



UNITED NATIONS
GENERAL
ASSEMBLY



Distr.
GENERAL

A/C.5/31/77
8 December 1976

ORIGINAL: ENGLISH

Thirty-first session
FIFTH COMMITTEE
Agenda item 92

PROGRAMME BUDGET FOR THE BIENNIUM 1976-1977

TECHNOLOGICAL INNOVATIONS IN THE PRODUCTION OF THE PUBLICATIONS
AND DOCUMENTATION OF THE UNITED NATIONS

1. In recent sessions, discussions have taken place in the Fifth Committee on the introduction of modern, computerized documents-reproduction equipment into the Department of Conference Services. The ACABQ last year urged the Secretary-General "to pursue his studies on technological innovations with greater vigour". 1/ Accordingly, the Department of Conference Services, in close co-operation with the Administrative and Management Service (AMS) and the Electronic Data Processing Information Service (EDPIS), selected Arthur D. Little, Inc., a firm of management consultants, to make a detailed study of the word-processing system in the United Nations. The first performance report for the Programme Budget for 1976-1977 has reported the expenditure of \$35,000 in the Department of Conference Services for the services of these consultants. 2/ Representatives of the Department of Conference Services, AMS and EDPIS participated in the study.
2. The purpose of the study was essentially to analyse the existing system of producing documents from typing through printing to distribution, and to consider the feasibility of introducing the kind of computerized text-processing and reproduction systems that are now widely used in organizations that, like the United Nations, produce large numbers of documents of different kinds under varying deadlines. The main conclusions were that new computerized text-processing systems and reproduction systems should be gradually introduced to replace existing methods and equipment. The new systems would produce substantial long-term savings in operating costs, would improve the efficiency of the documents production system and result in better quality documents. The recommended systems and their capabilities are more fully described in annex I.

1/ Document A/10299 of 20 October 1975.

2/ Document A/C.5/31/37, para. 23.4.

3. The consultants estimated that, at current levels of operation, the introduction of all the recommended systems would give rise to development and equipment costs of some \$2,200,000. These would be amortized over a period of four years by net savings in terms of staff requirements and supplies estimated at current levels to be slightly more than \$500,000 annually. These estimates were developed conservatively, i.e. from liberal estimates of costs and cautious estimates of savings. (The first evaluation of costs in direct consultation with suppliers has confirmed the conservative nature of the consultants' cost estimates.) An indication of the likely expenses involved in the first full stage, including the implementation of all text-processing systems and hard-copy equipment, is presented in annex II.

4. It is evident from the consultants' report that the basic element in their recommendations is the early introduction of text-processing equipment. It is equally obvious that, given the deadlines under which the Department of Conference Services operates, it cannot take the chance that any process in the document production chain be allowed to break down. As a prudent first step, it is proposed to introduce text-editing capacity in the Stenographic Services on a limited basis to operate in parallel with the normal operation.

5. Should the pilot project prove successful, it is proposed that the first phase of innovation of new systems should commence, based on (a) one complete text-processing subsystem (one out of the six recommended for full implementation), (b) 50 per cent of the hard-copy reproduction subsystem, and (c) linkage with the New York Computing Center (NYCC) for storage, dictionary capacity and production of microfiches.

6. The consultants also recommended that an automation co-ordinator be appointed for the period of implementation of the new systems, i.e. from four to six years. The consultants stressed the importance of an individual with knowledge of computer information technology, as well as experience in the United Nations system and a background in the field of administration. In their view, none of the present officials in the Department of Conference Services has the requisite knowledge in the field of information technology. A post at the D-1 level, as well as a secretarial post, to be financed from temporary assistance is, therefore, requested for the period of implementation.

7. After discussions with five suppliers of text-processing equipment and with three suppliers of hard-copy reproduction equipment, it is apparent that equipment and software with the special modifications and characteristics required for United Nations work can be obtained early in 1977. However, none of the manufacturers of text-processing equipment recommended were willing to enter into lease arrangements for less than one year. Based on the various proposals, the following cost-estimates have been established:

<u>Pilot project</u>	\$
Rental charges (1 central processing unit (CPU), 2 work stations, 1 slow- and 1 high-speed printer) per annum	18,000
One-time costs (equipment, supplies, shipping and installation, software, etc.)	20,500
Temporary assistance (2 G-4 posts for 6 months each for parallel operations)	20,000
	<hr/> 58,500
 <u>First phase - one year of operation</u>	
Rental charges	
- 1 CPU, 8 work stations, 3 slow-speed printers, 1 high-speed printer, 1 communications system	36,000
- 2 disk drives, 2 modems and fiche tests	25,200
- hard-copy equipment	31,500
Shipping and installation	1,000
Equipment	8,000
Supplies	28,000
Software	20,000
	<hr/> 149,700
Less - (Rental charges and one-time costs of pilot project)	38,500
	<hr/> 111,200
Plus: Salary and common staff costs automation and co-ordinator (1 D-1) and secretary (1 G-4)	87,500
Annual total:	198,700

8. The Secretary-General's recommendations can be summarized as follows:

(a) An additional appropriation of \$58,500 is sought for the initiation of the pilot project as early in 1977 as possible; 3/

3/ It should be recalled, in this regard, that estimated savings amounting to \$1,443,800 have been reported for the biennium under sect. 23, Conference and Library Services.

