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PROGRAMME BUDGET FOR THE BIENNIUM 1990-1991

Integrated management information system project: second progress report

Report of the Secretary-General

INTRODUCTION

1. The General Assembly, by its resolution 43/217 of 21 December 1988, approved the implementation of the first phase of an integrated management information system (IMIS) project over a period of three and a half years at a total cost not to exceed \$28 million at 1988 rates. Details of the Secretary-General's proposal for the project are contained in his report to the General Assembly at its forty-third session (A/C.5/43/24).
2. Following approval of the project, the Secretary-General submitted a progress report to the General Assembly, at its forty-fourth session, in which he indicated that it had been decided to proceed with the development of a system using a relational data-base management system supporting the structured query language, which ensures portability across computer environments; the project would use modern software development tools such as computer-aided software engineering tools (CASE tools); and that the hardware environment would not be limited to large mainframes as previously proposed, thereby providing greater flexibility to offices away from Headquarters (A/C.5/44/8, para. 8). The report also provided information on the general work plan for the first phase of the project until the end of 1992 and explained why there had been some delays in the start of the project.
3. In its report to the General Assembly recommending adoption of the project (A/43/980), the Fifth Committee requested that the Secretary-General report on the benefits to be derived from the project and on how it would contribute to the reform process mandated by General Assembly resolution 41/213 of 19 December 1986.

The purpose of the present report is to inform the General Assembly of what has been accomplished since the last report and provide the information requested by the Fifth Committee with regard to the benefits of IMIS. The report contains four sections: progress of work; plans for end-1991 to 1992; benefits to be derived; and a conclusion, which explains how the IMIS project constitutes a major component of the reform process for the Organization. The various tasks required to complete phase one of the IMIS project, which was approved by the General Assembly, will be referred to in the present report as "stages".

I. PROGRESS OF WORK

A. User requirements analysis

4. In his first progress report (A/C.5/44/8, para. 16), the Secretary-General indicated that, following the selection of a consulting firm, the first work to be done would be a detailed analysis of user requirements and the logical design of IMIS. The technical aspects of this work were to be contracted to a consulting firm specializing in the development of integrated systems using modern technology as the Organization does not have experience in developing large-scale integrated systems. Forty-eight consulting firms throughout the world were contacted; 15 firms submitted offers; a firm was selected and the consultants began work at the United Nations on 2 January 1990.

5. Concurrently, the United Nations project team was established, drawing expertise both from existing staff and from outside the Organization. In accordance with the wishes of Member States that the views and concerns of offices away from Headquarters be fully taken into account (A/43/980), IMIS focal points were designated in 1989 by heads of offices away from Headquarters. At the end of January 1990, the IMIS focal point and a representative from the electronic data processing (EDP) office at each major duty station attended a week-long workshop to introduce the staff members assigned to the IMIS project and the members of the consulting firm, to explain the methodology used for the analysis and design and to hear the concerns of each duty station relating to IMIS. The focal points also provided insights into operational constraints that had to be taken into account in the design of the system and in the elaboration of the hardware and software platform for IMIS.

6. The functional areas covered by the user requirements analysis are:

(a) Finance: budget, post management, assessments and contributions, treasury, accounting, payroll and personal accounts, insurance;

(b) Human resources: recruitment and filling of posts (including rosters and skills inventories), appointments, tracking of personnel actions, entitlements (necessary for payroll), leave and attendance, medical certification;

(c) General services: requisitions, procurement, contracting, vendor management, travel, shipments, inventory control;

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(d) Control and audit, while listed as a separate module for ease of analysis, in fact covers all areas since the system to be designed must provide facilities for clear control and meet accepted standards for EDP auditing.

