Some eager beavers never have enough but all the others get too much!
## TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PREFACE</strong></td>
<td>01</td>
</tr>
<tr>
<td><strong>1. PROCEEDINGS OF OCTOBER 9, 1983</strong></td>
<td></td>
</tr>
<tr>
<td>1.1 Opening Session</td>
<td>01</td>
</tr>
<tr>
<td>1.1.1 Introduction by DSE (D. Danckwortt)</td>
<td>01</td>
</tr>
<tr>
<td>1.1.2 Presentation of the Participants</td>
<td>03</td>
</tr>
<tr>
<td>1.1.3 Agenda of the Conference</td>
<td>04</td>
</tr>
<tr>
<td>1.1.4 Steering Committee</td>
<td>04</td>
</tr>
<tr>
<td><strong>2. PROCEEDINGS OF OCTOBER 10, 1983</strong></td>
<td></td>
</tr>
<tr>
<td>2.1 Discussion on &quot;Computers in Information&quot;</td>
<td>04</td>
</tr>
<tr>
<td>2.1.1 Computers in Information: Dataprocessing and Change of Structures</td>
<td>05</td>
</tr>
<tr>
<td>2.1.1.1 in Small Size Information Bureaux (Lecture by R. Schneemann)</td>
<td>13</td>
</tr>
<tr>
<td>2.2 Discussion on &quot;Low Cost Documentation&quot;</td>
<td>15</td>
</tr>
<tr>
<td>2.2.1 Low Cost Documentation (Lecture by M. Klatter)</td>
<td>17</td>
</tr>
<tr>
<td>2.3 Discussion on Thesaurus</td>
<td>19</td>
</tr>
<tr>
<td>2.3.1 The Subject Approach to Information: The Role and Use of Thesaur</td>
<td>29</td>
</tr>
<tr>
<td>2.4 Reception by German Foundation for International Development (DSE)</td>
<td></td>
</tr>
<tr>
<td><strong>3. PROCEEDINGS OF OCTOBER 11, 1983</strong></td>
<td></td>
</tr>
<tr>
<td>3.1 User Analysis and User Education (Discussion)</td>
<td>30</td>
</tr>
<tr>
<td>3.1.1 User Education (Lecture by O. Nørgaard)</td>
<td>31</td>
</tr>
<tr>
<td>3.1.2 User Analysis (Lecture by D. Steinert)</td>
<td>34</td>
</tr>
<tr>
<td>3.2 Visit to Deutsches Bibliotheksinstitut (DBI) (German Library Institute)</td>
<td>40</td>
</tr>
<tr>
<td>3.3 Film Presentation (History of Berlin)</td>
<td>40</td>
</tr>
<tr>
<td><strong>4. PROCEEDINGS OF OCTOBER 12, 1983</strong></td>
<td></td>
</tr>
<tr>
<td>4.1 Discussion on International Information Systems</td>
<td>41</td>
</tr>
<tr>
<td>4.1.1 International Information Systems (Lecture by R.T. de Mautort)</td>
<td>44</td>
</tr>
<tr>
<td>4.2 Demonstration of MINISIS</td>
<td>51</td>
</tr>
</tbody>
</table>
Global African and Nigerian Efforts to Develop Information Systems for Socioeconomic Development

Wilson Aiyepelu, Program Adviser

After these bibliographic references, I ask you to allow me to say a few words about IDRC, and I shall then also say something about myself and my credentials for being hired by IDRC in the first place after retirement from the UN, and for being heard by a group of such a librarian standing.

