

THE USE OF INFORMATION IN A CHANGING WORLD

**EDITED BY
A.VAN DER LAAN
A.A.WINTERS**

NORTH-HOLLAND

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THE USE OF INFORMATION IN A CHANGING WORLD

Proceedings of the forty-second FID Congress
held in The Hague, The Netherlands
24-27 September, 1984

edited by

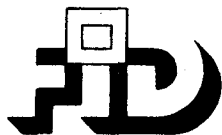
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FID Publication 631



1984

NORTH-HOLLAND
AMSTERDAM • NEW YORK • OXFORD

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ISBN: 0 444 87554 9

Published by:

ELSEVIER SCIENCE PUBLISHERS B.V.
P.O. Box 1991
1000 BZ Amsterdam
The Netherlands

Sole distributors for the U.S.A. and Canada:

ELSEVIER SCIENCE PUBLISHING COMPANY, INC.
52 Vanderbilt Avenue
New York, N.Y. 10017
U.S.A.

Library of Congress Cataloging in Publication Data

FID Congress (42nd : 1984 : Hague, Netherlands)
The use of information in a changing world.

(FID publication ; 631)

English and French.

Bibliography: p.

1. Information services--Congresses. 2. Information storage and retrieval systems--Congresses. 3. Data transmission systems--Congresses. 4. Information science--Congresses. 5. Documentation--Congresses.
I. Laan, A. van der, 1916- . II. Winters, A. A.
III. International Federation for Documentation.
IV. Title. V. Series.

Z674.2.F5 1984 020 84-10256

ISBN 0-444-87554-9 (U.S.)

PRINTED IN THE NETHERLANDS

PREFACE

It has been said that the only constant thing in life is change. At the point in time of the 42nd FID Congress, this constant change as reflected in the Congress Proceedings concentrates on three main trends:

- after many years of experience with often under-utilized information systems and services: a generally stronger concentration on both use and user of information, a shift in orientation from information supply to demand;
- along with this trend, a more economic outlook on the information transfer process and signs of an emerging market approach to this process;
- as an almost constant companion in the changing world: ever new horizons being opened up by innovative developments in information science and technology.

The Congress organisers have tried to reflect this troika of trends in a number of sessions and, in doing so, hope to arrive at a more or less actual picture of the state-of-the-art and an outlook on a not too distant future of the information scene as in mid-1984.

The authors having contributed to these Congress Proceedings were invited to send in their papers in the English language and in camera-ready format. This, of course, not only limited editing and correction possibilities to a considerable extent. It also confronted the editors with the problem where to draw the line between, on one hand, a linguistically understandable and technically acceptable volume and, on the other hand, a not too disorderly production process within the prevailing time constraints.

It was therefore decided to accept the formula that no technical or linguistic corrections should be made in texts that are understandable to the reader. By doing so, these Proceedings not only contain a number of obvious orthographic or typing errors, they also reflect the truly international character of this FID publication.

A. Van Der Laan
A.A. Winters

A 38/540

变化世界中的信息使用

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A 00430

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SESSION A:
INAUGURAL

WELCOME ADDRESS

Ricardo A. Gietz

Director, Centro Argentino de Información
Científica y Tecnológica (CAICYT)

President of FID

Ladies and Gentlemen,

On behalf of the International Federation for Documentation I have the great honour to express my cordial welcome to the 42nd International Congress of our organization, which on this occasion is held in The Hague, where the General Secretariat of FID has held its seat for more than fifty years.

The Federation has held several of its general conferences in the Netherlands. Moreover, for several decades a great number of meetings of the Executive Committee and of FID Council has taken place here. I cannot but emphasize the excellent arrangements and support that we have always received from the Netherlands Government as well as from NOBIN, our national member and the organizers of this congress. All this makes us feel as if we were at home. The charm of this garden city, of its architecture and of its coasts never fails to evoke our admiration, and we always feel attracted by its tradition and people. Undoubtedly, we have a perfect setting for our deliberations and we must, therefore, thank our Dutch colleagues for their cordial hospitality.