7. The analysis of administrative requirements for IMIS was completed in May 1990. It included numerous interviews with users in administrative offices both at Headquarters and at each major duty station of the United Nations. The same importance was given to supporting activities for administrative processes financed from extrabudgetary resources as for regular budget activities whereas in the past, systems tended to be designed primarily if not exclusively for regular budget activities. The administration of peace-keeping operations was also included in the analysis. Interviews were conducted at the following offices: Economic Commission for Africa; Economic Commission for Latin America and the Caribbean; Economic and Social Commission for Asia and the Pacific; Economic and Social Commission for Western Asia; the two offices at Nairobi (United Nations Environment Programme and United Nations Centre for Human Settlements (Habitat)); a peace-keeping field mission; the offices at Geneva (United Nations Office at Geneva, Economic Commission for Europe, Office of the United Nations Disaster Relief Co-ordinator, United Nations Conference on Trade and Development, Office of the United Nations High Commissioner for Refugees, International Trade Centre, UNCTAD/GATT); and the United Nations Office at Vienna. As a result of these interviews, it was found that the requirements of overseas offices were similar to those of Headquarters. The premise that an integrated system could be designed serving the needs of all United Nations offices was therefore confirmed.

B. Logical design

8. Following the user requirements analysis, a logical design (or external design) for an integrated system allowing on-line processing was constructed. The design was elaborated through the use of a software package CASE tool providing rigorous documentation and building a system as if it were an engineering project. The logical design does not require that a particular software package be selected. In fact, a good logical design can be implemented in a variety of data-base management system (DBMS) softwares as well as in many hardware environments.

9. Given the voluminous documentation and the difficulty of holding consultations through correspondence within tight deadlines, it was decided that teams from the IMIS project would travel to offices away from Headquarters to review the design with users at those offices. The design will also be presented to other organizations in the United Nations system that use the United Nations Secretariat's payroll system, such as the United Nations Children's Fund, so that the implications of a new system can be examined at an early stage and an orderly transition planned. Other projects have also been undertaken that are time-consuming and need to be completed before computer programming can begin.

10. The logical design for IMIS has also been provided to the United Nations Development Programme (UNDP) to enable it to determine to what degree IMIS could meet its requirements. Based on its review, UNDP will then decide whether it will

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join the United Nations Secretariat as a user of parts of the IMIS system. Such an outcome would probably be cost-effective and facilitate exchange of data to and from both organizations, particularly in the area of technical co-operation activities; in fact the need for the Secretariat to report to UNDP on these activities has been taken into account in the IMIS design.

11. During the user requirements analysis and the logical design stages, the United Nations team assigned to the project has worked closely with the consultants engaged for the analysis and design. This close co-operation ensures that, after the consulting firm is no longer engaged in the project, the detailed knowledge of the United Nations requirements and of the system remains with the United Nations staff.

C. Hardware and software platforms

12. The computer environment that will support the applications developed under IMIS is currently being selected, taking into account the investment already made by the Organization in computer hardware and recent developments in technology in areas such as data-base systems, graphic users' interfaces (e.g. use of icons or screen windows), microcomputers and telecommunications. Offices away from Headquarters have been consulted on these matters through a two-day technical workshop early in September 1990 when issues of concern to these offices were discussed and clarifications on the proposed technical platform were obtained.

13. While the final selection has not been made as of the date of this report, a number of features have been agreed upon: (a) the operating system for IMIS will be UNIX, which can be used on a variety of hardware platforms from different vendors; (b) instead of large mainframes as originally planned, the analysis of requirements at all duty stations indicated that powerful microcomputers or minicomputers can provide the necessary computing power to handle the IMIS processing needs; (c) these local computers will be connected to a more powerful computer at Headquarters; (d) at each duty station, the local computers will be connected to individual microcomputers through a local area network (LAN); (e) the IMIS project will continue to use a software tool to maintain its documentation on this complex system.

14. The procurement on a phased basis of the necessary hardware and software is being planned. First priority will be given to the purchase of the equipment needed to develop the project during the next stage and to those offices that had been delaying purchases of hardware and software pending a decision on the IMIS platform. These offices are considering at the same time their data-processing needs for substantive activities and the procurement needs of offices will be finalized on the basis of that analysis.

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II. PLANS FOR END-1990 TO 1992

15. A request for proposals will be sent out at the end of November 1990 to major consulting firms for the next stages of the project: internal design, programming and conversion to the new system. It is expected that the selection process for this second contract will take approximately three months. During that period, a final review of the logical design will be conducted with the users at all duty stations to ensure completeness and conformity with user requirements, as explained in paragraphs 9 to 11 above.

