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German Initiative of Networked Information

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In my paper I want to give few details, both about our ideas, our motivation to found DINI[1], and our primary objectives, our intended methods and steps we have taken so far.

I shall start with a description of the problem, then go on to explain the Foundation of DINI and finally give you some examples of how DINI works.

How can we describe the present situation?

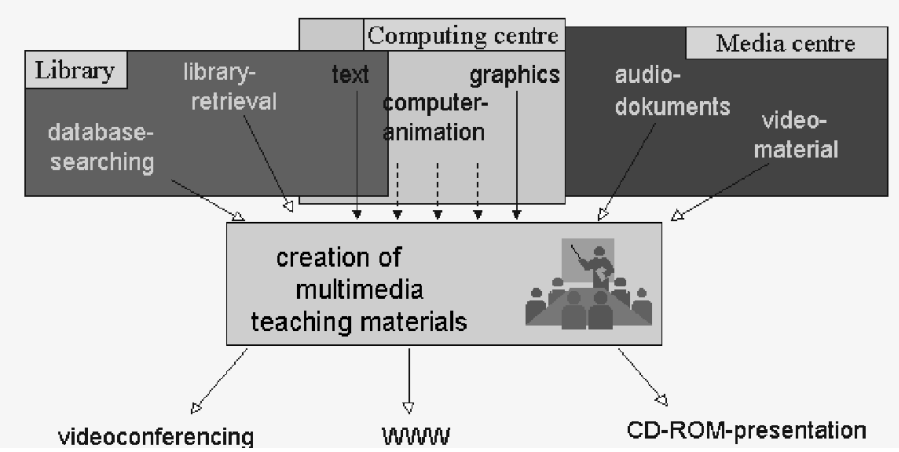

Figure 1: Problem description

If a scientist wanted or needed to create a so-called multimedia presentation for educational purposes, he would soon find himself confronted with a lot of problems. He would maybe want to integrate video- and audio materials, some pictures, wrap-around-text, computer animation, the results of a library investigation or the output of a database query. This list is by no means complete, yet every feature alone comes with its own potential of difficulties.

Besides, various forms of input may result in different forms of output, such as a video conference, a World Wide Web presentation or a CD-Rom – to name only a few.

This picture wants to show the difficulties in producing such a multimedia show on the one hand, and on the other hand the difficulties to find the corresponding university institution to support the production.

In Germany, at present, it is not clearly defined which department or institution is responsible for these individual tasks – which is why in most cases you will have to turn to numerous departments for the matter.

I believe this is a typical example of the present situation which, ideally, would require a converging of library and IT services. But from my point of view the requirements and expectations of scientists and students are the originators or determinating factors.

There is a change in requirements and the service institutions of a university have to react. Consider the following list:

Requirements and expectations of scientists and students

- *computer added*
  from PC to High Performance Computer
- *multi media*
  paper, electronic documents, audio and video materials
- *direct access to world-wide knowledge*
  libraries, data bases, world wide web, etc.
- *independence of place*
  university office, at home, abroad
- *electronic communication*
  e-mail, video-conferencing

The *traditional tasks* for the three institutions library, computing centre and media centre in the past are well known, there is a clear distinction in responsibility and relatively small overlap:

- The *libraries* were responsible for acquisition, storage, and delivery of literature – mainly paper-based at the time.
- The *media centres* were offering consultation service; they were also involved in the production of audio and video sequences, analogue material mostly. In addition they usually offered special services for video and audio equipment.

- The major task of the *computing centres* was to provide for sufficient computing power and storage capacity for their host institutions. They had to organize the computer infrastructure, and occasionally, they were asked to develop computer programs for academic staff.

In other words: The individual responsibilities of the university service institutions were obvious to their users.

Nowadays we have new tasks and different responsibilities:

- The *libraries* now have many additional tasks: to provide and store scientific material in digital format, to organize and ensure access to electronic information systems – to name only these two.
- The *media centres* now deal with all kinds of multimedia material – like computer-supported video sequences etc.
- *Computing centres* now frequently have to deal with electronic information systems, like the world wide web, to organize access to those, and to support their users in the process of creating their own web pages. An additional service, for example, should provide for computer video conferences.

