EUSIDIC Conference 1981

Opening address by Prof. Dr. *Urs Hochstrasser,*
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Vom 13.–15. Oktober 1981 hat in Bern die Eusidic Tagung stattgefunden. In seiner Eröffnungsansprache hat Herr Prof. Hochstrasser die Gäste aus dem Ausland begrüßt und auf die mannigfaltigen Probleme hingewiesen, die in der Schweiz im Zusammenhang mit der technischen Weiterentwicklung der elektronischen Übertragung von Informationen auftreten. Vor allem angesprochen wurden die rasche technische Entwicklung, die föderalistische Struktur und die starke Abhängigkeit der Schweiz vom Ausland. Selbstverständlich berühren diese Problemkreise auch die Bibliotheken, die sich den Einflüssen der automatischen Datenübertragung nicht entziehen können. Früher oder später wird das Papier als Gedächtnishilfe durch elektronische Medien teilweise ersetzt werden.

Du 13 au 15 octobre 1981 a eu lieu à Berne le congrès d'Eusidic. Dans son discours inaugural, le professeur Hochstrasser a salué les hôtes étrangers et attiré l'attention sur les différents problèmes que posent à la Suisse le développement technique continu des moyens de transmission électronique des informations. Il souligna surtout le rapide développement technique, la structure fédéraliste de la Suisse et notre forte dépendance de l'étranger. Ces problèmes touchent évidemment aussi les bibliothèques suisses qui ne peuvent se soustraire aux effets de l'automatisation. Tôt ou tard les médias électroniques remplaceront partiellement le papier réduit au rôle d'appoint.

It is an honour and a pleasure for me to open the Eusidic Conference 1981 and to welcome you here in Switzerland on behalf of the Swiss Government. The general topic of your meeting is the online universe. The bad weather which is greeting you in our capital makes it however obvious that the Swiss organizers are not yet interconnected with those powers who are responsible for the local climate. I am convinced that otherwise they would have ordered sunshine at least part of the time so that some of the beauties of our country could be presented to you in their best light. The present meteorological situation should however make it easier for you to attend the sessions. I still hope that you will get some opportunities to enjoy your stay in Switzerland also outside the meeting room and to get acquainted with this region not only on a professional level. Although professional information represents your business, I assume that you come here also to cultivate personal relationships and to get to know better your host country. I am convinced that the Swiss organizer, Radio Suisse AG, is doing its best to make

your days in Berne not only interesting but also pleasant on the personal side.

In spite of the problem with the uncooperative weather you are coming to Berne at a very appropriate time. Fairly recently Radio Suisse AG has started a new enterprise. *Data Star,* thus assuring a Swiss entry in the upcoming important business of information dissemination. Furthermore some time ago our national PTT administration signed the necessary contract with the European Economic Community to become part of *Euronet.* In view of the key role information is already playing on the verge of our postindustrial society, these two developments represent important steps in obtaining and maintaining access to the ever increasing flood of scientific and technical data. As a small country with a population of only six million, Switzerland cannot master the information explosion on its own although it is highly industrialized and possesses up-to-date educational and research institutions. Therefore there exists a general agreement that the Swiss activities in the field of information processing and handling should be deliberately oriented towards an integration in pertinent international efforts. As Article 2 of the Constitution of your «European Association of Information Services» states that the *purposes of Eusidic* are «to promote the unimpeded and efficient flow of information in machine readable form both within Europe and between Europe and the rest of the world», the Swiss government follows the efforts of Eusidic with much sympathy. We are happy that quite a number of Swiss institutions offering information services have joined your association and are thus actively participating in the technical sessions.

For Switzerland the rapidly increasing flow of data not only produces problems because it is a small country but also because of its federalistic structure and its well proven tradition of individualism. In our country we have a well developed private industry proud of its independence and relying on the principle of private initiative. Education is considered as an important domain of each of the 26 cantons forming our state. Only in some fields like professional training and education in the engineering, medical and natural sciences the federal government has major responsibilities. In addition most of the public money for research comes from the Confederation. In accordance with this setup there does not exist a strongly centralized line of command. Cooperation and coordination are the keywords explaining how public institutions and private enterprises solve their problems.

This situation also explains why Switzerland does not possess a centralized establishment for information services. But a number of institutions of a private or public nature have developed information services. This allows to experiment more easily with new developments but it is also threatened by a too wide dispersion of the very limited means available in this country. Although there do not exist exact figures we have the impression that the Swiss industry, at least the larger companies, and academic

research institutions have been able to keep pace with the impressive advances of information technology. In comparison with other European countries Switzerland has already become a good customer of data banks offered in Europe and overseas.

For obvious reasons no major data bases have been developed in our country. The practically complete dependence on international data bases offers at the same time advantages and poses problems. As long as all important countries adopt a policy of free access to their data banks, the Swiss customers can shop around for the best and cheapest information services. But there also exists the difficulty that the information which is produced in this country becomes adequately indexed and abstracted. This represents not only (or even to a lesser extent) a problem to our scientific community but also a threat to our national and cultural identity. If only foreign institutions with collaborators, who often are not familiar with our local conditions and our historical traditions, process the Swiss production of information it is to be expected that the results contain a higher number of mistakes and misinterpretations than if this work had been done by Swiss specialists. Up to now this problem has not yet become very important since the data bases in the social and economic sciences have not been developed as much as those in the engineering, medical and natural sciences. But already at present we hear some complaints that our scientific and cultural contributions are not sufficiently represented in the data bases available.

