UNITED
NATIONS

E

Economic and Social
Council

Distr.
GENERAL

E/CN.4/1990/39
31 January 1990

Original: ENGLISH

COMMISSION ON HUMAN RIGHTS
Forty-sixth session
Item 18 of the agenda

EFFECTIVE FUNCTIONING OF BODIES ESTABLISHED PURSUANT TO UNITED NATIONS HUMAN RIGHTS INSTRUMENTS

Report of the Secretary-General

GE.90-10195/1492B

1. The meeting of Chairpersons of human rights treaty bodies, which was held in Geneva in October 1988, recommended, as a matter requiring urgent attention, that a task force on computerization be appointed to explore the costs and benefits of computerizing the work of those bodies. The report of that meeting suggested, inter alia, that the establishment of a data base of information could reduce unnecessary work, increase efficiency and assist States parties in their own endeavours and could in the long term lead to considerable savings in money and staff time.

2. Pursuant to Commission on Human Rights resolution 1989/46 of 6 March 1989, the Secretary-General appointed a task force composed of a limited number of experts, including one or more experts in informatics to prepare a study on computerizing, as far as possible, the work of the treaty monitoring bodies in relation to reporting, with a view to increasing efficiency and facilitating compliance by States parties with their reporting obligations and the examination of the reports by the treaty bodies. The Task Force held its first meeting in Geneva from 26 to 30 June 1989 and finalized its study at its second meeting, also held in Geneva, from 11 to 12 January 1990. The Centre for Human Rights co-operated closely with the Task Force in the preparation of the study.

3. In that same resolution, the Commission requested the Secretary-General to report to it at its forty-sixth session on the results of the work of the Task Force.

4. The results of the work of the Task Force are reflected in the annexed study, which the Secretary-General is pleased to submit herewith for consideration and appropriate action by the Commission.

ANNEX

Study on computerizing the work of the human rights treaty monitoring bodies

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INTRODUCTION

A. Mandate

1. The Commission on Human Rights in its resolution 1989/46 of 6 March 1989 requested the Secretary-General to consider appointing, within existing resources, a task force composed of a limited number of experts, including one or more experts in informatics to prepare a study on computerizing, as far as possible, the work of the treaty monitoring bodies in relation to reporting, with a view to increasing efficiency and facilitating compliance by States parties with their reporting obligations and the examination of the reports by the treaty bodies. The Commission also recommended that the Task Force should prepare its study in close co-operation with the Centre for Human Rights and the persons chairing the monitoring bodies and requested the Secretary-General to extend all possible assistance to it to enable it to fulfil its mandate as soon as possible and to report to the Commission on Human Rights, at its forty-sixth session, on the results of its work.

B. Composition

2. The Secretary-General appointed the following members of the Task Force:

Mr. Philip Alston	(Australia)	Rapporteur of the Committee on Economic, Social and Cultural Rights
Mr. Claudio Lombardi	(Italy)	Computer expert
Mrs. Christiane Lübbe	(German Democratic Republic)	Computer expert
Mr. Fausto Pocar	(Italy)	Rapporteur of the Human Rights Committee
Mr. Bjørn Stormorken	(Norway)	Computer expert
Mr. S. Amos Wako	(Kenya)	Member of the Human Rights Committee

3. In addition, the following experts were invited to contribute to the work of the Task Force:

Mr. Alain Assouad	Chief, Electronic Data Processing Unit, United Nations Office at Geneva
Mr. Jean-Pierre Chardin	Chief, Distribution and Sales Section, United Nations Office at Geneva

Mr. Bernhard Graefrath	Chairman, International Law Commission
Mr. Hans Thoolen	Chief, Centre for Documentation on Refugees, Office of the United Nations High Commissioner for Refugees

4. At its first session, the Task Force appointed Mr. Philip Alston as its Co-ordinator.

C. Sessions

5. The Task Force held its first session in Geneva from 26 to 30 June 1989 and its second session in Geneva from 11 to 12 January 1990.

