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31 January 2006

TO: Mr. Marek Belka, Executive Secretary
               United Nations Economic Commission for Europe

FROM: Egbert C. Kaltenbach, Director
             Internal Audit Division II
             Office of Internal Oversight Services

SUBJECT: **Audit of United Nations Economic Commission for Europe**
             Information and Communications Technology Management
             (AE2005/720/01)

1.   I am pleased to submit the final Report on the audit of UNECE's Information and Communications Technology Management, which was conducted by Mr. Leonard Gauci during September and October 2005.

2.   A draft of the report was transmitted to the Chairman of the ICT Management Group (ICTMG) on 16 November 2005. The comments of the Officer-in-Charge, UNECE of 6 January 2006 are reflected in this final report.

3.   I am pleased to note that with one exception, all of the audit recommendations contained in the final Audit Report have been accepted, and that UNECE has drawn up a timetable for their implementation. OIOS considers these recommendations to be of critical importance. The table in paragraph 51 of the report identifies the further action that is required for the recommendations to be closed. *Recommendation 2 has not been accepted so far. For the reasons outlined in the report, OIOS is reiterating this recommendation for consideration by management.*

4.   I would appreciate if you could provide me with an update on the status of implementation of the audit recommendations not later than 31 May 2006. This will facilitate the preparation of the twice-yearly report to the Secretary-General on the implementation of recommendations, required by General Assembly resolution 48/218B.

5.   Please note that OIOS is assessing the overall quality of its audit process. I therefore kindly request that you consult with your managers who dealt directly with the auditors, complete the attached client satisfaction survey and return it to me.

6.   Thank you for your cooperation.

Attachment: Client Satisfaction Survey

cc: Mr. Christopher B. Burnham, Under-Secretary-General, Department of Management (by e-mail)
Mr. S. Goolsarran, Executive Secretary, UN Board of Auditors
Mr. T. Rajaobelina, Deputy Director of External Audit (by e-mail)
Mr. H. Brüngger, Director, Statistical Division, Chairman of the ICT Management Committee of ECE (by e-mail)
Ms. S. Bartolo, Secretary of the Commission and Special Assistant to the Executive Secretary (by e-mail)
Mr. F. Moser, Chief, Information Systems Unit (by e-mail)
Ms. C. Chávez, Chief, Geneva Audit Section (by e-mail)
Mr. L. Gauci, Auditor-in-Charge (by e-mail)
Mr. D. Tiñana, Auditing Assisting (by e-mail)
Mr. M. Tapio, Programme Officer, OUSG, OIOS (by e-mail)

United Nations
Office of Internal Oversight Services
Internal Audit Division II

Audit Report

**Audit of United Nations Economic Commission for Europe
Information and Communications Technology Management
(AE2005/720/01)
Report No. E06/R01**

❏ **Report date: 31 January 2006**

❏ **Auditor:** Mr. Leonard Gauci, Auditor-in-Charge

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Office of Internal Oversight Services
Internal Audit Division II

Audit of United Nations Economic Commission for Europe Information and Communications Technology Management (AE2005/720/01)

EXECUTIVE SUMMARY

During September and October 2005, OIOS conducted an audit of UNECE's Information and Communications Technology Management function.

The audit did not reveal major weaknesses. However a number of measures need to be taken to strengthen the governance and administrative structure over the overall ICT operations. *Except for one recommendation, where management has proposed a substantive change, UNECE has accepted all of the recommendations and has set up a timetable for their implementation.*

The setting up of the ICT Management Group and the holding of regular meetings has been an important step in the coordination of ICT matters. OIOS is of the opinion that there is room for raising the profile of ICT across the Commission and strengthening ICT governance, and is recommending that strategic and high-level policy matters be presented at Directors' meetings on a more regular basis. *UNECE has agreed to implement this recommendation with immediate effect.* OIOS has also recommended assigning the role of Chief Information and Communications Technology Officer (CIO) to a suitably qualified senior official. *Management has proposed a different approach, namely that of assigning the role of CIO to the Chief of the Information Systems Unit.* OIOS remains of the opinion that this function needs to be assigned to someone at the senior management level and has reiterated its recommendation for UNECE's reconsideration.

OIOS recognizes that the formulation of a comprehensive ICT strategy for the medium term will need to take into account the on-going UNECE reform process and that certain decisions cannot be taken unilaterally but in the context of the ICT infrastructure within UNOG and the policies set by UNHQ. Nevertheless, OIOS believes that management is in a position to start implementing the recommendations made in this report.

