the full spectrum of OCLC and OCLC PICA products and services: FirstSearch, the OCLC reference service from which a wealth of databases is made available to researchers and reference librarians', WorldCat and extended WorldCat: the shared cataloguing database with almost 50 million bibliographic records, PICA's central and local library systems, PiCarta the end user service and the internet portal iPORT. The EUCAT concept acknowledges that most European countries have their own union catalogue on a national, federal state or regional level – each of which continues to reflect the culture, language and cataloguing rules and conventions of the individual country/state/region. There are further roles of EUCAT, as EUCAT is:

- a front end to online delivery services and online content;
- a tool for cooperative collection development;
- an authentication source of information;
- a tool for the location of physical materials, e.g., as a back end to a specialised subject portal;
- a source of copy cataloguing;
- a source of data for ordering purposes;
- the back bone of the inter library lending system.

The importance of content and the technology for advanced organisation/indexing and access of content was well illustrated by **Gregor van Essen**, Director of International sales, Endeavor Information Systems (EIS), a full subsidiary of Elsevier Science, based near Chicago (USA) and its European HQ is located in London (UK). It is EIS' philosophy, materialized in its EnCompass digital libraries concept, that the basic library management system is only the first part of a library's value chain:

Library management system  $\rightarrow$  access  $\rightarrow$  linking  $\rightarrow$  digital collections  $\rightarrow$  learning objects.

EnCompass helps libraries (1) to manage access to licensed and restricted materials, (2) with the ability to control access to resources and (3) with multiple options for authentication. Voyager, EIS' library management system and EnCompass its digital library system provide a complete system

- for one-stop shopping/integrated access
- that grows as the library grows

<sup>&</sup>lt;sup>2</sup>See below in this report for a presentation about EIS by Gregor's van Essen's.

- metadata support
- LinkFinderPlus, which presents links from any Open-URL enabled resource
- with a search and navigation layer to
  - local digital repositories
  - remote digital repositories
  - library OPAC
  - web-based and online databases.

**Eberhard R. Hilf** and **Julika Mimkes** of the ISN Institute for Science Networking Oldenburg, GmbH and we quote from their presentation "Learning and Research Success: the role of libraries in the IT age", that students feel "Suspicion, when teaching methods, content, and books stay the same in 50 years in contrast to the rapid progress in the sciences". With students being "the future of a competitive industrial country and want to be optimally served to get prepared" they want:

- to learn, contact, discuss with my comrades, tutors, teacher, as close as possible to whenever they feel they need it, say, sitting on the campus lawn and interconnected by my laptop;
- to learn by interactively experimenting;
- to be enabled to access whatever and wherever teaching material in the world is best suited to my
  present needs [lean learning just in time...];
- to learn with the speed they personally can handle;
- to permanently know where they are in the learning process.

Requirements for Retrieval of eLearning modules are

- sources at the creator's place: a worldwide distributed database to assure copyright stays with the author and latest version;
- content search by international metadata standard usage;
- cooperation of scientists as creators and editors, and IC-services for usability and standards.

The North-German Physik Multimedial project fulfills these requirements under the condition, that a restructuring of library, computer center, multimedia-center, distant-learning center into an integrated *Information Center can be accomplished*. Such IC should have also the tasks

- training of personnel;
- training of University members (students and staff) in the usage of the new techniques;
- competence centre for new techniques and services;
- service and maintenance of eLearning modules, search engines;
- posting, archiving, correct metadata usage, quality filters for eDocuments.

**Liv Saeteren** (OSLO Public Library) explained her concept for "The modern public library": "Knowledge and learning are based on interaction. Users of information sources and creative forms of communication relate actively to these sources in order to acquire and develop new knowledge and understanding. Therefore, the library's role is to guide individuals, groups and organizations through the process of finding and processing information so they can accomplish their particular, and often individual, goals. A modern library is an active promoter of literature and creative works. A kaleidoscopic urban society challenges a library's direct dissemination activities in that it calls for varied and exciting experiences, both in terms of special arrangements and a design/profile that invites the public to make use of the library. The modern library is a meeting place with contents that are useful and inspiring to everyone, and is, in this sense, an important arena for integration and diversity". The library must according to Liv:

- offer ample possibilities for collecting and processing knowledge and information;
- make the necessary facilities, resources and information accessible to groups and individuals, and act as a gateway to other services and sources;
- provide a stimulating arena for meeting, working and learning a laboratory for creative teamwork and dialogue;
- function as a meeting place for integration and diversity, and be a literary venue in the capital city;
- be an important node within the city's cultural life and network of knowledge.