6. The agenda for the first session submitted by the Secretary-General was as follows:

1. Opening of the meeting by the representative of the Secretary-General
2. Adoption of the Agenda
3. Mandate of the Task Force
4. Consideration of relevant documentary materials
   - (a) Categories
   - (b) Volume
     - (i) existing backlog
     - (ii) annual load
   - (c) Priorities
5. Utilization of the data base
6. Organizational framework
7. Plan of action

7. The agenda for the second session was as follows:

1. Review of technical reports prepared by expert consultants
2. Consideration of proposed system
3. Preparation of the final report of the Task Force

8. The following documentation was made available to participants:

Provisional agenda and annotations (HRI/MISC/1989/1)

Excerpts from the Report of the Meeting of Chairpersons of human rights treaty bodies convened pursuant to General Assembly resolution 42/105 of 7 December 1987 (A/44/98)

Compilation of the general guidelines elaborated by the various human rights treaty bodies (A/40/600/Add.1)

Establishment of an integrated management information system (A/C.5/43/24)

Progress report on the pilot project on optical disk technology (IAMLADP/1989/R.12)

Consultancy report by Mr. Stormorken on an information system for international human rights treaty bodies

Consultancy report by Mr. Lombardi on relevant existing and prospective information systems

9. During the course of the first session, members of the Task Force observed the operation of the following projects: (a) the pilot project on optical disk technology being conducted by the Publishing Service of the Conference Services Division of the United Nations Office at Geneva; (b) the Centre for Documentation on Refugees of the Office of the United Nations High Commissioner for Refugees; and (c) the computerized data base in the Centre for Human Rights relating to the work of the Commission on Human Rights Working Group on Enforced or Involuntary Disappearances.

D. Tentative arrangements for concluding the work of the Task Force

10. At the end of its first session, the representative of the Secretary-General was asked to explore the possibility of obtaining the services of two expert consultants to prepare separate technical reports on the following topics: (a) detailed review of the functions and accessibility of existing and prospective data bases administered by the international organizations which are of relevance to the work of the treaty bodies; (b) possible modalities of establishing and operating an electronic data base for the work of treaty monitoring bodies in relation to reporting. These two reports would be considered by the Task Force at its second session and integrated, as appropriate, into the final report. Subsequently, the Governments of Italy and Norway agreed to make available the services respectively of Mr. Lombardi and Mr. Stormorken to prepare the technical reports requested by the Task Force.

11. In preparing his report, Mr. Lombardi held discussions with officials of the Computing Centre at United Nations Headquarters and with a variety of other relevant officials. He also interviewed officials at the United Nations Office at Geneva, the Food and Agriculture Organization in Rome and the European University Institute in Florence. Mr. Stormorken, in the preparation of his report, held consultations with officials of the International Computing Centre, Geneva and of the International Labour Office Electronic Data Processing Department.

I. THE EVOLVING TREATY REGIME AND THE NEED FOR INNOVATION TO COPE WITH THE EXISTING AND POTENTIAL WORKLOADS

12. The meeting of Chairpersons of human rights treaty bodies which met in Geneva in October 1988 recommended, as a matter requiring urgent attention by the General Assembly, that a task force on computerization be appointed "to explore the costs and benefits of computerizing the work of the Committees" (A/44/98, para. 82). The report of that meeting suggested several benefits that might flow from establishing a data base of information relevant to the work of the treaty bodies. In the first place, the ability of members of the Committees to identify and synthesize the diverse sources of information of direct relevance to their work would be greatly enhanced. It was also suggested that computerization would "reduce unnecessary work, increase efficiency and assist States parties in their own endeavours" as well as result in considerable savings in money and staff time in the long term (A/44/98, para. 65). The recommendation of the meeting of Chairpersons was subsequently reiterated by the Secretary-General in the "in-depth evaluation of the human rights programme" prepared for the Committee for Programme and Co-ordination in 1989. The Secretary-General noted that all of the relevant data "could be fed into a data base, updated periodically as required, and made available to each of the treaty bodies when it undertakes consideration of a report on the implementation of the relevant instrument by the reporting State" (E/AC.51/1989/2, para. 118).

13. Before examining (in the following section) the various data base needs and the ways in which such a data base could be effectively used by the Secretariat, the treaty bodies, States, other United Nations bodies and potential users, it is appropriate to provide a brief overview of the factors which argue in favour of computerizing as much as possible the relevant data.

14. The first factor concerns the stresses and strains which have in recent years impeded the effective functioning of the treaty bodies. These problems have been analysed in some depth in a "Study on long-term approaches to enhancing the effective operation of existing and prospective bodies established under United Nations human rights instruments", prepared in response to General Assembly resolution 43/115 and submitted to the General Assembly at its forty-fourth session and to the Commission on Human Rights at its forty-sixth session (A/44/668). Briefly stated, from the perspective of the treaty bodies, they include: long-term delays in the submission of States parties reports and what amounts to a virtual failure to report at all by a number of States under most instruments; sometimes lengthy delays in the consideration of States reports by some of the treaty bodies due to inadequate available meeting time, cancelled or shortened sessions or other pressures; continuing uncertainty as to whether sufficient funds will be available to enable some of the treaty bodies to meet; inadequate basic Secretariat services especially in the case of the Committee on the Elimination of Discrimination Against Women; the inability of the Secretariat to provide the level of legal and analytical research and other back-up services which could enhance the effective functioning of the various Committees; and problems arising from the need to promote co-ordination among the work of the various bodies.