(b) Should the pilot project prove a success, the authority of the Advisory Committee would be sought under the terms of the resolution on unforeseen and extraordinary expenditures, to enter into commitments in 1977 to permit implementation of the first phase of the new system;

(c) A report on the results of (a) and/or (b) would be submitted to the General Assembly at its thirty-second session; should the results warrant, revised estimates for the Department of Conference Services and for Conference Services, Geneva, would be submitted at the same time for expanded and further implementation of the consultants' recommendations.

Annex I

RECOMMENDATIONS OF THE CONSULTANTS

Text-processing

1. The consultants recommended the installation of computer-based text-processing systems in each of the English, French and Spanish typing units and, when the technology becomes available, in the Russian and Arabic typing units. Each text-processing system would comprise a central minicomputer, several visual display terminals, high- and low-speed printers, and disk storage. The systems would incorporate automatic capabilities which would both promote production efficiencies (e.g. full editing capabilities) and improve the appearance and readability of United Nations documents (e.g., automatic margin justification). The systems would be introduced slowly alongside existing typewriters to allow orientation and back-up capacity, until typewriters were eventually phased out. The main advantages over typewriters would be greater technical capabilities, and greater output without staff increases.

Reproduction

2. The installation of new high speed non-plate-making reproduction equipment was recommended to handle small jobs (hard-copy equipment). This would operate alongside the existing printing equipment that handles medium and large jobs. The capabilities of this new equipment would include high-speed reproduction, and reduction capacity. The new equipment would gradually replace existing stencil and mimeograph duplicators. Its advantages would include high speed and improvements in quality. Substantial savings would occur through use of print reduction, resulting in diminished paper consumption.

3. The installation of a large computerized photocomposition system was recommended. This would reduce the volume of work now contracted to external printers, and would handle the printing of major publications such as official records and statistical compilations. The photocomposition system would include: a central computer; optical scanners, which can directly read typed copy through the central computer into the photocomposition machine; editing terminals, which permit editing of texts through the central computer; and photocomposers, which print by a photographic process and collate and bind the documents. The technical advantages of this system would include improved quality of documents and publications, and greater production capacity. Savings would arise through reductions in the amount of external printing.

Microfiche

4. An expansion of the use of microfiche was recommended, after further feasibility studies, in the Dag Hammarskjold Library and the Distribution and Sales Sections. The proposed equipment includes: computer output microfiche equipment,

/...

which produces fiche versions of documents electronically stored in the NYCC computer; fiche-makers, which produce fiches directly from documents; fiche-duplicators, which reproduce fiches and fiche-printers which print documents from fiches. The advantages for the Library would include greater speed in obtaining a greater number of microfiche versions of documents and publications after production. Instead of shipping documents to overseas offices by pouch, the Distribution Section would send microfiches to be reconverted by a fiche-printer into printed documents. Also, instead of storing documents for later distribution and sales, the documents could be stored in fiche version and printed by a fiche-printer as required. This would save storage space and reduce wastage of paper. Savings would arise through reduced transport and storage costs.

Computerization of glossaries

5. The consultants recommended the installation in the Documentation and Terminology Section of display terminals and a printer, linked to the central computer, to permit greater speed and flexibility for the terminologists and improvements in the quality and usability of glossaries. The consultants recognized that savings would be difficult to quantify in this area and recommended further feasibility studies.

Computerization of activity reporting

6. The eventual computerization of activity reporting was recommended. Through the system reliable data would be more speedily available to management to assist in planning, budgeting and day-to-day control of the documents system. The consultants also recommended a more detailed feasibility study.

Annex II

FIRST STAGE: TEXT-PROCESSING AND HARD-COPY EQUIPMENT

<u>Rental charges (annual)</u>	\$	\$
- Text processing (English, French, Spanish Units)		
6 central processing units (CPU)		50 400
52 work stations		101 000
18 slow-speed printers		48 000
6 high-speed printers		16 000
6 communications systems		12 000
		<hr/> 227 400
- Text processing (correspondence unit)		
1 CPU		8 600
4 work stations		8 000
2 slow-speed printers		5 400
		<hr/> 22 000
- New York Computing Center		
2 disk drives, 6 modems (including software)		48 000
- Reproduction		
2 hard-copy systems		62 500
<u>One-time charges</u>		
Shipping and installation	6 000	
Diskettes	16 000	
Tables and stands	20 400	
Print wheels	30 000	
Software	50 000	
	<hr/> 122 400	
Average annual cost over four years		30 600
<u>Supplies and replacements (annual)</u>		
- Print-wheels and diskettes		5 000
		<hr/> 395 500
<u>Annual cost: Total</u>		