OIOS is recommending that the Information Systems Unit coordinate with the Business Owners to draw up a rolling strategic plan supporting the Commission's mandate and policies for IT services and applications covering the next two biennia. The plan would be reviewed on an annual basis and updated to take into account any changes in internal policies, and in the context of UNOG's ICT plans once these are finalized. UNECE should first make every attempt to use applications and services that are already available through other UN entities such as the Information Technology Service Division at UN Headquarters, UNOG and the International Computing Centre. The strategy should serve as the basis for determining UNECE's ICT budget requirements for the

2008-2009 biennium. *OIOS is pleased to note that UNECE will be starting the process of developing a rolling ICT Strategy for 2007-2009 during the current quarter.*

While ISU is responsible for the UNECE's core application systems, it has no control over systems that are developed and maintained within the other Divisions. There are currently eight applications that have been developed outside of ISU and are run independently. OIOS is recommending that all ICT matters throughout the Commission, including software development and maintenance, be assigned to the ISU and that the Chief, ISU attend meetings of the Directors. In its role, the ISU should present senior management with an update on the ICT policies and procedures, including those within the United Nations Secretariat, and implement procedures for user acceptance testing and formal sign-off of project outputs. *UNECE will be taking steps to implement the recommendations made by OIOS in respect of the above matters, allowing for the fact that the timing and details of their implementation and of others made in this report will be linked to the ICT strategy document.*

OIOS welcomes UNECE's initiative to obtain direct representation on the Secretariat's ICT Board. Given the interdependence of certain ICT functions such as security and business continuity planning, OIOS is recommending that UNECE coordinate with UNOG and other UN entities based in Geneva to form an ICT Board at the Geneva level. *OIOS is pleased to note that UNECE will be taking this initiative with other UN organisations in Geneva.*

ISU has a service agreement with the Statistical Division. OIOS is recommending that the ICT services ISU is mandated to provide to each of the Divisions and the rest of the user community are defined in a service catalogue, and that any other services are reflected in bilateral Service Delivery Agreements. These measures should improve the level of ICT services to the user community and generate more accountability and transparency. *UNECE will be taking steps to implement these recommendations during the third quarter of 2006 and during 2007 respectively.*

UNECE management has noted the need to increase IT training across the Commission but agreement has not yet been reached on how the process should be structured and funding allocated. Funds for ICT training are allocated on the basis of proportionality, which could mean that staff training requirements do not address the Commission's overall priorities. OIOS is recommending that the ICTMG draw up a strategy, develop criteria and provide a mechanism for the utilization of ICT-related training funds. It is also recommending that a programme is set up under which all UNECE staff will obtain ECDL/ICDL certification. *UNECE will be taking steps to have this recommendation fully implemented during 2007.*

UNECE needs to develop a formal policy covering all aspects of IT security, including the granting and administering of access rights. Periodic reviews can then be carried out to check that existing access rights conform to the policy. There should be a mechanism under which ISU is immediately informed of all staff movements so that it can update their profile accordingly. OIOS is also recommending a formal policy over the granting and administering of access rights to the e-mail system, including remote access, and the closure of e-mail accounts. *UNECE has agreed to implement the recommended actions.*

UNECE's production servers and the back-up-and-restore services are outsourced. It is understood that security arrangements over back-up media are the responsibility of the service provider but

this is not sufficiently specified in the Service Agreements. OIOS is recommending that this matter be included in the Agreements. UNECE should also establish a formalized incident-reporting procedure with its service providers, and in coordination with UNOG/ICTS and ICC, carry out a recovery exercise on an annual basis. *UNECE has accepted to implement the recommended measures subject to agreement on the part of the respective service providers.*

There are no detailed plans to ensure that in the event of a major disaster UNECE's critical operational functions are properly recovered and become operational within acceptable timescales. OIOS is recommending that UNECE collaborate with UNOG/ICTS and UNHQ/ITSD and hold a workshop for members of the ICTMG to advice on the categorization of mission-critical systems and data. This should lead to the implementation of a Business Continuity Plan. *UNECE has agreed to establish a suitable procedure for the definition of Business Continuity.*

OIOS believes that the implementation of the recommendations set out in its report would bring the management of ICT more in line with best practice and would demonstrate management's commitment to ensuring proper control in this area.