15. In addition, it is widely recognized that the increasing number of ratifications and accessions to the principal instruments and a continuing increase in the number of reports and communications being submitted to the relevant bodies has added to the burden placed upon the Secretariat as well as States that are parties to a variety of instruments.

16. In the future, existing problems will be exacerbated in at least two respects. In the first place, the extent and scope of the challenges confronted by the treaty bodies in ensuring the maintenance of present levels of functioning will increase significantly. In essence, this is a result of accumulated experience, evolving procedures and the simple passage of time. Thus, for example, in the examination of reports, the Human Rights Committee is now beginning the examination of third periodic reports while the Committee on the Elimination of Racial Discrimination is already considering tenth periodic reports by some States parties. Similarly, the Committees are continuing to become more sophisticated in their work through the refinement of reporting requirements, the adoption of a growing number of general comments and of final views (on communications) which contain significant elements of general relevance for the evolving jurisprudence under the instruments in question. These developments greatly increase the demands placed on the Secretariat, on the Committee members and on States parties in terms of sheer volume of documentation, the complexity of the issues and the difficulties of co-ordination.

17. In the second place, existing problems will be exacerbated in the future by the adoption of at least two major additional instruments in the course of this and the next year. Both the Convention on the Rights of the Child and the draft Convention on the Rights of Migrant Workers and their Families provide for reporting obligations by States parties and the establishment of new supervisory bodies. In the medium and long term there will almost certainly be additional instruments adopted and possibly new committees established. In addition, the number of States parties to existing instruments continues to rise steadily.

18. This general overview of the current status and probable evolution of the work of the treaty bodies clearly demonstrates the rapid escalation in the document handling and information processing capabilities that will be needed in order to ensure the effective functioning of the treaty bodies in the years ahead. It is clear that some degree of electronic data processing is indispensable if the system is not to collapse under the weight of the increasing demands for information which it continues to generate, taking into account, in particular, the continuing limitations placed on staffing resources of the Secretariat.

19. This conclusion is, of course, entirely consistent with the general evolution of the technological environment. As a recent report noted, "the whole philosophy of the system [proposed for dealing with United Nations documentation] is based on the idea that computers will become as common in the office environment in the near future as telephones today". 1/ Nevertheless, the current situation within the United Nations in this regard leaves much to be desired. Thus the Secretary-General has recently stated:

> "In performing its administrative functions, the United Nations operates without much of the sophisticated automation aids available in today's world. Information systems development has not kept up with the state of the art or the needs of the Organization" (A/C.5/43/24, para. 5).

20. It is clear from the survey of existing facilities undertaken by the Task Force that this assessment applies equally, if not even more strongly, to the needs of the treaty bodies. Moreover, as discussed below (section III infra), the data base activities which have already been undertaken by other international organizations working in human rights-related areas are considerably more advanced than those which have so far been undertaken in connection with the work of the treaty bodies. 2/

21. An additional argument in favour of computerization is that much of the documentation currently being produced for the treaty bodies is available in word processed form and could thus be fed directly into a data base at very low cost. The failure to establish such a data base so far thus represents a waste of potentially readily available information resources.

Relevance of the present report to the overall United Nations human rights programme

22. The primary focus of the work of the Task Force on Computerization relates to "the work of the treaty monitoring bodies in relation to reporting". 3/ While at first glance it might seem that this mandate embraces a relatively limited part of the overall activities of the United Nations in the field of human rights, more detailed consideration confirms the fact that the activities of the treaty bodies in relation to reporting are integrally linked to the overall human rights programme. Thus in its resolution concerning the creation of the Task Force, the Commission on Human Rights specifically recalled "the many resolutions of the General Assembly, the Economic and Social Council and the Commission on Human Rights affirming the importance of the effective implementation of United Nations instruments on human rights in promoting universal respect for, and observance of, human rights and fundamental freedoms". 4/ The impact which the work of the treaty bodies can have on the overall programme was well illustrated in comments made by the Director-General of the United Nations Office at Vienna in opening the eighth session of the Committee on the Elimination of Discrimination Against Women:

> "She said ... that the reports of the sessions of the Committee and of the States parties were presently among the main sources of information for the preparation of documents for the Commission on the Status of Women and she emphasized the multiplier effect of the Committee's work in the definition of global policies" (A/44/38, para. 8).

23. By the same token, the work undertaken by the General Assembly and other United Nations organs such as the Commission on Human Rights, and the Sub-Commission on Prevention of Discrimination and Protection of Minorities is of considerable relevance to the work of the treaty bodies. This applies as much to the studies carried out on particular situations as to those dealing with the more theoretical aspects of the interpretation and application of specific rights.