*The public library as a forum for learning*, but as contribution to IT competence in the society and for the individuals she sees the public libraries maintain, improve and develop services like

- providing general access to technology; equipment, both hardware and software and the electronic information itself. As, of course, already established in libraries all over
- guiding, teaching in how to use the equipment, and how to search. Well established services all over I presume
- selecting, categorizing, making gateways to special and valuable information sources, or sources important to special target groups; on line reference services; well established public library services several places – as improvement of traditional library services.

Not so evident, but a natural consequence of a library's function as a learning center would be to

- provide technology and training; work methodology for groups, working in projects;
- be the show-room of new technological devices for the general public;
- provide technology in terms of universal tools.

She would even presume that public libraries could be interesting partners to companies in developing methods and tools for working and learning processes. The public library is a meeting place for the general public, and the library staff will have competence in how various technological tools can be improved to facilitate the users needs.

**Hans Roes** (KUB, Tilburg) postulated, that: "Since libraries in higher education find their *raison d'être* in supporting research and education, a relevant question is how libraries can and should transform themselves in order to cope with the changes in our educational systems" and he sees five strategic areas, that have to be discussed:

- digital libraries and digital learning environments,
- digital portfolios,
- information literacy,
- collaborative course design,
- the relation between physical and virtual learning environments.

"Digital libraries seem, no, *are* natural complements to digital learning environments. They are able to integrate the freely available information on the web with the more formal literature for which (increasingly consortium) licenses on electronic versions are arranged with publishers. These licenses enhance and replace traditional collection development policies. Digital libraries facilitate time and place independent information services for students, needed especially if active learning styles become more commonplace. Digital libraries are already available 24/7 from anywhere in the world, offering flexible arrangements for students/knowledge workers. Much work done over the past decade in developing digital libraries will have an important pay-off for educational innovation. The main issue, of course, is whether more active

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learning styles will become the norm, since many of today's courses are of a rather "self contained" nature in which educators present students with texts to work through in a linear way and assessment is too often based on whether or not a student is able to reproduce the texts prescribed by the teacher".

"Seek and Ye Shall Find" – Researching across Multi-Disciplinary Content has been prepared by **Dianne Miles**, Director of International Library Services, Ingenta PLC and presented by **Richard Smart**, Regional Manager Library Services. Smart focussed on "The Internet Information Supply and the role of the aggregator". According to Ingenta, there are a number of routes for researchers to access full text scholarly journal material via the Internet. "This could be directly from the website of a publisher or indirectly via an aggregator. By it's nature the publisher's website will give access to that publisher's material. We can loosely define what an aggregator does as:

- bringing together content from multiple publishers on one system,
- providing a common interface to that content.

Generally they allow cross searching of the bibliographic header and sometimes of the full text. They increasingly offer interlinking of content. Most importantly from the library's point of view they offer a single one-time authorisation layer. We can broadly divide aggregators into three types:

- traditional full text aggregators,
- gateway aggregators,
- hosting aggregators.

Some examples may help to differentiate these "new" and traditional aggregators. Good examples of traditional aggregators would be ProQuest, Ebsco Publishing and Gale Group. Core characteristics are that they

- hold the full text,
- add value as a one stop shop to libraries,
- offer publishers access to new markets albeit at a heavy discount.

The aggregator bears the technology and marketing costs and there is little or no entry cost for the publisher. From the point of view of the library a "package", often focussed on a particular discipline, is sold complete and cannot be significantly unpicked. Since the bundled discounts are sometimes arguably viewed as a threat to subscription income publishers are increasingly embargoing the most recent material in order to avoid this. The second category of aggregator identified here is "gateway aggregators". Examples would be the subscription agent gateways such as SwetsNet Navigator and Ebsco Journals Online. These have been joined more recently by newer gateways such as The Scientific World and TDNet. The defining characteristic of most but not all of these gateways aggregators is that they point to content, by and large they do not host the material. Usually they hold bibliographic records, typically including the abstract, so that they can provide their users with a useful retrieval interface. The full text is held elsewhere on either a publisher's website or a hosting aggregators website and they pull the full text from a third party source. This type of gateway often forms part of a bundle of services that is offered to libraries as part of a major subscription package. The third type of aggregator is called the hosting aggregator. Examples would be Project Muse, CatchWord (prior to its integration with Ingenta), Allen Press and HighWire, although HighWire rejects this description of themselves. They are differentiated from the gateway aggregators in that they exclusively host material. This type of aggregator can add a different mix of value, which includes a series of extensive and complex technology and distribution

services which from the libraries point of view can lead to a wider choice of access routes to subscribed material and means that users can reach content regardless of their chosen access method. Like other aggregators they offer libraries a one-stop shop. Typically they are paid by the publisher and so are in a sense "Digital Presses", as HighWire describes itself and, like a conventional printing press will be paid for the services they provide. The technology platform used to support the aggregation service has seen further development to support quite independent subject or publisher focussed web sites and portals. Additional services that are now typically available from hosting aggregators include the creation, maintenance and resolution of reference links, TOC alerting services and the ability to search for related articles. Some services also offer a rapid "prepublication" services for content can also provide a valuable for non-subscribers on an e-commerce basis. Distribution services for content can also provide a valuable service not only to the publisher who would like their content readily available but also to the library and researcher who is given a choice of routes to content.

