

Use of optical discs at the United Nations
for the storage and remote retrieval
of conference documents

1. The pilot project under way at the United Nations Office at Geneva since April 1988 has already demonstrated the possibility of inputting UN conference documents on optical discs and retrieving them in real time from anywhere in the world with a personal computer (display on screen or paper copy print-out).

2. The system is a unique combination of optical disc technology and high-speed long-distance data transmission. It is entirely open, i.e. it is compatible with most equipment presently in use for data and word processing and in particular the equipment used at the United Nations. The inputting can be done both through scanning of paper documents or directly from word processors (coded data). Up to 60,000 scanned pages or 400,000 pages already in coded form can be stored on one disc, and discs with a capacity of over one million pages will be available in May. A retrieval station can search for and display a document on the screen or produce a print-out in a matter of seconds. Any document inputted on discs can be called page by page on the screen and enlarged almost at will (starting from an A3 format, successive enlargements can be done until the whole screen is occupied by one small portion of one letter). This makes the consultation on the screen very easy when no paper copy is needed. If a print-out is required, it can be limited to a page or any part of a page or, on the contrary, cover the whole document. The advantages of such versatility are numerous for many applications. Digitized documents stored on optical discs are transmitted at the rate of 64 kbits/s, whatever the mode of inputting (scanning of paper documents or direct inputting from word processors) and whatever the distance (local network or international link). This makes it possible to build up networks of document servicing centres which can be consulted in real time from authorized retrieval stations. It must be emphasized that a PC used as a retrieval terminal need not be dedicated to this task; one of the advantages of the system is that PC assigned to other tasks can double up as retrieval terminals for the optical disc system.

3. The Working Group on Optical Discs which was set up to monitor and evaluate the pilot project recommends the establishment of an operational system at the UN in the 1990-91 biennium, which would comprise two document servicing centres, one in Geneva, the other in New York. The Geneva centre will input Geneva-produced documents on optical discs and the New York centre those produced in New York, an exchange of inputted documents taking place daily by remote transfer during off-hours. Permanent missions and in-house work stations will be connected to the system first, and users which are more

remote (governments, institutions and various organizations) or local users other than permanent missions or the Secretariat (specialized agencies, other international organizations, etc.) will be connected at a later stage. It should be noted that, due to the absence of local networking in the Palais des Nations, it will be easier in Geneva to connect permanent missions to the system than in-house work-stations. Since the permanent missions are the main users of conference documents and since the system will be of particular benefit to them, it is logical to put the emphasis initially on connecting missions to the system pending the availability of sufficient local network capacity to connect all internal users. The development of Integrated Services Digital Networks (ISDN) and of high-speed data networks will make it possible later to connect to the system users anywhere in the world.

4. The increased capacity of the new discs which have been announced will make it possible to operate the system in a particularly interesting way. Since the annual production of UN conference documents (1 - 1.1 million pages, all languages included) could in fact fit on one of these discs, the Working Group recommends to operate at least two disc-drives on line for the retrieval of the most recent documents (i.e. less than one-year old): an on-line disc-drive can only read one side of the disc; two will, therefore, be needed to give immediate access to the most recent documents, which are also the ones which are the most frequently consulted. For documents over one year old, the discs will be transferred to a juke-box where access time may reach up to twenty seconds, if a change of disc is needed. Older documents, consulted less frequently, will also be inputted on discs which will be placed in juke-boxes. The existing conference documentation of the United Nations amounts to some 40-50 million pages, the inputting of which constitutes a huge task. The Working Group recommends that this one-time inputting operation be contracted out, in order to enable the UN to substitute to a great extent electronic distribution for the distribution of paper documents and to preserve its institutional memory (this has now become urgent in view of the fact that early UN documents, which were printed on poor quality paper, tend to disintegrate when touched).

5. There are many potential fields of application for optical disc technology at the UN, whether it is combined or not with high-speed telecommunications (Library, Archives, Information Service, Terminology, Translation, etc.). Without even going beyond the fields directly related to the production, distribution and use of conference documents, the benefits of such a system - as against its moderate cost (about one million dollars in each of the first two years in Geneva) - are numerous. To quote just a few:

- Immediate availability of conference documents for authorized users,
- Increased efficiency and productivity all round,
- Reduced press runs by as much as 20-40 % with consequent savings in reproduction (supplies and services) and distribution (staff, storage space, postage),

- Savings of space for the libraries in New York and Geneva, one result of which is that it will not be necessary to build a new building for the storage needs of the Library in Geneva at an estimated cost of \$ 8.5 million,

- Savings of space in reference units and terminology and increased efficiency of these services and of the translation sections,

- Reduced needs for storage space and staff for external users (particularly permanent missions and governments),

- Preservation of the institutional memory of the Organization (particularly for fragile documents or documents of historical value),

- Increased revenues through the sale of series of documents either on regular optical discs or on CD-ROM's and through the sale of subscriptions for access to the optical disc system (documents and bibliographic references),

- Elimination of duplicate storage and processing activities in documentation centres belonging to substantive departments,

- Greater awareness of the activities of the Organization through access to the system for universities, libraries and other institutions.

6. The report of the Working Group on optical discs, which contains supplementary estimates for the 1990-91 biennium, has been finalized on 22 March 1989. After a number of internal reviews, it is to be submitted to CPC at its May session, and next to ACABQ and the Fifth Committee, with a view to enabling the General Assembly to take a decision on the establishment of an operational system at its next session.

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