24. The Task Force, therefore, considers that any activities undertaken in relation to the work on reporting done by the treaty bodies will be of direct and considerable relevance to the entire human rights programme. As a result, every effort must be made to ensure as far as possible, the compatibility of any system designed to service the specific needs of the treaty bodies with the broader needs of the programme.

II. SPECIFIC DATA BASE NEEDS AND THEIR POTENTIAL USERS IN CONNECTION WITH THE WORK OF THE TREATY BODIES

A. Needs and functions served by electronic information retrieval

25. A variety of needs may potentially be satisfied by the establishment of a data base relating to the work of the treaty bodies. In its most basic form it provides ready access to the text of documents and facilitates rapid identification not only of the relevant documents but also the specific parts which are required. A data base serves basic administrative functions such as signalling due dates or preparing relatively standard-form correspondence. Basic reference information can also be provided such as updated lists of instruments or ratifications in a given field, or current bibliographies. More complex research tasks can also be performed such as identifying all the relevant documentation dealing with a specific issue or a particular provision of one or more of the relevant treaties.

26. In general terms, therefore, the establishment of a data base can contribute to the work of the treaty bodies in at least three separate ways. Firstly, it can enable the efficient production of large bodies of information including both text and statistics. Secondly, it enables the maximum utilization of available administrative support by facilitating a more even spread of work over time. Thirdly, it provides crucial support in "problem-solving" thus enabling a comprehensive and rapid response to be made to requests for legal research support by members of the treaty bodies, States parties or others. Thus while the first two functions contribute to increased efficiency, the third provides the potential for a considerably enhanced capacity to respond to the evolving needs of the treaty bodies.

B. Potential Users

27. Initially, the Secretariat and, in particular, the International Instruments Section of the Centre for Human Rights, will be the primary user of the electronic data base in its day-to-day operational functions relating to the provision of substantive services to the expert members of the treaty bodies and to States parties. To some extent, States parties and individual experts may also wish to have direct access to the data base. In addition, the members of the other United Nations bodies concerned with human rights issues and the relevant parts of the Secretariat which service those bodies would make considerable use of the data base. Eventually, access to the data base could be provided to such potential users as Member States of the United Nations in general, other international organizations, non-governmental organizations, academic researchers and interested members of the public.

C. Listing of specific needs

28. On the basis of a thorough review of the type of activities undertaken by the treaty bodies, the Task Force identified the following list of specific needs. The list is given in general order of priority and some indication is given of the types of functions served by the availability of the information in question. The list does not purport to be exhaustive or definitive.

(i) Texts of the relevant human rights treaties

This would cover the text of each of the treaties providing the basis for the supervisory activities of the relevant treaty bodies. These texts are already available in electronic form. The inclusion in the data base would facilitate easy cross-referencing among different treaties and constitute the legal foundation stone of the system.

(ii) Status of ratification

This information would cover the list of States parties to each instrument, the dates on which signatures, ratification or accession and entry into force occurred for each State, the optional provisions accepted or not accepted by each State, and the text of any reservations, declarations or objections lodged by each State. The inclusion of this information would enable immediate print-outs to be made showing all of the relevant data for any given State; all of the relevant data for any given instrument; and a comparative analysis relating to specific issues of relevance. The information would be right up to date and would reflect inputs from the Office of Legal Affairs in New York as well as the Centre for Human Rights in Geneva and other relevant sources of such information.

(iii) Status of reporting

This information would include the reporting periodicity applicable to each instrument, the due dates for all reports, the date of submission and publication and the symbol number of each report, as well as the date of examination and the relevant documentary references pertaining to each report. The data base would also include standard texts for recurring correspondence between the Secretariat and States parties and information on the dates on which reminders were sent. The inclusion of this information would greatly facilitate and expedite the work of the Secretariat, would enable the treaty bodies and the States parties themselves to know the precise status of their past, present and future reporting obligations.

(iv) Membership of treaty bodies

This information would cover the administrative arrangements relating to the nomination and election processes, the biographical details of all candidates, the current and past composition of each treaty body and the date of expiration of each member's term of office. Its inclusion would facilitate the work of the Secretariat, improve the availability of membership lists, and facilitate analyses of membership characteristics.

(v) Basic committee texts and decisions by the meetings of States parties

The information would include the rules of procedure, the reporting guidelines and other such texts applicable in the case of each treaty body. In addition, it would include the texts of any decisions adopted by, or other information relevant to, the meetings of States parties to each of the relevant instruments.