Let me point out that The Netherlands is the oldest national member of FID, and remind you of the names of two colleagues from this country who have worked during a long period of time for our organization: the name of Dr. Jan Ahling Prins who presided over the Federation from 1931 to 1946, became its first Honorary President, and deceased in 1963; and that of our admirable and proficient Secretary General, Mr. Frits Donker Duyvis, who carried out such duties for more than twenty years (from 1938 to 1959), with all his fervour and efficiency. He became an Honorary Fellow in 1957 and died in 1961.

The user of information is again the central subject of our meeting.

I say "again" because it was in my country, The Argentine Republic, where the 35th International Congress on Documentation discussed this topic, now 14 years ago. It was precisely my duty to propose this subject, on behalf of my organization to the FID General Conference, two years before the Congress, where it immediately met with a favourable reception by the members.

The Congress in Buenos Aires in 1970 was, in a sense, a challenge, treating a subject that, until that moment, had not been discussed in previous meetings as a matter of priority.

In the Congress announcement we said: "The user is the destinatory of information. In the majority of cases he also performs the important role of producer of information. Hence the double interest for the documentalist to learn the habits and requirements of the user. He must adapt the systems he elaborates to obtain and retrieve information. This is particularly necessary in developing countries, where the problems of present day changing society are aggravated by the rapid evolution they experience when they incorporate modern techniques, bridging stages that more advanced countries have had to overcome. Users in these countries must constitute a special preoccupation in the field of documentation, on the one hand

due to their difficulties to obtain information, and on the other because of the interest in making accessible to the rest of the world the information they themselves produce".

On that occasion, the Congress considered three main topics: Topic 1- Communicating information to users, subdivided in a) User studies, b) Building of user profiles and c) Improving efficiency; Topic 2- Training of users; and Topic 3- Tools for users, subdivided in a) Conventional tools and b) Non-conventional tools.

We should point out a difference between the general orientation towards the subject "users of documentation", at that occasion, and the orientation that corresponds with the present Congress with the title "the use of information in a changing world".

In 1970, papers were orientated towards a concern for the existing users of information systems and services.

I remember, however, an exception: the interesting work of prof. Helmut Arntz, my distinguished predecessor in the Presidency and FID Honorary Fellow, who referred to the training of *potential* users, considering that high-level officials or managers ought to use information for decision making, particularly in the administrative and economic fields.

We are now approaching the mid-eighties and we notice that concern for the user has increased through the past years at all levels and in many different fields of activity. Today, more than ever, concrete and particular information needs are being met in different sectors of society; it is intended to give appropriate and useful information to those who need it, whether conscious or unconscious of their needs, rather than train recognized users who are supposed to take the initiative of using the available facilities.

So far, documentation and information centres studied the needs of their existing groups of users. This coincides now with the not very favourable economic situation that has reigned during the past years, forcing people in charge of documentation and information systems to commercialize their services.

We have promised ourselves in this Congress, as has been stated, not to deal with the description of processes of information treatment unless they contain elements closely linked to the needs or capacities of assimilation of not-yet or potential users. In other words, we must focus our interest on the last step of the information cycle, with particular reference to the end-user.

Nowadays, the use of information is more and more required to achieve professional objectives and to make a variety of decisions. The number and variety of potential users has increased and is quickly growing. As information has become an important component in any activity of society, we feel obliged to pay more attention to the demand for information than to the mechanism of supply of information, which must become much more conditioned to demand than before.

Our Congress should allow for a confrontation with concrete experiences in how the transfer of appropriate information to the right end-user can be encouraged, thus satisfying an economic consideration of our time.

If what is going to be heard and discussed during these days will make it possible to improve the relation supply-demand of information, to make more not-yet and potential users aware of the importance of information, to meet more needs more effectively, and to increase the number and quality of FID program projects in this field within the mentioned orientation, we shall be glad being able to consider this a successful Congress.

With the wish and confidence that this will be so thanks to the contribution of all of you, I have the honour, on behalf of FID, to declare the 42nd Congress open.