January 2006

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I. INTRODUCTION

1.   During September and October 2005, OIOS conducted an audit of Information and Communications Technology management within the United Nations Economic Commission for Europe. The audit was conducted in accordance with the International Standards for the Professional Practice of Internal Auditing.

2.   The UNECE has about 220 staff members, the majority (198) being regular staff. In addition to the 55 Member States, all interested UN Member States have observer status and may participate in the Commission's work. The UNECE Secretariat has six Divisions, which currently manage nine sub programmes. There is also a Technical Cooperation Unit. The Information Systems Unit reports directly to the Executive Secretary.

3.   The findings and recommendations contained in this report have been discussed during the Exit Conference held on 3 November 2005 with the Director, Statistical Division in his capacity as Chairman of the ICT Management Group, the Secretary of the Commission and Special Assistant to the Executive Secretary, and the Chief, Information Systems Unit (ISU).

II. AUDIT OBJECTIVES

4.   The main objectives of the audit were to:
   (a) Assess UNECE's governance and organisational structure with respect to ICT;
   (b) Determine what is required for the development of UNECE's strategic plan for ICT;
   (c) Assess UNECE's practices and plans for ICT against the global ICT strategy of the UN Secretariat; and
   (d) Identify areas of ICT that require the attention of UNECE's management to bring them in line with best practice.

III. AUDIT SCOPE AND METHODOLOGY

5.   The audit addressed the general management of ICT within UNECE and focused on the relevant areas of Information Technology controls that fall under the responsibility of the ISU. It did not examine the IT controls over individual application systems or the functionality aspects of such systems.

6.   OIOS sought to obtain an understanding of the computer environment at UNECE (organization, systems and key performance indicators) through the completion of a questionnaire. A set of tailored audit programmes in the form of another questionnaire covering all the audit objectives was developed on the basis of the above and discussions with relevant personnel. During the audit, OIOS analysed applicable data and reviewed the available documents and other relevant records. Interviews were held with selected managers and staff. Other managers were invited to meet with the auditors and comment on any ICT-related matter they wished to discuss.

IV.   AUDIT FINDINGS AND RECOMMENDATIONS

A.   Governance structure for UNECE's ICT function

1.   ICT governance at the UNECE level

7.   The governance role for ICT within UNECE is entrusted to the Information and Communications Management Group (ICTMG). This is in conformity with the requirements of the Secretary-General's bulletin "Information and Communications Technology Board" (ST/SGB/2003/17), which, *inter alia*, calls for all departments and offices away from Headquarters to establish information and communications technology committees (ST/SGB/2003/17 para. 4.4). This committee would oversee all major decisions regarding new software applications, define system and data ownership and monitor IT-related matters to see they are in line with the ICT strategy of the entity in question, and the overall ICT strategy of the Organization.

8.   OIOS is pleased to note that the ICTMG has been active, with 12 meetings held since it was set up in September 2003. The Director, Statistical Division, has been the Chairman of the Group. The ICTMG has served as a useful forum for the co-ordination of ICT activities. It has also provided a means for ensuring that all ICT projects and new systems, including those financed by extra-budgetary funds, follow standard procedures.

9.   A paper entitled "Towards an E-Strategy for the UNECE" that was approved by the Directors' in September 2003, and which included a recommendation for setting up the ICTMG, suggested that that the orientation of the Group should be relatively high-level and with strategic orientation. At the same time, the Group was to have technical functions "… thus relieving the ES and the Directors' meeting from the burden of taking technical decisions." These two objectives, while both valid, may not be easy to achieve within the same forum.   A review of the Group's meeting minutes and the report by the Chairman to senior management for the period October 2003 to December 2004 shows that the Group's meetings have in fact been more technically-oriented. In this regard, the established network of ICT Focal Points has a crucial role to play as this forum advices exclusively on technical matters.

10.   OIOS feels that there is room for more awareness of ICT policy and strategic issues at the senior management level, and that raising the profile of ICT would be to the benefit of the Commission. While the ICTMG should serve as the forum for implementing a common IT policy across the whole of UNECE (for example with regard to the implementation of new systems, change control procedures, and data security), OIOS is of the opinion that matters concerning ICT strategic direction should be discussed in the presence of the Executive Secretary in the Directors' meeting in a more systematic way.

Recommendation:

> ➢   Strategic and high-level ICT policy matters should be presented for review and decision by UNECE senior management at the Directors' meeting in a more regular way (Rec. 01).

Management response: UNECE accepts recommendation 01.
Implementation: January 2006.