IDRC, in the words of the President, was created in 1970 by the Parliament of Canada in response to the realization that considerable development research was needed in the developing countries, if developing countries were to gain the competence to fix their own goals and to solve their own problems. The centre is, unlike any other organization; it continues to be funded entirely by the Parliament of Canada. Yet, it is not in any sense part of the Parliament of Canada. Its policies are set by a board of governors, composed of both Canadians and Non-Canadians; 10 of the 21 members are drawn from outside Canada, 6 of them from developing countries. And there is a member of that board in France, a professor of law, who is going to breach my neck in Paris. IDRC is distinct not only in what it is but also how it goes about its task. Its concern is not simply to offer research support to the developing countries, but to do so in ways that increase the competence of researchers in those countries. We do this by spending our funds in large measure to the developing regions themselves. But in Canada we finance research programs which, in most instances, are chosen by scientists from those regions, and operated by them. IDRC does not itself conduct research, rather it assists in the identification process, in the trace and refinement of methodology, and in the monitoring of progress and in the evaluation of results.

The research project and programs are of very practical applied nature, focusing primarily on the rural poor. We encourage activities in the fields of agriculture and health sciences, and assist the interdisciplinary refinement and application of new technology. We often help isolated scientists without access to the materials of their colleagues through the creation of information systems for basic development data and through the dissemination of bibliographic and other materials, many of them prepared within the centre.

In short, IDRC is international both in scope and in structure, and most important for our presence here, IDRC is charged by a statute not only with the task of fostering research, but as well with the task of fostering the mechanism for the dissemination of information. That is, assisting in the distribution of existing knowledge.

The angle under which IDRC has approached its mission towards information has been in two directions:

1) Assisting the world community in the developing linkages - data bank-interconnections, developing in particular PADIS and being central to the development of AGRIS and DEVSIS.

2) Taking a practical view of the information-function by develop-
Energy Library, an industrial library, a social services library – it is, from the point of view of subject coverage, an immense and total thing; they are providing the whole houses with the classical services of accession lists, photocopies of the contents of incoming material, etc., and they are trying very hard to add an active feedback and interchange with the readers, they use questionnaires etc. That falls into my remark of yesterday: "Some eager beavers never have enough, and all the others always get too much". Since the library of UNIDO went its own way I have remained for ten years the head of UNIDO's industrial information section. I finished up as director of public information services for Austria and the Federal Republic of Germany. But before going back to my subject there (as I had hoped very much that board would slowly be filled, so I would know exactly what to say), I will turn to a board which I filled myself which refers to my specific experience and which may have a bearing on the concerns of the participants here: Knowledge Ignorance

Research and Development (R.D.) generates documents (Doc.) and data in quantities and some hidden knowledge that short of brain-washing or self-cracking one never gets at. That is totally out of anyone's reach. Those documents and data flow through scientific and technological information lines (S.T.I.) from the libraries, counters, data-banks to documentation-centres' terminals and recipient institutions – the world of ignorance and question-marks. Those who engage in research and development are totally satisfied with all those documents and data; they relish those bibliographic printouts and those documents that may possibly come along with them. And it is important
for everyone who does a research on a mini-point to know what has been done on this subject between Ulam Bator and Asuncion as a base for his further efforts. The scientific and technological information flows have been institutionally the worry of the non-governmental FID and UNESO with its UNISIST program. They have considerably served the dissemination of information throughout the world and lent a higher dignity to the profession of librarian, and the more computerized the librarian, the greater is his grade of dignity.

The world of industry, I would say, differs. Concerning knowledge in industry, you have a segment of it which generates documents and data, and much of that gets into the STI. This free flow of documents and data consisting of industrial knowledge is important, but by far not the essential. You have a sector of knowledge, proprietary knowledge, in industry wherein is the totally unassailable unless you use undesirable means. Developing countries seem to believe that sector of preserved information, simply because it doesn't flow around, fills the horizon. The role of international organizations, the role of development promotion centres is to persuade developing countries, that there is a division of labour, and in the intermediary world between this free-flowing information and that hidden knowledge, you have a world of available knowledge which is perfectly fit for the direct access on excellent terms.