"East of Eden" was the titel of a presentation by Alojz Androvicz (Universitaetsbibliothek in Bratislava, Slowakei), who compared Slovakia -a nation at the edge of the electronic society - with more developed countries in Western Europe and by this illustrating – a probably even growing – information gap: Library collections in Slovakia grow with appr. 700,000 items annually or 1 item per 8 inhabitants for which EURO 400 per capita is spent. Comparative figures for the UK are 1 item per 2 inhabitants (collection growth 28 m items) or a spending of nearly EURO 14,000 per capita. Androvicz has mentioned also a nice example of a successful multilateral cooperation within ESPRIT - an EU Project Programme in the area of ICT, called Establishment of Electronic Information Services CCE/NIS (ESPRIT 977062). This EEIS project encompasses a web-based multinational and multilingual information system developed by 22 Central and Eastern European and former Republics of the Soviet Union (MOE countries). This EIS-CCE/NIS Project connects national Information Centers, supra-regional scientific and technical libraries, as well as national libraries of the participating countries within a distributed (library) network. There are 14 national nodes in the network. The future MOE countries Russia, Ukraine, Georgia and Uzbekistan have their own national node in the system, which serves as a system and content provider. The central node of the system is hosted by the German Fraunhofer Gesellschaft (a national research association), but will be soon managed by Saale Net GmbH, Rudolstadt (Germany), which acts as the central system provider. In the future the national nodes may migrate to a national information center, however at the moment they contain metadata about the accessible resources only.

The UK government strategy for Information Technology embraces e-commerce, e-Government and public access. According to **Andrew Duncan** (Policy Manager, Social Inclusion and Learning Technologies, UK Dept. for Education and Skills), is the main commitment on access to Information Technology to make the Internet universally available to all who want it by 2005. There are, of course, many who do not see any value in using Information Technology. Promoting the benefits of new technologies to non-users is an important part of the UK strategy. There are currently national television campaigns promoting the advantages of the Internet to non-users. Another target is to establish 6 thousand UK online centres by the end of this year. This is the main programme for offering public access to technology and the Internet. Increased use of the Internet provides Governments with an opportunity to expand the availability of services online. In the UK every Government Department and each Local Authority has an e-business action plan setting out how they intend to put services online, and to make there services interactive on the Internet. The efforts of Government are to close the gap between those who have access to the Internet. The aim is to close the digital divide. In

the UK there is continued strong long-term growth in Internet penetration. Currently 39% of households are connected to the Internet. From the slide you can see that 53% of UK adults have access to the Internet at home, at work or at a public access point. However, within this overall trend of increasing Internet use there are more men than women using the technology. However, this gap is narrowing. The largest differences in Internet use are by age, occupational status and income levels. It is not surprising that the voungest people in the population make the most use of the Internet. There is a challenge in promoting the benefits of new technology to those who do not have the confidence, trust or skills to use a personal computer. Older generations are being influenced by those still at school and in full time education of the potential of IT to enrich their lives. The UK government strategy for Information Technology embraces e-commerce, e-Government and public access. The main commitment on access to Information Technology is to make the Internet available to every citizen. In the UK there is continued strong long-term growth in Internet penetration. Currently 39% of households are connected to the Internet. From the slide you can see that 53% of UK adults have access to the Internet at home, at work or at a public access point. However, within this overall trend of increasing Internet use there are more men than women using the technology, but this gap is narrowing. The largest differences in Internet use are by age, occupational status and income levels. It is not surprising that the youngest people in the population make the most use of the Internet. There is a challenge in promoting the benefits of new technology to those who do not have the confidence, trust or skills to use a personal computer. Older generations are being influenced by those still at school and in full time education of the potential of IT to enrich their lives.