Three scenarios shall demonstrate potential problems of collaboration activities that may result from the change mentioned above.

- Undoubtedly, a library now has to store electronic documents along with paper-based forms. Conversely, archival services have always been among the traditional tasks for a computing centre. In most cases there are big storage robots and a lot of know-how organizing this kind of procedures. The question arises whether it is necessary for the library to build up its own electronic archive.
- The media centres were the first to produce analogue video films. Nowadays they also use computer-based video-cutting stations and other high tech equipment and have acquired the know-how in some techniques of audio, light and camera-using. At the same time, computing centres are faced with a growing demand for support in visualisation projects.
- Most media centres host a media library, where everyone can borrow video and audio material as well as CD-ROMs. But then any modern library also provides access to CD-ROMs, mostly via computer network.
- These are additional examples which show the necessity to cooperate more and more closely.

According to the new tasks and different responsibilities a group of members of three German organizations published ten theses concerning the situation of the library and IT infrastructure at German universities: „Information Infrastructure in Change – Challenges for the Universities and their Information and Communication Centers", at <http://www.tu-dresden.de/agbibrz>/. The three organizations were:

- German Library Association (Deutscher Bibliotheksverband)
- Society of the Centres for Communication and Information Processing (ZKI)
- Association of Media Centres at German Universities (AMH)

I just quote two theses as examples:

Thesis 1:
The impact of universities and colleges, not only on research, but also on education, will increasingly be evaluated in a setting of national and international competition. To a large extent, the success of individual universities and colleges will depend on their capacity to utilize new technological structures for the advancement of scholarly information and communication.

Thesis 10:
Networking that rapidly increases in capacity and efficiency does not only enable but also requires an unprecedented degree of regional and interregional collaboration among infrastructural institutions.

Due to an advanced organization and the division of labour among universities, colleges and their infrastructural institutions, the supply of services is going to improve progressively. Tasks focusing on different objectives need to be distributed accordingly, thus generating a coordinated structure of virtual libraries, computer and media centres.

Apart from their regular responsibilities, the local infrastructural institutions will also be in charge of organizing the supply of shared services. In addition to the collaboration among the infrastructural institutions, we also need to build partnerships with publishers and computer technologists in order to develop new standards and forms of publication. In order to do that, we need to combine all available forces. Considering thesis ten, we decided that it would be easier to organize the cooperation if we created an organization similar to the American „Coalition for Networked Information". Therefore, we founded the „Deutsche Initiative für Netzwerkinformation" (German Initiative for Networked Information), DINI.

Let me summarize the primary objectives for this organization.

- Initiation and intensification of regional and nation-wide collaboration
- creating recommendations for efficient information services and communication networks in and between universities
- structuring and construction of networked digital publication possibilities
- development of archiving services
- dissemination of good experiences (best practice)

In the first two years of our work we concentrate our activities in the following fields:

- multimedia applications (production, development of tools, used for distance education, etc.)
- network-based education (infrastructure for distance education)
- questions of law (copyright, authenticity, etc.)
- joint accounting and services (identification, access rights, etc.)
- recommendation and standards for electronic publishing (archiving, data structure, OAI-specification, etc.)

I would now like to give you some examples for common work in Germany which demonstrate the beginning of the necessary cooperation between the different service institutions of a university.

First the project MILESS from the University of Essen:

MILESS is a learning and teaching server for multimedia documents. It is a cooperative project of the computing centre, the library and the media centre. Also involved in this project are different departments of the university. They started together with the department of linguistics and department of physics. Today a lot of departments are involved.

The project's aim is to store and retrieve any form of document which is produced in this university, i.e. text-based documents, pictures, videos, multimedia teaching materials and so on.

The *computing centre* is responsible for the technical basics. They designed the system and developed some program scripts. The whole system is based on the IBM Content Manager (former IBM Digital Library).

The *library* is responsible for cataloguing the materials, and the *media centre* is responsible for all non-text-oriented materials.