Now, you have a matching situation in the world of ignorance. You have a limited sector of industry that is able to identify its problems and to express it in the form: if I get these data and documents, my problem is solved. That is the more sophisticated sector of industry with information-gate people who can identify problems and find those documents they believe they need. But that is only a limited segment. The less developed the countries, the fewer engineers, the fewer there are people who can translate it into the request for documents. Then you have a sector of total refuse of information and absolute black-head neglect of any cooperation. And you find that there is an insatiable demand and information at the same time as the start of that new science and technology. And then there was a political situation: in every country there was some kind of atomic energy program, there was a national authority which decided once and for all that this document was classified and the other was free for circulation. This being said, everything that's military is classified etc. is completely out of sight, and the problem was, what to do with the other things. In those years informations were at their very start, and so was the field of Nuclear Energy Agency. There was not a formal but built-out of documentation through many, many years before informatization everized. So, this was a perfect case where one could practically start with computerized information at the same time as the start of that new science and technology. And then there was a political will of the Soviet Union and the United States of America that they were extremely curious to look at what the other side was producing, and if it was not secret they could do so. On that basis INIS was started and it turned out to be a success. The producer and consumer community of nuclear energy literature is extremely homogeneous. The will is to try to reduce this hard-core of willful ignorance. But between these two extremes you have a gap of unfilled requirements and problems that are to be solved by a slow progress and extension of the sector that thrives on documents and data. It is absolutely necessary to set in developing countries national industrial information centres whose role is to have access to the terminals and the data. They can translate some of this into the request for documents and data. They are the best customers of those documentation centres, but their industrial information officers are people with industrial and economic experience within a slight dabbling of documentation technique; but their function as information officers is essentially that of communicating of industry by sector and its economic and financial problems.

Who else is informing industry? You have a commercial information flow. Those who produce can persuade someone to invest in these products-services or -goods and they transfer as much information as in their contracts for transfer of technology; they have committed themselves to them, but not more; they don't pretend to facilitate an appropriate choice between available technologies. This is the role of another circuit, and I would call it, by difference with the scientific and technological information flow, the industrial and technological information flow. This requires a central international structure - one, or more. In UNIDO it is INISB (Industrial Technological Information Bank) the function of which is to explore for the benefit of developing countries through those national information centres this vast area of run-out patterns of engineers retired, who are quite ready to offer directly their services to settle a new technology notion and to answer inquiries.

I now want to talk about the international cooperation in information, of which DVIS is a part. In the late 60s and early 70s there was a general vision in the UN system that a brave new world was on the threshold to happily exchange information about everything, and the only problem was to get organized. John Woolston, at that time, was the head of the information services of the Atomic Energy Agency. There you had a superb model situation which, unfortunately, could not be found until today anywhere. The political situation: in every country there was some kind of atomic energy program, there was a national authority which decided once and for all that this document was classified and the other was free for circulation. This being said, everything that's military is classified etc. is completely out of sight, and the problem was, what to do with the other things. In those years informations were at their very start, and so was the field of Nuclear Energy Agency. There was not a formal but built-out of documentation through many, many years before informatization everized. So, this was a perfect case where one could practically start with computerized information at the same time as the start of that new science and technology. And then there was a political will of the Soviet Union and the United States of America that they were extremely curious to look at what the other side was producing, and if it was not secret they could do so. On that basis INIS was started and it turned out to be a success. The producer and consumer community of nuclear energy literature is extremely homogeneous. The will is to try to reduce this hard-core of willful ignorance. But between these two extremes you have a gap of unfilled requirements and problems that are to be solved by a slow progress and extension of that sector that thrives on documents and data. It is absolutely necessary to set in developing countries national industrial information centres whose role is to have access to the terminals and the data. They can translate some of this into the request for documents and data. They are the best customers of those documentation centres, but their industrial information officers are people with industrial and economic experience within a slight dabbling of documentation technique; but their function as information officers is essentially that of communicating of industry by sector and its economic and financial problems.