A. Internal design

16. The internal design stage consists of building the system specifications to such a degree of detail that the programming can begin without the need for further interviews with users during the programming stage. In the past, less attention was given to this stage of systems development; as a result, specifications were often changed after the programmers had begun their work, resulting in additional costs and delays. Other activities will take place during this stage such as the verification of existing data for accuracy and completeness, a time-consuming but essential task for the successful implementation of IMIS.

17. In parallel with the technical design, a detailed review of work-flows and procedures will be performed. The development of IMIS offers a unique opportunity to review the codes and procedures developed by users over the years at all duty stations, streamline them and introduce uniformity for consistency throughout the Secretariat and ease of maintenance. Codes (for instance those needed for the chart of account, or for occupations) will therefore be reviewed to standardize them before incorporation into IMIS as tables. Through this world-wide review, it is expected that substantial benefits will accrue when all functions currently being developed are implemented.

B. Programming and testing

18. Once the specifications are well documented in the CASE tool, the programming stage begins. The United Nations will test the programmes to verify that they perform the tasks as required in the specifications. Conversion of data from the current systems will also be planned, in particular the building of interfaces between IMIS and other systems that will not be replaced by IMIS.

C. Telecommunications

19. Given the distributed nature of the system, the importance of a good telecommunications network becomes evident. The transfer of data between Headquarters and other duty stations as well as within one duty station is predicated on a telecommunications infrastructure that is stable, reliable and world-wide. The Secretary-General's report on the status of technological innovations in the United Nations submitted to the General Assembly at its current

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session (A/45/478) refers to the need for fast and reliable networks for the transfer of data and information from one office or duty station to another, both for administrative and substantive activities. Therefore, the installation of the appropriate communications network will be given priority consideration in 1991. The hardware will also be installed on a phased basis through 1992. It is crucial that the equipment be in place and well tested before the IMIS software is installed at each duty station.

D. Training

20. An essential task in the successful implementation of IMIS at the end of the development stage, besides data conversion, is the training of staff on the new system. This stage must be timed early enough to ensure that it is completed when the software is installed. Training is virtually a project in itself, which will be incorporated into the overall project in a phased manner.

III. BENEFITS TO BE DERIVED FROM IMIS

A. General considerations

21. The analysis of benefits outlined in the present report is based on four general assumptions. First, the current operational environment in each office and location serves as the basis for the description of benefits. Secondly, these descriptions are based on the premise that the current procedures will be revised where possible prior to final implementation to take full advantage of IMIS capabilities. Thirdly, the potential benefit will be greater in locations that will be moving from manual systems to IMIS than in locations that already have some degree of system automation. Finally, the benefits are based on expected performance once IMIS is fully implemented and when all relevant staff are making full use of IMIS features. This typically occurs about six to nine months after implementation.

22. Currently, the information systems that support the administration and management functions at the United Nations suffer from a number of shortcomings that were identified in the report of the Secretary-General proposing IMIS (A/C.5/43/24), including duplication and inaccuracy of data, inadequate central control over data, incomplete data, limited management reporting capabilities and a lack of integration between administrative systems. The existing systems evolved over the years and were sometimes linked to each other more to meet individual functional requirements than to support system integration. As a result, the United Nations current administrative and management systems are marked by redundant data entry, an inability to compile consistent data for managing, planning and decision-making and time-consuming reconciliations between systems and processes.

23. The capacity of the United Nations administrative and management information systems to support the growing number of activities mandated by the General Assembly, such as large-scale peace-keeping operations, is severely strained. IMIS

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is a key component in the reform efforts of the United Nations to ensure that the future activities of the United Nations are carried out with all the efficiency and effectiveness required by the mandates and priorities legislated by the General Assembly.

24. The requirements most critical to the success of IMIS in meeting the United Nations information system needs are as follows:

(a) A custom-built application system that addresses the unique needs of the United Nations Secretariat;

(b) A powerful and flexible data retrieval capability that allows the United Nations to produce ad hoc reports in response to management and legislative requests;

(c) An integrated, world-wide, relational data base that implements a consistent set of coding structures and values throughout the Secretariat;

(d) User-oriented software and development tools that ensure that the system is easy to use;

(e) Capture of the data in the system from one source to prevent duplication of effort and inconsistency of data;

(f) Security of access to data and processes to protect the system from unauthorized use.