(vi) States parties reports and related documents

In addition to the reports submitted by States parties (virtually all of which are already available in electronic form) this information would include either the text of, or a detailed reference to, any additional documentation submitted by each State party's representative in the course of presenting a report, as well as the text of supplementary reports, and any lists of issues or other documentation made available to States parties' representatives by a committee or a working group thereof. Inclusion of such information would ensure the availability of documentation which can currently be considered ephemeral, would enable comparative analyses to be undertaken on specific issues on the basis of information provided by States parties and would greatly facilitate the preparation of background analyses of the examination of previous reports to be used by the treaty bodies in examining subsequent reports. In addition, information on specific topics will be able to be extracted and will provide an invaluable basis for the elaboration of general comments, suggestions and recommendations of a general nature.

(vii) Annual reports of treaty bodies

The annual reports contain, inter alia: summaries of the examination of States parties reports; the text of all general comments, final views, recommendations, suggestions and such like adopted by the relevant committee; and a record of the methods of work adopted. Their inclusion in the data base would seem indispensable in view of the major importance of much of the material and the manifold uses to which it can be put.

(viii) Summary records

It has long been acknowledged that the summary records, which reflect not only the reasons underlying the approach adopted by the Committee but also the nuances of its dialogue with the representative of the State party, constitute an integral part of the Committee's work. Their inclusion in the data base would facilitate the retrieval of information relating to specific States and broader based comparative analyses of specific issues.

(ix) Follow-up activities

This category would include details of all resolutions adopted by United Nations organs relating to the work of the treaty bodies and specific references to the debates in those organs. The inclusion of such information in the data base would ensure more effective and systematic feedback to the treaty bodies and would facilitate a subsequent review of actions taken by the Committees in response.

(x) Reference documentation and information

This category would include, but not necessarily be limited to, detailed references to the following types of information: the text of human rights instruments other than those included in item (i) above; relevant resolutions of United Nations organs other than those included in item (ix) above; relevant reports and studies submitted to United Nations human rights organs; relevant reports prepared by the specialized agencies and other United Nations bodies; decisions and case law of regional human rights organizations

including the African Commission on Human Rights, the Inter-American Commission and Court of Human Rights and the European Commission and Court of Human Rights; and general bibliographical information. The inclusion of this information in the data base would be an important element in promoting better co-ordination among bodies dealing with comparable issues, facilitating greater consistency in the interpretation of norms, reducing the overlapping demands placed on States parties, and achieving many of the other goals identified by the General Assembly and the second meeting of chairpersons of human rights treaty bodies. Access to much of the relevant information could be obtained by linking the proposed data base to existing data bases within the United Nations, the specialized agencies and the regional organizations.

III. COMPARABLE DEVELOPMENTS IN OTHER PARTS OF THE UNITED NATIONS AND IN OTHER RELEVANT INTERNATIONAL ORGANIZATIONS

29. As the Secretary-General has noted (see para. 19 above), the United Nations, in general, has lagged behind in the development of information systems and most of its existing data bases will require profound revision, both as to their structure and in respect of the software tools by which they are accessed. However, the current trend within the Organization, actively stimulated by the Technical Innovation Board (TIB) established in 1987, is very much toward the development of new information systems and of more sophisticated applications.

30. The key factors in this process of innovation are the growing availability of powerful tools that can increase productivity; the expanding need for the sharing of data and of communications facilities; and resort to the logging and exchange of data between computers irrespective of vendor and siting. Decisions taken at Headquarters concerning strategies relating to inter-operability or technological innovation will undoubtedly have an important bearing on developments throughout the Organization.

31. A focal point in the quest for innovation being currently pursued by the New York Computing Centre is the Integrated Management Information System (IMIS) which, although not directly relevant to treaty-body related concerns, since it addresses administrative, financial and personnel matters, is nevertheless of considerable general interest. The IMIS is the first project devoted to rationalizing and making coherent a number of different hardware, software and data systems i.e., will address a variety of important areas of broad relevance such as methodology, communication; the establishment of new structures; criteria for technology selection; project management and prototyping techniques, option selection, the consistency of data organization, change strategy and software tools. The IMIS will affect United Nations computing centres worldwide. Accordingly, the project's future development as well as its accomplishments will need to be followed closely.

32. There are several existing data bases within the New York Computing Centre that are of potential relevance, such as the Multilateral Human Rights Agreements data base which forms part of the United Nations Treaty Information System (UNTIS) and the United Nations Bibliographic Information System (UNBIS), but they are generally obsolete both in terms of data and technology. The United Nations Statistical Information System (UNSIS)

contains potentially useful statistics in the areas of Energy, Industry, Population, National Accounts, Trade, Construction and Agriculture. A new data base, ORCIDATA which is to contain profile information on States, is currently under development but in view of the obsolescence of the New York Computing Centre's existing data new information will need to be collected for this system.