Jens Thorhauge, Danish National Library Authority has been invited to outline "Scandinavian models for financing" under the sub-theme "State strategies and subsidisation" as part of the topic "Structure and financing of electronic information supply in the future" from the point of view of the Danish National Library Authority (DNLA), which is a government agency (and has very little to do with the Royal Library, our national library). DNLA is relevant in this context as we are responsible for our union catalogue, which in its public version is called bibliotek.dk and in which you can search and order material from every library in the country. Likewise DNLA is responsible for Denmark's Electronic Research Library, which is defined as a project running for five years - at the moment in its final year. Denmark has no comprehensive formal, written and approved information policy. We have some basic political goals and a political practice based on these goals. The principles were originally formulated in 1993 by DNLA, inspired by the work initiated in UNESCO. In a number of reports prepared on the initiative of different governments, these principles have been further developed, for instance, in Infosociety 2000 (1995) and Information on time (1997). These reports have formed the basis for various legislation, for example, a library act in 2000, which makes internet services and equality of media obligatory in all public libraries. In terms of financing I should add that all use of library materials and basic help is free of charge for everybody. While at the same time libraries may offer special services at a charge. In an extremely short version the principles are:

- 1. It is up to the public authorities to make sure that every citizen can gain knowledge of and access to all major parts of published information.
- 2. The state must provide ensure an efficient public infrastructure for information mediation. The public libraries and the public research libraries form the backbone of the infrastructure.
- 3. The public authorities must ensure the registration, etc. of publicly available information so that the users can find out which information is available, where it is and how one gains access to it.
- 4. The state must ensure the collection and preservation of the most important parts of any information published in Denmark.

- 5. Via their libraries the public authorities must guarantee the users access to internationally available, published information.
- 6. The state must ensure that information published in Denmark is accessible from abroad and must encourage international exchange of information.
- 7. Every citizen must in future be guaranteed sufficient training in how to exploit the information available. Such training should be part of everyone's education from primary school to postgraduate level.

These basic political statements are still valid and express reasonably well what we are aiming at. In one sentence: the state has a vital role – and the basic responsibility – in developing informed citizens. But it has to be said that since they were formulated nearly ten years ago, we have witnessed the internet revolution and a shift of paradigm in the library- and information world.

Informations- und Wissensmanagement im Kontext strategischer Ziele (Information and Knowledge Management in the context of strategic objectives) was the topic of **Dr. Ehrfried Büttner**, Siemens AG, CT IRC. Dr. Buettner stated that information management and knowledge management have developed in time from different perspectives and from different organisational structures. The Corporate Information Research Center (CT IRC) has developed from a central library, central information and documentation services and has incorporated training and vocational activities and includes

- Business Information Services (BIS),
- Technology Information Services (TIS),
- Information Technology Services (ITS),
- Library Services (LIS).

Market and Competitive Intelligence activities are organized by Division and that applies to company and branch of industry information too, although a close cooperation exists between the CT IRC and the divisional departments. The IRC is a Profit Center with full cost recovery and negotiable contracts with the various departments. Knowledge Management or "Wissensmanagement" (KM) has become a discipline within Siemens for the last 4 years and at present KM is organized at the level of divisions, companies and at corporate level with a CIO (chief information officer). Central activities at present are

- Communities of Practice (CoP),
- building a corporate technical infrastructure (ShareNet/Livelink).

Johan van Halm

# **Appendix: Programme and Lectures**

# Tuesday, 5 February 2002

13.30 Welcome Adresses: Prof. Dr. Dieter Timmermann, Rector, Bielefeld University; Andrew Glass, Deputy Director, The British Council Germany; Prof. Mel W. Collier, Library Director, Tilburg University; Dr. Solke H.J. Veling, General Manager, Ticer; Dr. Karl Wilhelm Neubauer, Director, Bielefeld University Library.

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# **Opening Lectures**

- 14.00 Knowledge Management A New Hype of Computer Scientists?: Prof. Dr. Dr. h.c. Hermann Maurer, Head of the Institute for Information Processing and Computer Supported New Media (IICM), Graz University of Technology, Graz (A).
- 16.00 Coffee Break

# High Quality Information for the Industry

Chair: Prof. Mel W. Collier, Library Director, Tilburg University, Tilburg (NL)

- 16.30 The Library The "Hub": Eugenie Prime, Manager Corporate Libraries, Hewlett Packard Company, Palo Alto, CA (USA).
- 17.30 Information and Knowledge Management in the Context of Strategic Goals: Dr. Anne Petry-Eberle, Senior Manager Information Resources, DaimlerChrysler AG, Stuttgart (D); Dr. Ehrfried Büttner, Head of the Corporate Information Research Center, Siemens AG, München (D).
- 18.30 Reception in the Minor Hall: 10 years of Bielefeld Conference The Story of Success Continues; 16 Years at the Bielefeld University – Karl Wilhelm Neubauer is Taking His Leave; Reception of the Mayor of Bielefeld, Eberhard David and the Rector of the Bielefeld University, Prof. Dr. Dieter Timmermann.
- 20.00 *Celebration* in the Mövenpick Hotel (on personal invitation).