25. The IMIS system design that is being developed incorporates all these requirements and has the following characteristics:

(a) Full integration among all application areas;

(b) Data bases independent of the application programmes;

(c) Applications on-line to authorized users;

(d) Extensive information-reporting capabilities;

(e) Automatic creation and transmission of electronic documents;

(f) Controlled access and audit trail functions to ensure security and integrity of the system and data;

(g) Text and data-processing capabilities;

(h) Tools to support development, maintenance and operation of the system.

26. Benefits will, as noted, be realized in three ways. First, the United Nations will gain improved management control over its financial and staff resources. Secondly, the United Nations will improve the capacity and quality of its

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administrative service delivery with little or no incremental staffing cost. Thirdly, the United Nations will be able to achieve actual financial benefits through IMIS implementation.

27. The design of IMIS provides features that will bring benefits across functional areas (budget, finance, human resources and general services). Some of the main features are listed below:

(a) Timely and accurate reporting: Management control of resources and efficient allocation of those resources have been hampered by lengthy delays in information processing and inconsistent data collection and reporting. IMIS will provide timely and accurate reporting through its integrated data-base approach and on-line query facilities. It will simplify the production of management information, thus increasing the time that can be spent on more substantive activities;

(b) Integrated coding structure: IMIS uses a comprehensive, yet very flexible, transaction coding structure that captures all the data required to perform general ledger, budget, treasury and financial project or programme management functions. Furthermore, it facilitates the accounting for other activities that have financial implications such as salary advances, travel claims, etc. This structure will significantly reduce the amount of redundant data entry and manual transcription of codes, accommodate the reporting requirements of separate United Nations funding sources and enable comparative management information to be readily produced;

(c) On-line sufficient funds editing: Budget balances by allotment account will always be up to date and, as requisitions, purchase orders and invoices are processed, IMIS will interactively check for the availability of funds. Furthermore, users will be able to query, on an ad hoc basis, the available balances in an allotment account or project before processing, certifying or performing a related task;

(d) Total integration of personnel processing and payroll: Any change to an individual's personnel record is reflected in the payroll subsystem. IMIS has been designed so that personnel actions will be entered once and processed through payroll rather than repeatedly rekeyed. It also means that information on staff entitlements is entered only once system-wide and stored for subsequent processing;

(e) Retroactive processing: IMIS has the capability to process retroactively a transaction to an individual, calculate the "correct" entitlements and salary package for the effective period and disburse the appropriate payment. Additionally, IMIS can retroactively apply changes to entitlements or salary tables to yield new compensation values for affected individuals for that period in time. This retroactivity process takes advantage of the integration between the human resources and payroll functions to increase the efficiency of the calculations;

(f) Simulation processing: IMIS has a simulation function that allows for the calculation of hypothetical entitlements and changes to existing entitlements or their values without affecting the real data base. This feature permits the

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payroll to be run in simulation mode to project the financial implications of simulated entitlements;

(g) Costing of posts: The budget subsystem allows a post to be costed using the simulation functions in the IMIS entitlements/payroll functions to calculate hypothetical entitlements and staff assessments. This feature allows for the price estimation of posts using current payroll information. It has the advantage of yielding the most accurate projections of costs without expending significant effort;

(h) Accurate staffing tables: IMIS provides current and accurate information on all posts, their status (e.g. blocked, frozen, loaned), their incumbents and their funding sources by location, organizational unit, mission, fund, etc. This information will not only show current information but will also allow the user to view historical and prospective changes to the staffing tables. This accuracy will facilitate the ability to answer queries, to analyse the geographic distribution of posts at any point in time, to produce organizational charts detailing the lines of responsibility among posts and to produce statistical and management information on the composition of the staff;

(i) Consistent tracking of activities: IMIS tracks the progress of activities and their associated steps as those activities are being performed. These activities can be standardized or customized to a particular process in a particular location (e.g., recruitment of a short-term translator for a conference at a regional commission). This feature is a powerful tool for monitoring and managing processes and improving the overall efficiency of the work;

(j) Comprehensive and integrated personnel data base: The major feature of the IMIS human resources subsystem is the completeness of the data base and its total integration with post information, entitlements data, payroll processing, travel services and classification. This comprehensive data base captures demographic, dependent/beneficiary, work, contractual, documentation (visas, laissez-passer), non-confidential medical and performance information. This design feature enables authorized users to have easy, on-line access to current and historical information on a person before taking an administrative action;