33. The Human Rights Documentation Centre at the Council of Europe maintains data bases relating to the case law of the Strasbourg organs, the status of signatures and ratifications (which is currently being extended to include reservations and declarations in full text), national case law, and bibliography (including a bibliography of scholarly writings on case law). This comprehensive information system is implemented on in-house mini-computers.

IV. PROPOSED SYSTEM ARCHITECTURE AND ITS FINANCIAL IMPLICATIONS

Introduction

34. The Task Force has studied in detail the needs of the various treaty bodies and of their Secretariat, the International Instruments Section of the Centre for Human Rights. Furthermore, in two technical reports prepared by two of the computer experts in the Task Force, the different technical options with regard to computerization of the section have been carefully studied. This chapter gives an overview of the system which the Task Force, on the basis of its deliberations, considers to be the most appropriate. 5/

35. In general, the system must be open and compatible with industry standards in order to contain costs and provide expandability and flexibility in the future. At the same time, the system architecture and hardware must be compatible with the existing computer equipment in the United Nations, exploit its potential as well as comply with all pertinent guidelines in force. The Task Force has, as far as possible, sought to avoid specifying the products of any particular manufacturer in order to ensure that a range of different suppliers might be utilized, as appropriate. In order to achieve these goals, the relevant officials of the Computing Centre of the United Nations Office at Geneva have been involved at all stages of the work.

A. Proposed computer hardware architecture

36. This section deals with the technical prerequisites in light of the above-mentioned considerations and provides specific recommendations for carrying out the project identified by the Centre for Human Rights.

1. Technical system objectives

37. The overall architecture of the proposed system has been defined by the Task Force in accordance with the following criteria:

(i) Existing infrastructure, resources and equipment must be integrated and utilized to their full potential. This makes the participation and co-operation of the Electronic Data Processing department of the United Nations Office at Geneva indispensable.

(ii) The solution must allow for a multi-vendor environment, thus permitting the use of equipment from a variety of vendors to be used.

(iii) The solution must be based, for all new hardware and software, on open standards, in order to contain costs and ensure compatibility with existing and future equipment.

(iv) The architecture must reflect the real flow of data, information and work methods of the service concerned in order to be effective.

(v) The use of each component of the system, as well as the total integrated solution, must be intuitive and user-friendly. To this end, the user interface must be built on a graphical user interface (GUI), programmed in line with industry standards (using the proper style guides) and provides for the use of icons and pointing device at all levels. Furthermore, the transfer of information from one application to another must be effortless.

38. In order to give effect to these principles, the proposed system architecture is composed of three levels, corresponding to the way in which the data and information are treated in the International Instruments Section of the Centre for Human Rights:

Level 1 Professional staff: Personal work station for each professional staff member, providing personal productivity tools and catering for data and information currently in use.

Level 2 Section (International Instruments Section (IIS)): Local file and data base server for the International Instruments Section, catering for the internal and active information, as well as providing a communication gateway, printing facilities, access to the optical disk document reproduction service, back-up and other necessary system services for the Section.

Level 3 Central, external access point: Main central data base server at the United Nations Office Geneva Computing Centre level providing information management and retrieval facilities for data and information used by both internal and external users.

39. In the following, a description of the equipment and basic system software proposed on the different levels is given.

2. Personal work station

40. It is proposed that each professional be equipped with one PC (Personal Computer) running OS/2 with Office Vision. Each work station will be equipped with a local area network connection (LAN), connecting the work station to the local departmental server. This will provide each professional staff member with a very user-friendly electronic work tool, enabling him/her to produce documents, retrieve and integrate information from the central as well as the local data base, manage the lists of treaty body membership and the administrative details relating to the reporting procedures, in addition to a number of everyday chores such as appointment scheduling, calculations, fax and telex production as well as communications through the United Nations world-wide communications network. All active data, i.e. data used actively

by one staff member, will reside on the PC's internal hard disk as long as it remains of interest only to that staff member (although back-up will be made on the server). More permanent information will be transferred to the local server or the central data base, depending on its nature, for easy access by others.

41. Employing a graphical windowing user interface and standard applications makes it possible to provide an integrated system where the user can work simultaneously with several applications and where information can be moved easily from application to application and machine to machine. Such a work station has the potential of greatly enhancing the productivity of each individual staff member.

3. Local server

42. The proposal provides for a relatively modest local server to be placed on the premises of the service concerned. The server should run OS/2 with a LAN (local area network) manager as well as a small number of specialized applications. All work stations will be connected to the system via the LAN.