TOWARDS A GLOBAL INFORMATION NETWORK

Jacques Tocatlian

Director
Division of the General Information Programme
UNESCO

The present document traces the progress achieved in networking from early times to the present day, with specific reference to the work of Unesco in this area. It recalls the recommendations of the UN Conference on Science and Technology for Development (UNCSTD), Vienna, 1979 on the need to set up a global information network on science and technology. The author explains the difficulties encountered in the implementation of such a network, refers to the establishment by the UN ACC Task Force of Technical Working Group I, responsible for elaborating on and refining the concept of the Global Network and formulating specific projects for its implementation.

A. NETWORK : OPERATIONAL DEFINITION

For the purpose of this presentation, an "information network" can be defined as a mechanism or arrangement enabling individuals and groups of people to exchange either bilaterally or multilaterally messages, information and various types of data.

B. NETWORKS OF PEOPLE

Early man had discovered that the exchange of messages was essential to the survival of the individual, the family and of the species. From early times, travellers were the main purveyors of information across national boundaries. Indeed, to-day as in time long past, "people on the move" are important action agents in the exchange of information all over the world.

Since then, symbols have been used down the ages in an attempt to transcend both time and space.

In the 15th century, the discovery of sea routes from Europe to China and Japan in the Far East, and the Americas in the West, greatly enhanced trade and travel and hence the international exchange of information. The types of information thus exchanged increasingly concerned such topics as natural resources, products of commercial value, local needs, etc. "Networking" among peoples of different continents developed along with migrations of whole populations and the practice of colonization.

In the same period, the fall of the Byzantine Empire, the migration of scholars in Europe, the invention of movable metallic printing types, the foundations of many seats of high learning, all stimulated interaction among scholars and the exchange of ideas.

C. THE BIRTH OF THE "JOURNAL" LINKS EUROPE WITH AMERICA

With the appearance of the journal (Journal des Savants ; Transactions of the Royal Society) in the 17th century, a powerful means of exchanging information was given to scientists and scholars the world over and is still flourishing to-day.

Progress achieved in the transport and postal systems also accelerated networking among the peoples of the world.

D. THE INFORMATION TECHNOLOGY REVOLUTION

In present day societies, all the means of exchanging information operate concurrently. The information technology revolution (that is the compounded impact of the computer, telecommunications, the audiovisual media and reprography) has appreciably enhanced mankind's potential for global information networking - this enhancement being itself a response to the "information explosion" witnessed in the last decades.

A global network, however, is not merely designed for the exchange of information : it should also facilitate the sharing of information and communication resources and thereby reduce the cost of such resources. This being so, to-day's information networks are somewhat different even from those of the last decades.

E. INTERNATIONAL COOPERATION

In his categorization of models of international cooperation, Nobel Laureate Jan Tinbergen stressed that the exchange of information among the parties concerned was an important component of such models.

A series of events, of varying significance, can be viewed as having paved the way to the foundation of the International Federation for Documentation : in the middle of the 19th century, links were established between the Royal Society in London and the Smithsonian institution in Washington : as a result of investigations carried out into their documentation and owing to the publication by the Royal Society of a catalogue of scientific publications, American scientists became better documented on the findings of their British counterparts and vice versa. Activities that would be described to-day as the bibliographic control of scientific publications progressed with the creation, in 1895 of the International Institute of Bibliography, known from 1938 onwards as the International Federation for Documentation, and, in 1925, that of the International Institute for Intellectual Cooperation which gave a further impetus to bibliographic work.

The International Federation for Documentation, which currently promotes facilities for the exchange of information, contributes to the improvement of information handling and documentation methods and plays an important role in world cooperation in these areas.

F. STANDARDISATION AND PERIODIC BIBLIOGRAPHIES

The late 19th century witnessed significant changes in the methods of compilation of international specialized bibliographies. Responsibility for such compilation, which initially lay with the individual became a cooperative concern. This trend led to the mass production of bibliographies which, in turn, called for the introduction of standardization into their production procedures and for the sharing of relevant investments and resources. Concurrently, there was a drift away from the massive, cumulative single bibliography towards the periodic bibliography such as it is produced to-day. These developments led to the emergence of indexing and abstracting services and of secondary periodicals in the field of bibliography.