(k) Consistent application of entitlements across staff categories and locations: The Staff Rules and Regulations specifying the entitlements and benefits applicable to the various staff will be embedded in IMIS and tightly controlled by authorized individuals. As such, the consistent administration of entitlements will be considerably facilitated for every individual within the system;

(l) Use of standard letters, notes and offers: IMIS will contain the standard letters used by the various organizational units in performing many of the functions of IMIS. These letters will be available for automatic generation or customization before issuance. This should greatly reduce the work-load and the printing/photocopying of new forms. It also increases the flexibility of the types and contents of letters mailed;

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(m) Automatic issuance of notices and reminders: IMIS will generate notices to organizational units, alerting them to perform an activity such as a performance evaluation, medical certification of sick leave, etc. If the organizational units do not respond, IMIS will generate a follow-up reminder. This management feature of IMIS will alleviate the burden now placed on individuals to keep track of delays and notify others to initiate activities;

(n) Improved coding techniques: Currently, the United Nations financial coding structure mandates the inclusion of all coding elements within the financial code (e.g., General Ledger Code, Allotment Code, Project Code, etc.) to execute a financial transaction. In IMIS, there will be a distinction between primary coding elements and secondary coding elements. Primary coding elements are those that are essential to the recording of a financial transaction - i.e., a fund, organizational unit, account, programme, activity, or project; secondary coding elements - i.e., bank code, location code, donor code - are associated with primary elements and used to facilitate reporting. This coding technique reduces the elements that the user needs to be input directly. It also accommodates easily new reporting needs;

(o) On-line code validation: IMIS will interactively validate accounting codes as transactions are processed. As a result, errors will be detected immediately and corrections applied before transactions are processed. This facility will eliminate the current practice of correcting errors after the transaction has been processed. The current practice places the entire burden of error correction on the Accounts Division rather than the individual closest to the details of the transaction; furthermore, it requires the Accounts Division to spend effort and time investigating the causes of the error before corrections can be made. The current practice hinders the preparation of timely financial management information;

(p) Capability to provide performance measures: IMIS has the capacity to estimate the length of time it requires to perform certain activities. This feature enables managers to compare the estimates with actual practice and revise the estimates as appropriate. It also alerts managers to problem areas and ineffective processes.

B. Benefits for the management of human resources

28. In addition to the benefits mentioned above which apply across functional areas, IMIS will bring the following specific benefits in the human resources area:

(a) Improved management and administrative control over personnel actions: Because data in IMIS will be consistently entered and applied, the Organization will be able to examine the transactions it performs in administering staff, by category, and take appropriate management action relative to each specific transaction. Over time, this management data will show trends in transactions, allowing the United Nations to manage the associated transactions more efficiently and effectively;

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(b) Individual skills inventory: The IMIS skills inventory of United Nations staff and candidates includes an individual's functional/occupational skills, language capabilities, educational background, training, non-United Nations work experience, publications and honours. Because of the total integration of the data base, this feature allows users to perform world-wide roster searches based on very specific criteria required to fill a post or to develop career plans to meet the Secretariat's evolving requirements;

(c) Facilitation of appointments: The generation, compilation and calculation of all the conditions of service for the various categories of personnel are activities that currently consume staff time and effort. IMIS will determine, based on an individual's appointment, duty station, grade, etc., a person's entitlements package, calculate the remuneration and produce the relevant offers of appointment. These features should shorten the time needed to process an appointment;

(d) Integration of post with job descriptions and with staff: Essential to the IMIS design is the ability to associate the job descriptions with the incumbents and to infer possible skills that the individuals may have acquired while occupying a particular post/position. Furthermore, it also provides information on the types of functions being performed within the United Nations and the shifts in work-loads over time;

(e) Vacancy projections: Through the post management subsystem, current and future vacancies can be identified by location or organizational unit. This facility will assist in planning recruitment and placement programmes, identifying posts with special requirements, initiating specific recruitment activities earlier and managing the loan of posts;

(f) Standardization of job descriptions: Through IMIS, users may create or use standard job descriptions for posts. This will eliminate the time users spend writing new job descriptions for conventional posts, increase the consistency of classifying posts and assist in the overall classification exercise;