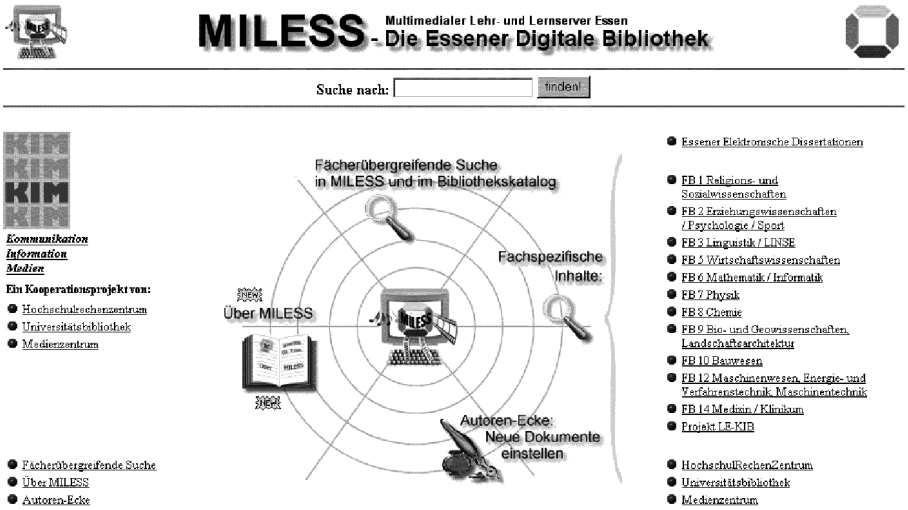

Figure 2: The project MILESS (The University of Essen)

I believe this is a good example of why cooperation is necessary. None of these services would have been able to realize this project on their own.

Another example of cooperation is part of the present work of DINI.

At present five task groups are at work in DINI. One of these task groups deals with managing public internet stations. In a lot of different university institutions you can find public computer stations, especially in libraries, computing centres etc. Every institution has the same problems: how can you organize work, how can you manage user accounts, how can you make sure that every user has access only to those resources which he or she is entitled to. Specialists from libraries, computing centres and media centres are involved in this DINI Group.

The aim of that task group is to create a recommendation for the German universities. The major topics of this paper shall be:

Major topics of public internet stations:

- computer stations in libraries, computer centres, media centres, university departments, etc.
- legal aspects:
  laws, data protection, etc.

- management:
  financial aspects, security, maintenance, etc.
- equipment:
  quality, network structure, server concept, etc.
- user helpdesk:
  further education, teaching material, etc.

The Humboldt-University built a new building for the service institutions of the University in Berlin Adlershof on the campus of the departments of mathematics and natural sciences. This new building integrates the computing centre, the media centre and a part of our library.

Information and Communication Centre Berlin Adlershof

Computing and Net-working Management	*Media Centre*	*Library*
• manangement of networking computer service • file and archive service • service for peripherals	• video service • media service • computer based training	• acquisition • cataloguing • archiving of documents in printed and electronic formats

Consulting and Competence Centre

- standard software, visualization tools
- internet use
- library database searches

public stations for

- research, reading and writing
- video cutting
- video conferencing (also provision of dedicated rooms)
- rooms for working groups
- communication areas

Humboldt University	*Extra- university research*	*Enterprises*
scientists, faculty members, students	scientists	small and medium-sized

Figure 3: Information and Communication Centre Berlin Adlershof

Using the possibilities of a new building we want to offer several different services of the different institutions together. The users in Adlershof are scientists and students of the university as well as scientists of non-university institutions and members of small private companies; they will get the support they demand from one place. This does not mean that three service institutions fuse into one institution. But we will offer a consulting and competence centre for computer software, internet use and library research. We plan common reading and computer desks, video cutting places, rooms and places for video conferences and also communication areas for Adlershof. We hope to open this new building in the middle of next year.

To summarize my paper leads to a statement like the following:

> „The change of information infrastructures is a duty, challenge and chance for the service institutions."

Duty means that service institutions have to realize the demands of the university. *Challenge* means that the service institutions should not only react but should play an active and trend-setting role in the university. *Chance* means that connected to every change is the possibility to give the institution a new orientation in the university.

REFERENCES

1 Deutsche Initiative für Netzwerkinformation (German Initiative of Networked Information