43. The server is, in fact, a more powerful PC with expanded disk-capacity connected to a printer and a special device that enables multiple highspeed links between the personal work stations and the central data base located on the mainframe of the Computing Centre of the United Nations Office at Geneva.

44. The server will provide a platform for running a number of applications containing data common to all staff members of the service concerned, such as the treaty body membership programme, as well as electronic-mail, section-wide appointment schedule systems, etc. The server will thus be a repository for information pertinent to the International Instruments Section but not to the external users.

45. The server will also play an important role as a communication gateway allowing both access to the central computer and to the world-wide United Nations communication network. Furthermore, it will enable efficient and safe back-up for the data on the personal work stations as well as fast exchange of files between the staff members.

4. Central data base

46. It is proposed that the mainframe of the Computing Centre of the United Nations Office at Geneva be utilized for applications which will manage information to be accessed by external users, in addition to staff members. The following information would be contained in the central data base:

(i) Text of treaties;
(ii) Status of conventions;
(iii) Status of State reports;
(iv) Rules of procedures;
(v) Texts of State reports;
(vi) Texts of summary records of committee meetings;
(vii) Texts of the annual reports of the treaty bodies;
(viii) Texts of analytical summaries, etc.

47. The mainframe of the Computing Centre of the United Nations Office at Geneva is connected to a world-wide network and has all facilities for providing access to the data bases 24 hours a day. Since there is spare capacity on the machine for the time being, it will reduce the necessary investment considerably.

48. The type of data base software that must be used for large, full text data bases like this, requires professional attendance, back-up procedures with large capacity tape stations, etc. With a small increase in the resources of the Computing Centre, the vast potential of the mainframe, the telephone and satellite communication exchange in place, etc, can be realized for the benefit of the Centre for Human Rights.

B. Proposed software application architecture

49. In this section, the objectives of introducing computerized support to the International Instruments Section are spelled out. Subsequently, the proposed applications are described.

1. Application support objectives

50. The proposed system is primarily aimed at supporting the following tasks:

(i) Supporting the professional staff of the International Instruments Section in discharging their support functions to the treaty bodies, as well as the expert members of these bodies. Since analytical work dominates their activities, the most important task of the information system will be to provide information necessary to undertake this activity.

(ii) Assisting the Governments of the Member States in complying with the requirements and the procedures of the treaties in question. Another important aspect, therefore, is to make all pertinent information available to Governments in a speedy manner.

51. In order to support this kind of activity, the system must be able to provide staff members with minutes of meetings, studies, published cases, and information from State reports. Access to this information must be easy, fast and reliable. The most important aspect of this is the way in which the information may be accessed, how relevance is assessed and how pertinent information may be integrated into new documents. New documents created through the use of the system must subsequently be integrated in the base of available information, to provide background information in the future.

52. In order to satisfy the needs defined, a number of applications are suggested. In general, it is advised that the work stations run OS/2 (the new standard operating system for PCs) with the new graphical windowing system Office Vision running on top, in order to be consistent with the principles set forth in section one of this chapter. This will provide a highly consistent and intuitive user environment where the user can work with many applications simultaneously in different windows of the screen. This windowing system will also provide the user with the ability to "cut and paste" information from any application running in one window to another application in another window.

53. The applications proposed can be split into two categories: personal productivity applications and data base applications. These categories are discussed below.

2. Personal staff productivity applications

54. This category includes obvious applications such as word processing, communications, appointment scheduling and other personal productivity tools. However, it is important to note that the whole computerization programme has the individual staff member's work as its objective. In line with the general developments in the business world, the International Instruments Section staff member will produce documents in a more direct and complete manner himself. As all the background information will be available electronically, the staff member will draft and revise the intellectual contents of his/her documents directly on the word processor. The work of the secretaries will be significantly reduced as they can concentrate on the layout and printing of the documents.

55. These functions will all be supported by standard applications that are embedded in the Office Vision package. They will be well integrated and their user interface consistent, since they form part of one complete package. Furthermore, Office Vision will be available on the mainframe as well, making it possible to provide the same programmes across the United Nations Office at Geneva.

56. The personal productivity tools will mostly be located on each PC giving excellent response times to the user and avoiding overloading of the central system. Some application will be located on the server, notably the data base on treaty body membership.

3. Data base applications

57. The important backbone of the application architecture is based on data base software, managing the information to be used with the other tools. Traditionally, data bases have only been tuned towards applications with structured data, like inventory control, accounting systems, etc. where the data are well-structured and can be managed in neat tables. Within the needs defined in chapter II, the data base for managing the treaty body membership and the status of the conventions (ratifications, applicability, declarations, etc.) requires this kind of data base tools.