(g) Reduced processing time for personnel actions: IMIS will replace the current manual process of recording personnel actions on forms and forwarding them from organizational unit to organizational unit around the world for action. In the future, all personnel actions will be entered directly into IMIS. Although the equivalent of these forms will need to be generated at the conclusion of the transaction, authorized staff in the various offices will have access to the same information and will therefore be able to take the necessary action immediately;

(h) On-line monitoring of attendance: IMIS captures and merges the overall United Nations calendar, the organizational unit calendar and an individual's personal calendar to provide a comprehensive picture of the anticipated work hours and days of an individual. Against this calendar, absences and leaves are recorded and verified. This feature provides an accurate record of the individual's attendance, incorporating past, current and future leave schedules;

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(i) On-line entitlements balances: For each staff member, IMIS will provide information on the individual's entitlements, the available balance and the historical use of the entitlements. This feature will assist administrative and personnel staff in tracking the benefits due to a person and answering questions pertaining to an individual's entitlements package;

(j) Integration of insurance and personnel processing: The integration of personnel and insurance carrier information within IMIS will facilitate the capture and verification of data on individuals prior to the establishment of coverage. This feature will also yield management reports which indicate the type of coverage by staff category, the number of staff with dependants and their coverage, etc., and users will be able to reconcile insurance carriers' invoices with the actual staff coverage.

C. Benefits in finance, accounting and budget

29. The United Nations overriding goal in the area of programme planning, budget and finance is to gain control over a precarious financial situation. IMIS will be responsive to the array of United Nations medium-term plan objectives in this area including strengthened financial control and asset management through automation and timely collection and processing of financial information and reports. More specifically, the following benefits have been identified:

(a) Improved treasury management: IMIS will provide the United Nations with a management information system that can increase its control over banking relationships and cash management operations. Through this, the United Nations can gain real benefits by improving investment earnings, reducing bank service charges and generally improving its utilization of the international banking system. The system will provide, on line, the up-to-date banking and cash account information that is required to implement the advanced treasury management techniques that would allow the United Nations to realize substantial benefits;

(b) Automated currency conversions: The global operations of the United Nations require it to operate in numerous currencies. Currently, the United Nations converts manually all financial transactions into its official reporting currency, the United States dollar. This process is time-consuming and is prone to calculation and data entry error. More importantly, transactions are not retained in the denomination that is required to facilitate currency management. IMIS provides for the entry of all transactions in the currency of denomination and the simultaneous automatic conversion of the amount of the transaction into the United Nations reporting currency. Concurrently, IMIS stores the transaction in the currency of denomination to provide for the automatic functions that are currently performed manually or not performed at all, namely identification of exchange rate exposure, cash flow and requirements by currency and revaluation of obligations, payables and receivables and generation of translation entries;

(c) Up-to-date cash requirements by bank and currency: IMIS will be capable of presenting treasury managers with aging reports of cash requirements by currency and by bank. Currently, the Treasury is presented with a listing of disbursements

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to be made. The disbursements are made based upon historical analysis of cash requirements. Under IMIS, the Treasury will be able to schedule and thus manage disbursements in a way that maximizes earnings on short-term investments and minimizes exchange rate losses or maximizes gains;

(d) Automatic bank statement reconciliations: The United Nations currently maintains a large number of geographically dispersed bank accounts. Owing to bank-processing timing differences, bank statement reconciliation is currently manual, time-consuming and potentially incomplete. IMIS will provide the United Nations with the capability to better control its cash resources through the pooling and increased management of funds in selected accounts;

(e) Consolidated Member State account analysis: Because of the current method of storing accounts receivable information, it is extremely difficult for the United Nations to prepare a timely consolidated report of charges and payments to the account of a Member State. IMIS integrates the processing of all accounts receivable information for Member States regardless of fund and provides an on-line presentation of charges and payments to the account of a Member State or any entity for which such transactions have been processed. This consolidation of account information applies equally well to staff members and outside agencies;

(f) Electronic inter-office voucher (IOV) processing: IMIS provides for the on-line processing of IOVs. Offices that authorize another office to incur expenses on their behalf will record all the pertinent information in the system including a reference number. The office requesting reimbursement for a given amount will merely refer to that reference number. This will automatically maintain the ledgers of the authorizing office, the executing office and the consolidated ledgers at Headquarters. The receiving office will not be required, as is currently the case, to spend time ascertaining to which office, account and object of expenditure the IOV refers. This will eliminate not only costly transcription errors but also one of the major reasons for the current delays in the closing of monthly, annual and biennial accounts;