OIOS takes note of management's response. It will keep this recommendation open pending receipt of the relevant extract from the meeting minutes and/or agenda as evidence of implementation.

2.   Designating a Chief ICT Officer

11.   To achieve a more effective governance function, entities operating in the private and public sectors have created the role of Chief Information and Communications Technology Officer (CIO). This person would be a senior manager or director who sits on the Board, and has overall responsibility for the entity's Information Technology planning, coordination and policy implementation.

12.   The importance of this role is also being recognized within the UN Organization as demonstrated by the following examples:

- General Assembly resolution 57/304, para. 4, requested the Secretary-General, *inter alia*, to make proposals on how to reflect the functions of chief information and communication technology officer of the United Nations in the organizational structure of the Organization, as suggested by the Advisory Committee on Administrative and Budgetary Questions. In response, the Secretariat stated that the Project Review Committee of the ICT Board provides the head of the information technology services division, as chair of this committee, with a strong, central authority over Information and Communication Technology initiatives in the global Organization (A/58/7 Annex IX).

- The Joint Inspection Unit (JIU), in its report on the management of information systems in United Nations organizations, recommended that the Executive Heads appoint or designate a senior official to serve as CIO (A/58/82, Recommendation 2). Depending on the size of the organization, the CIO or the official (including the chief of "an appropriate unit") who has CIO functions would report directly to the Executive Head or to the Deputy Executive Head in charge of programmes. The report also recommended that "… depending upon organization-specific circumstances, the CIO functions could be performed by an appropriate unit or, in the case of small organizations that cannot afford a CIO, by a senior official with organization-wide coordinating responsibilities as well as some IT knowledge".

- The JIU also recommended the designation or appointment of a senior official as CIO to the United Nations High Commissioner for Refugees (A/59/394/Add.1 para. 19, Recommendation 7(d)) and in 2004, UNHCR recruited and appointed a CIO at the D-2 level to perform the above-mentioned functions.

13.   The CIO would represent UNECE in external meetings where high-level policy issues are discussed (for example, the Secretariat's ICT Board). As such, the role would not duplicate that of the Chief, ISU who would be responsible for all day-to-day matters concerning ICT across the Commission. While the ICTMG should continue to form the basis of UNECE's ICT governance structure, a director designated as CIO would facilitate the implementation of ICT-related policies throughout the Commission. His position would also provide him with an opportunity to identify

areas where efficiencies can be achieved. A list of specific responsibilities that may be assigned to the CIO function is attached at Annex A.

Recommendation:

> UNECE should define the functions associated with the role of Chief Information and Communications Technology Officer and assign this role to a suitably-qualified senior official (Rec. 02).

Management response: *UNECE accepts recommendation 02 subject to a proposed substantive change: (a) The job description of the Chief, ISU be amended to cover all functions of a CIO (except for the chairing of the ICTMG) and its classification be reviewed; and (b) the ICTMG will continue to be chaired by a director from a user division.*
In the UNECE the head of ISU reports to the Deputy Executive Secretary (D-2), who has many other responsibilities than resource management. Assigning the CIO function to an existing D-1 would mean to give management responsibility to a senior manager outside the line hierarchy between the chief of ISU and his supervisor. Furthermore, there are no ICT professionals at the D-1 level in the UNECE. However, in order to see the CIO function implemented with its intended weight, it has to be carried out by someone whose responsibility includes the ICT domain for the UNECE as a whole. We understand that in larger UN organizations, with an ICT division of a certain size, either the head of this division assumes the role of CIO for the organization and is at the same time included in senior management meetings, or the senior manager to whom the head of ICT responds (and who has responsibilities for other resource components such as human and financial resources) carries out these two roles (as will be the case in UNCTAD), including the chairing of the ICT management group. The proposal for UNECE in the report is more in line with the second variant. We consider that the alternative way to implement Recommendation 02 as proposed above, which is more in line with the classical organizational model for a CIO, is more appropriate for UNECE, even if this means that the CIO function would not be assigned to a senior manager at D-1 level. For the ICTMG as body that represent users, we are of the opinion that the present arrangement of the chairperson being a director at D-1 level from the user side should continue.
Implementation: Second quarter 2006.