I must admit that we have not yet any plan how to improve this situation. Since there are quite a number of smaller countries in Europe faced with similar difficulties, it might be worthwhile to discuss a common approach for solving this problem. Of course the easiest way out would be that every producer of information would also assume the responsability to prepare the necessary index and abstracts for an easy access to his work. This would however require a discipline and a training which simply do not exist at present and which even in the coming generation of scientists and engineers may not be obtained on a sufficiently wide basis. Therefore it is perhaps more realistic if, using the present methods for processing information, collaboration between international data banks and appropriate national institutions is established for this purpose. Thanks to the tremendous advances of electronics since World War II we now have a very powerful and inexpensive tool — the computer — at our disposal for doing at least part of the necessary routine work.

A lot of ingenious thinking has already gone into programming the computer for a variety of tasks in information processing and transfer. Yet there is a lot of room for further developments and improvements. Those who are responsible for financing such efforts together with the future users admire, although with somewhat mixed feelings, the wealth of ideas which are produced in this field because innovations may prove to be expensive and cum-

bersome to introduce. The developers of new automated methods in information processing should always keep in mind that often *compatibility* with already existing methods may be a more valuable asset than a higher degree of sophistication in information handling which does not always allow the exchange of information with data bases using another method. An international association like yours can do much in order to establish and maintain a reasonable degree of compatibility between the different systems of information processing without stifling the desired advances in this field completely.

As the methods of retrieving information via interactive terminals advance, the information services will not only offer references to where the desired data can be found but they will even produce the corresponding documents on an electronic display or on a more permanent medium. Doubtless to say that this will produce problems with copyrights and publishers. The libraries will also be affected by such a development. In our small country with decentralized and considerably autonomous libraries the increasing use of on line searching for scientific and technical information has brought out some of the inadequacies of our present library system. Especially in the medical field where the Swiss Academy of Medical Sciences with the support of the federal government and of the industry has pioneered a documentation service for medical researchers and hospitals more than ten years ago, it was recognized that a much higher degree of coordination between the existing medical libraries was necessary. Only by a deliberate distribution of the tasks for acquiring the more specialized books and periodicals even from the more remote countries it became possible to satisfy most requests for such publications. At present a special commission set up by the federal government with the mandate to elaborate a proposal for a nationwide coordinated information and documentation policy, is studying the possibilities to apply this successful experience to other fields of scientific information.

The fact that at this meeting papers are already devoted to the problems of *full text periodicals online* and to a *plan for electronic publishing and document delivery* shows that the libraries may lose in the not too distant future a considerable number of customers if they do not soon manage to get fully integrated into the modern information services under development at present. This would reduce their activities to the collection and maintenance of books of bibliophile value and other precious documents. A few dissatisfied customers of libraries perhaps think that librarians see their foremost task anyhow in protecting books against being read and therefore they may not mind such a narrowing of their responsibilities. I am however convinced that the large majority of librarians would be very unhappy about such a development. A few Swiss libraries, especially those connected with the Federal Institutes of Technology, have already made

some important steps in order to prevent such a narrowing of their tasks by integrating new information services into their programs.

It is quite clear already that the electronic revolution brought about by different solid state devices, in particular by integrated circuits and also the recent advances in communication technology such as the introduction of glass fibers for the transmission of messages, will on the long run profoundly change our ways of processing and using information. At present paper represents probably still the most important material for storing information. In the not too distant future electronic memory devices will however take its place. There remains only the question whether the access to these devices is realized by terminals containing typewriters or speech recorders which will store language either in phonetic or in the usual written form. Thus our grand-children may not even be forced to learn typewriting in order to be able to take full advantage of this new information technology.

At present most uf us still have the feeling that paper is a very convenient medium for working out and recording our ideas. But it may be just a matter of getting used to the electronic information processors beginning in childhood; some people already use personal tape recorders and text processors instead of the old notebook and the handwritten letters. Emotionally most of us find the idea revolting that young ladies will no longer record their deepest sentiments on rose-coloured paper. On the other hand environmentalists should be enthusiastic about the prospect that most of our forests will no longer be sacrificed in order to obtain the tremendous quantities of paper which we need now. As always the reality will be somewhere in the middle: there will be fewer handwritten letters, books will be bought mainly because of their aesthetic value but the routine information will be entirely handled with the aid of the new information technology.

You as specialists in the field of information processing will be among the pathfinders to this new age. I hope that you do not only see the professional challenge in your activities but also the responsibilities to preserve the human values in an automated world full of electronics.

Thus I conclude my remarks with the wish that you will take home from this conference not only many useful professional inspirations and experiences but also a human enrichment and pleasant memories of our country.