(g) Automatic creation of subsidiary ledgers: Currently, the United Nations creates and maintains its subsidiary ledgers manually. This process is time-consuming and is subject to data errors. IMIS will automate this process, reduce manual effort and improve data integrity;

(h) Multi-organization payroll processing: IMIS is designed to process the payroll of all or any duty stations and/or organizations associated with the United Nations, accounting for unique calendars including holidays, pay dates, etc. Additionally, IMIS accommodates multiple pay frequencies by organization and duty station. This flexibility provides for continuity of payment and reporting as organizational units and staff members move within the Secretariat;

(i) Support for local currency requirements and conditions: IMIS will handle salary scales and entitlement values in all currencies and make payments in the appropriate currency. Furthermore, it will give users in New York and other locations, the ability to apportion payments into the appropriate multiple payment currencies;

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(j) Budget creation: IMIS will allow local users to input data into any version of the budget on line and transmit it electronically to the Budget Division for review and adjustment. To support this activity, IMIS will have budget instructions available on line for users for reference during this process. This facility will help to ensure consistency of budget preparation for programmes, projects and peace-keeping missions, as well as aggregate reporting;

(k) On-line budget validation: Validation mechanisms that compare requested resources to budget targets proliferate throughout the design of the budgeting functions within IMIS. Such mechanisms assist users in effectively formulating their requests and reduce the effort associated with manual reviews by budget officers. For example, when the budget amounts are being entered, they will be validated against budget ceilings and the predefined growth factors established in the budget outlines; and when extrabudgetary funds are requested, the resource amounts and any estimated entitlements will be checked against existing fund balances to determine if a request may be satisfied;

(l) On-line task management: IMIS encompasses a work planning subsystem that allows managers in the field to do active task planning and to better control their resources by enabling users to associate tasks with their required resources and their correct appropriation and allotment accounts. Furthermore, it allows for task management and tracking of performance measures to be done on line at the activity level;

(m) Integrated budget reporting: This feature permits ad hoc budget reports to be generated on line, using data pertaining to funds, organizational units, accounts, programmes, projects or any other activities associated with budget lines. The built-in integration of the accounting and the budget functions in IMIS greatly facilitates the generation of up-to-date reports that show the actual spending of allotted amounts in comparison to budgeted amounts. In addition, reports can be generated that show the efficiency of various activities;

(n) Electronic assessment letter processing: IMIS will provide for automated processing of the letters to Member States regarding assessments and for the automatic update of accounts when payments are made. Through IMIS, assessment account balances are monitored and the relevant data items automatically transferred into the assessment letter. This design will eliminate the need for manual calculation of contributions balances and production of assessment letters;

(o) Flexible costing: IMIS will contain standard salary costs, conference costs and travel costs which individuals may use for pricing purposes. Additionally, IMIS allows for users to add local cost tables to support unique requirements. For subsequent use, these specific entries can be saved as part of the costing functions. These features enable local duty stations to provide more rigorous budget justification.

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D. Benefits in general services

30. In the general services area, the growing operational demands placed on the Secretariat have an enormous impact on the United Nations ability to maintain a high degree of operational readiness and capability to mount new peace-keeping operations and other missions. IMIS will be highly effective in integrating and standardizing data and text-processing capabilities in the areas of procurement, inventory and travel-related operations that are not currently supported by integrated computerized systems. Specifically, IMIS will provide the following benefits:

- (a) Elimination of duplicate procurement data entry: Through the IMIS integrated data base, purchasing requests will be entered once and will flow through the prerequisite, requisition, purchasing and receipt processes without re-entry or transcription of data. This will not only save data entry resources but will also ensure a greater degree of data integrity since there will be fewer opportunities for data entry errors;
- (b) Volume discounts through grouping of purchase orders: Procurement personnel are currently hampered in their ability to determine the types and timing of purchases being made by other offices and therefore have difficulty in gathering the required information to obtain maximum volume discounts through the grouping of purchase orders. IMIS will capture information beginning at the prerequisite stage and will allow a central procurement office to combine and group purchase orders in ways that will both meet substantive office requirements and generate volume discount savings;
- (c) Elimination of manual pre-encumbrance ledgers: Currently, allotment accounts are not updated frequently enough to satisfy the information needs of the procurement staff or of the administrators initiating the procurement requests, nor do they have the facility to show potential future commitments in the form of pre-encumbrances. Therefore, many offices are maintaining their own ledgers either manually or on microcomputer. On-line updating of accounts will eliminate the need to maintain these ledgers outside IMIS;
- (d) On-line tracking of requisition status: There can often be long delays between the requisition of material and delivery. As a result, it is very easy to lose track of a requisition. The IMIS tracking system can be used to monitor a requisition or purchase order throughout its life-cycle until delivery;
- (e) Improved accuracy of annual purchasing plan: Currently, procurement personnel often overobligate funds to ensure that sufficient funds are available when the invoice arrives. This results in inaccurate information relating to available funds and inefficient use of financial resources. On-line editing of sufficient funds and updated account information will permit more flexible purchase planning and lead to improved utilization of funds;
- (f) Statistical summary of United Nations purchases by Member State: From time to time, legislative bodies request reports summarizing United Nations purchases by country of origin. Currently, gathering these data is a

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time-consuming process and there is the possibility of inaccuracies. The automated IMIS procurement system will capture Member State vendor information and will enable this and similar reports to be produced automatically in response to a simple inquiry;

(g) Reduced procurement, travel and transport transaction cycle times:

Procurement, travel and transport transaction cycles require a great deal of manual processing at present. IMIS will shorten these cycles by automating manual processes where possible. IMIS will also help to shorten cycles by providing information to allow for faster management decisions;

(h) On-line travel information: An important United Nations goal is to provide administrative support for an increasing work-load arising from General Assembly mandates. The IMIS on-line travel information feature will reduce the amount of time staff must spend in planning their itineraries. It will also assist in determining the lowest fares for the particular journey;

(i) Improved property management and control: The United Nations will gain the ability to track valuable and reusable items. IMIS will track all inventory items and give management the ability to reduce overspending on capital items by locating and sharing these resources among offices.

IV. CONCLUSION

31. The goals of the reform process mandated by the General Assembly include greater control over the United Nations administrative budget while increasing the quality of services provided. The Secretary-General, in proposing IMIS, has addressed these objectives. In particular, he has stated that IMIS will provide management with a comprehensive, timely and accurate view of United Nations assets and liabilities and give the Organization the capacity to handle an increasing work-load while containing costs, simplifying procedures, improving information flow, reducing delays through improved delegation of authority, and achieving a greater level of accountability.

32. The extensive list of benefits that the United Nations expects to derive from the implementation of IMIS addresses a number of specific recommendations by the Group of High-level Intergovernmental Experts to Review the Efficiency of the Administrative and Financial Functioning of the United Nations ^{1/} endorsed by the General Assembly in its resolution 42/211. The timely and accurate information on staff and on posts will facilitate the implementation of a number of recommendations relating to personnel (recommendations 46-49). It will provide for the implementation of recommendation 42 on the need for clear and transparent rules. IMIS will undoubtedly bring a large measure of coherence in the administration of staff rules since the entitlements will be accessible on line to all those with authority to process personnel actions. Most of all, the need to increase efficiency and achieve cost-effectiveness of administrative services and to avoid duplication of work as mandated in recommendation 30 is being addressed in the design of IMIS as described above.

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33. It should be noted that large, one-time savings are not typically generated when an organization automates or electronically integrates its administrative functions. Generally, these benefits lie unrealized in the form of unused capacity until the organization's administrative demands increase over time. Therefore, the benefits of IMIS will be realized by the United Nations over the lifetime of IMIS in the form of postponed appointments or eliminated staffing needs as the demand for administrative services grows.

34. The benefits of IMIS described in the present report can and undoubtedly will be achieved. As indicated in section II, the project must first go through a number of stages in the time-frame for the first phase approved by the General Assembly, i.e. three and a half years. It is therefore expected that the system will become operational in 1993.

Notes

1/ Official Records of the General Assembly, Forty-first Session, Supplement No. 49 (A/41/49).