58. There are multitudes of software packages, called Data Base Management Systems (DBMS), available which can do these jobs on the local server. As part of the Office Vision OS/2 combination, there will be a SQL-server data base available which will fit the requirements. On the mainframe of the Computing Centre of the United Nations Office at Geneva, the existing package Enquire would also be well suited.

59. However, the success of a computerized information system for the International Instruments Section will depend on the ability to handle large amounts of largely unstructured text in natural language, rather than structured data. Data base systems adapted to this kind of data are referred to as IRS (Information Retrieval Systems). Since this type of data base software is not available on the mainframe, it is proposed that an IR-system be purchased.

60. This highly specialized and relatively new data base technology will provide information in "electronic full text" form to staff members. It will be possible for staff members to open a new window while working with a document in a window, access the full text data bases and search for information on the desired topic across many different document types in one operation. In other words, the staff member could for example ask for all the paragraphs in the State reports, minutes of meetings and analytical summaries that deal with children and their right to measures of special protection. The staff may then review these paragraphs and paste, cut and copy any relevant parts directly into the document on which they are working. This will speed up their work tremendously.

61. In order to make this possible, the data bases must cover all the necessary information and, maybe most importantly, it must be possible to access it in a very sophisticated manner.

62. The proposal includes recommendations as to how the data bases should be loaded, including a comprehensive programme to deal with the backlog of existing documents. The United Nations is in the fortunate position that many of the documents, in the various languages, are available in electronic form. Before their inclusion in the data base, the texts will be modified slightly in order to introduce a meta structure necessary to make the texts suitable for efficient information retrieval. The IR-system to be procured must have a proper free text query language, enabling the user to define very complex retrieval conditions. The system must recognize such text entities as sentences and paragraphs as well as fields in the text. It should be able to use word and hit frequencies for ranking of result-lists, provide a thesaurus facility and be able to focus on paragraphs or sentences.

C. Timetable and costing

63. The Task Force considers that it would take approximately 18 months to make the system fully operational. The estimated initial (one-time only) cost for the proposed system is US$ 508,500, covering the following main categories of expenditures:

Hardware	$US 72,500
Software	80,000
Software development	47,700
Data base loading	170,000
Human resources	113,200
Training	25,100

The estimated annual recurrent cost for the system is $US 87,700. 6/

V. IMPACT OF THE PROPOSED SYSTEM

64. The Task Force considers that the need to develop appropriate information technology through the use of computers to assist the treaty bodies in the performance of their various functions is beyond doubt. The overall growth in the size and complexity of the treaty régime over the past decade has been enormous. In the future that trend can be expected to continue as more States become parties to existing treaties, as new treaties are adopted and new supervisory bodies established, and as the treaty régime as a whole grows in both complexity and sophistication. Since most of the treaty bodies have

already expressed the need for greater assistance from the Secretariat than can currently be provided and since new demands will continue to be generated three possible scenarios may be envisaged. Under the first, there would be a major increase in the number of staff available to the treaty bodies. Given existing constraints and the staff shortages already experienced in other areas this seems highly unlikely. Under the second scenario the ever-increasing needs of the treaty bodies would simply be ignored. The Task Force believes that this approach would have dire consequences not only for the treaty régime but for the overall United Nations human rights system. The third scenario is to move gradually towards the effective use of computerized information technology systems.

65. A recent report by the International Labour Office has concluded that "the most promising direction for improving public service productivity is office automation through development of IT (information technology) and computerization." 7/ The report notes three major categories of benefits that can flow from such an approach: reduced costs; increased resources; and the provision of better and often new services.

66. The Task Force believes that the productivity of the existing staff available to the treaty bodies can be greatly enhanced by computerization of the relevant data. Moreover, the range of services that can be made available to States and to the expert members of the relevant bodies can be expected to be significantly expanded. In the short term the cost will be significant. In the longer term, there would not appear to be any other alternative unless the entire treaty régime is to be permitted to collapse under the weight of the ever-increasing demands being placed upon it.

Notes

1/ Progress report on the pilot project on optical disk technology.

2/ See e.g. Hans Thoolen, "The Development of Legal Data Bases in Refugee Work", International Journal of Refugee Law, vol. 1, No. 1, 1989, pp. 89-100.

3/ Commission on Human Rights resolution 1989/46, para. 2.

4/ Commission on Human Rights resolution 1989/46, first preambular paragraph.

5/ Detailed specifications are available in the files of the Secretariat for consultation.

6/ A detailed break-down of the estimated costs is available in the files of the Secretariat for consultation.

7/ ILO, World Labour Report 1989, Vol. 4, p. 137.