Who else is informing industry? You have a commercial information flow. Those who produce can persuade someone to invest in these products-services or -goods and they transfer as much information as in their contracts for transfer of technology; they have
government has its hands on. Not at all to the extent that
industrialized countries to feed industrial data into a system like
that. That is why INDIS turned out to be much more modest and put
up a set of abstracts. Up to now there are some 15,000 items. All
this package of UNIIX abstracts is published
that has been
integrated in the IDRC-operated bibliographical data bank
and included in the MINISIS bibliographic package.
My experience with UNIIX is some amount of classical bibliographic
services and an intense insistence on that last segment of the
information flow which goes not to an undefined user group but to
the very end-user who has decisions to make, and who wants pre-
cooked elements for decision-making rather than tons of paper.
The INDIS proposition came after the success of AGRIS and without
thinking much of INDIS development as a genuine proposition. It was
thought that the international community would be ready now to take
over since development was a thing which was thought in need of a
new cooperative information system. During all those years there
have been efforts in the UN system to make it adopted as a project
starting at the top and going down to the bottom.
In those years money suddenly became available, perhaps the political
will was not there, and the minus-growth in budgets may have
added to the problem.
There was another idea of establishing a world-wide network for
Scientific and technological information. This idea has been worked
on in the early 70's and brought to the floor at the Vienna confer-
cence on science and technology for development in 1979 where it was re-
garded the only outcome of this maxi-conference. The idea was to
establish a GIN (general information network). This was a vague con-
cept but had a vision of satellites everywhere, terminals and data-
banks everywhere, and a flow of information at low cost practically to any-one throughout the world. The
about a sector of things like DEVISIS? So GIN became the object of
inter-agency meetings and all sorts of people are writing interesting
papers. There was one interesting proposal written by a profes-
sor in information-sciences, Prof. Siemkow, which was seriously
discussed. His vision was a central console somewhere in the world,
where everyone with a problem, be it nymalitical, technical, socio-
ological etc. would tel es not a request for literature on the subject
but for the telephone- or tel-exchange of the man/ women who

In this respect I can refer to more modest enterprises so as to draw
up guides to sources of information. Many people have been doing
that. My previous institution and myself have been drawing up from
every sector of industry guides to information sources that are very
much appreciated.
But what happened to the bright idea of a centralized DEVISIS? Since
it did not come in through the front door it has been tried through
many kitchen-doors. The paper by Mrs. Shearer gives a listing of DEV-
SIS related enterprises. There has been a DEVSIS India in 1975/76
which represents an effort to retrieve every piece of literature rele-
vant to development sciences generally in Canada, but also of coun-
tries who kind of contributed - the Federal Republic of Germany was
one of these. The DEVSIS Canada has been widely disseminated and
shorn to everyone that it was a practical and useful thing.
India developed its own DEVINDEX India in 1981, and also in Austra-
Gernia a respective DEVINDEX is in preparation.
There have been DEVISIS-type operations on which IDRC had some influ-
ence or gave some money. In Tunisia there is a national DEVISIS ope-
ration which is computerized, and in Thailand, Pakistan and the Phil-
ippines there is one manual.
I should also like to draw your attention to a relevant place -
IRIS/IS/IS in France. We have been doing that without specific refer-
ence to DEVISIS But the idea is spreading. And it is not excluded that
when many countries have done their national thing they will
come together and produce on a democratic basis what has been thought of
on a technical basis.
Furthermore, there are regional systems, like INFOPLAN around CEPLAN
in six latmamonian countries, which produced a PLANNDEX in 1979.
There is CAROPLAN relating to six countries in the Caribbean, which
produces ABSTRACTS (of development literature). And then there is
PAOS, a na.xi-technical network of Africa, which started PAOS/DEV,
the DEVISIS-phenomenon for Africa, in 1980; you have seen the DEVISIS
Africa today. - In Asia there isn't anything of this type yet, but
a certain network is going to be put up this year or next year, and
there has been a meeting in Colombo to discuss the possibilities
for the future; something is most likely to come up for Asia and South-
east Asia. In ESCAP there has been produced some service in relevance
to development literature. - In the Middle East, though the political
situation is difficult, some things have been solved, concerning EMA.
As far as the UN is concerned, they have established a development
information system which is producing development information abstracts
(DIESIS/UNIIX). All those people working on the min/men/ women

4.2 Demonstration of MINISIS
The second half of the day was taken by an introductory
lecture on MINISIS plus practical demonstration of the