# Wednesday, 6 February 2002

#### Structure and Finance of Electronic Information Supply

Chair: Jean Sykes, Librarian and Director of Information Services, London School of Economics, London (UK)

## State Strategies and Subsidization

- 09.00 Building the UK's Distributed National Electronic Resource: Dr. Alicia L. Wise, Director of Development, Joint Information Systems Committee (JISC), London (UK).
- 09.30 Scandinavian Information Policy and Models for Financing: Jens Thorhauge, MA, Director General, Danish National Library Authority, Copenhagen (DK).
- 10.00 The Future of Scholarly Information: Recommendations and Political Consequences in Germany: Dr. Friedrich Bode, Ministerialrat, Ministerium für Schule, Wissenschaft und Forschung des Landes Nordrhein-Westfalen, Düsseldorf (D).
- 10.30 Coffee Break

### Commercial Strategies of Big Information Providers

- 11.00 The ISI Strategy: Timothy Hamer, Managing Director, ISI Uxbridge, Uxbridge (UK).
- 11.45 The Elsevier Strategy: Derk Haank, Chief Executive, Elsevier Science Inc., Amsterdam (NL).
- 12.30 The Role of the OCLC/PICA Cooperative in Providing Information to the European Library Community: Michel G. Wesseling, Director, OCLC/PICA Information Technology Center, Leiden (NL).
- 13.00 Lunch and Exhibition; meanwhile: Product Presentations in the Main Hall

IT for all

Chair: Barbara Lison, Director, Public Library, Bremen (D)

- 15.30 Bringing IT All Back Home: Public Libraries and the Concept of Knowledge-Districts in The Netherlands: Dr. Jos Geevers, Coordinator Strategy and Policy, Public Library Eindhoven, Eindhoven (NL).
- 16.00 IT for all Computer Access and Skills in the UK: Andrew Duncan, Policy Manager, Social Inclusion and Learning Technologies, Department for Education and Skills, London (UK).
- 16.30 Coffee Break
- 17.00 East of Eden Information Supply at the Border of the Electronic Society: Alojz Androvic, MSc. PhD. Assistant Director General, University Library in Bratislava, Bratislava (SK).
- 17.30 Open Access to Scientific Information: The Public Library of Science et al.: Dr. Esther R. Dyer, Executive Director, American–Italien Cancer Foundation, New York (USA).
- 18.30 Happy Hour Reception in the Exhibition Area, Foyer

## Thursday, 7 February 2002

Internet Information Supply and the Role of Search Engines in the Future

- Chair: Lars Bjørnshauge, Director, Lund University Libraries, Lund (S)
- 09.00 Search Engines instead of Data Bases?: Dr. Eric G. Sieverts, Research and Development, University Library Utrecht, Utrecht (NL).
- 09.30 Strategies for Quality Search Engines: Thomas Place, Deputy Librarian, Tilburg University Library, Tilburg (NL).
- 10.00 "Seek and Ye Shall Find" Researching across Multi-Disciplinary Content: Dianne Miles, Director of International Library Services, Ingenta plc., Oxford (UK); presented by Richard Smart, Regional Manager Library Services, Ingenta plc., Oxford (UK).
- 10.30 One of the Concepts for the Future: The Endeavor Approach: Gregor van Essen, Director of International Sales, Endeavor Information Systems, London (UK).
- 11.00 Coffee Break

# The New Role of the Library in Developing IT Competence in Society

Chair: Klaus-Peter Böttger, Head of the Professional Association Information Library; Director, Public Library, Mülheim a. d. Ruhr (D)

- 11.30 Digital Libraries and E-Learning: Trends and Opportunities: Hans Roes, Deputy Librarian Collection Development and Information Sciences, Tilburg University Library, Tilburg (NL).
- 12.00 Meet Work and Learn: The Public Library as a Center for Learning: Liv Sæteren, Director, Deichmanske Bibliotek, Oslo (N).
- 12.30 Closing Lecture Learning and Research Success: The Role of Libraries in the IT Age: Prof. Dr. Eberhard R. Hilf, Chief Executive, Institute for Science Networking, Carl von Ossietzky University, Oldenburg (D).
- 13.00 Farewell Address: Dr. Alex Klugkist, Director, Library, Rijksuniversiteit Groningen, Groningen (NL).

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