OIOS takes note of management's response. On the basis of this audit, and of similar ones conducted at other UN entities, OIOS is of the opinion that assigning the functions of a CIO to the Chief, ISU, whose post is currently at the P-4 level, will not achieve the desired objectives. (We must emphasise that this is no reflection on the managerial or technical competencies of the person currently occupying this post). While a level of ICT knowledge would be desirable, the most important role of the CIO would be to act as focal point at the senior management level to see that ICT policies are properly implemented throughout the Commission. In the case of UNCTAD, where the post of Chief, IT is at the P-5 level, management accepted a similar recommendation and this was reflected in the vacancy announcement for the position of Director, Division of Management. With regard to comment (b), Annex A lists the various responsibilities that may be delegated to the person who is assigned the role of CIO and OIOS leaves it at Executive Secretary's discretion whether the ICTMG is chaired by the CIO or a director from the user side.
OIOS is reiterating recommendation 02 as originally drafted for consideration by management and will keep it open pending management's response.

3.   The role of the Information Systems Unit

14.   ISU currently has eight posts. Five of these are at the professional level. The Unit is structured into two sections; one dealing with systems development and maintenance of in-house developed systems, the other with operations. The Development Section, with one Information Officer and two Associate Programmers allows for testing by a person who is independent of the one who has done the programming.

15.   ISU has been providing a support service that is essentially aimed at ensuring users within the various Divisions can access their systems without interruption, and that the integrity of data held on these systems is safeguarded. While the Unit has expanded its responsibilities from an infrastructure service towards software development, the latter has been made possible through the implementation of an outsourcing strategy for ICT services.

16.   While ISU is responsible for the UNECE's core application systems, there are eight applications that have been developed outside of ISU and are run independently.   None of these systems interface with core UN application systems such as IMIS and Galaxy but ISU has no control over systems that are developed, implemented and maintained within the other Divisions. In some cases, Divisions operate their own change control procedures independently of ISU. The ICTMG is the only forum through which some monitoring by ISU can be achieved.

17.   OIOS sees the Chief of ISU as first in the line for ensuring that the Commission's overall ICT function is maintained at a high level. This requires participation at the senior management level to properly plan UNECE's ICT services requirements, and to coordinate with the Commission's ICT service providers.

18.   The September 2003 paper, "Towards an E-Strategy for the UNECE" recommended "The current role of ISU should be extended so that it can act as a provider for software development and maintenance for general and specific division needs." OIOS feels that a formal ICT strategy still needs to be developed. It will also need to take into consideration the direction that the Commission will be taking in the coming years, and may come up with a number of options. For example, the Commission may be better served if, due to limited available funds, software development is further systematically outsourced. However, ISU would be responsible for monitoring the development of all applications within UNECE and see that this complies with the Secretariat's global ICT policies over systems development and security standards.

19.   Irrespective of the approach towards systems development, OIOS is of the opinion that ISU should be assigned overall responsibility for the Commission's ICT function. In line with this responsibility, the Chief, ISU, in addition to attending ICTMG meetings would also attend meetings of the Directors.

   Recommendation:

   ➢   UNECE should:
       (a) Define the ICT-related tasks applicable to the Commission,
       and assign responsibility for the ICT function, including software

development and maintenance, throughout the Commission, to the Information Systems Unit; and

(b) Include the Chief, ISU in meetings of the Directors when ICT issues as such, or issues with possible impact on ICT, are on the agenda (Rec. 03).

Management response: *UNECE accepts recommendation 03. In order to avoid centralization of all ICT related posts, recommendation (a) could be accomplished through a matrix organization by maintaining the supervisory function in the Division and establishing a functional reporting line to ISU.*
Implementation: Second quarter 2006, January 2006 for (a) and (b) respectively.

OIOS takes note of management's response. It will keep this recommendation open pending receipt of documentation evidencing its implementation.

4.   Coordination among UN entities based in Geneva

20.   There is presently no forum where the UN entities based at the Palais des Nations, can discuss policies on ICT matters, which, to some extent or other, are interdependent. Entities need to be aware of the constraints imposed by the current infrastructure within UNOG, as well as that planned for the medium term, in order to draw up a comprehensive and attainable ICT strategy. For example, the plans for setting up a Data Centre within UNOG and the replacement of the network infrastructure over the next two years are unknown to senior management. This will impact on all users, and on plans for the provision of services related to disaster recovery.

21.   UNECE is represented on UNOG's Technology Innovation Committee (TIC). However, the TIC is a technical advisory board and does not have a mandate, for example, to approve ICT initiatives and projects undertaken by UN entities based in Geneva. The TIC's terms of reference are currently under review with the aim of clarifying its mandate and objectives but OIOS understands that the updated terms of reference will still see the TIC focussed on technological matters with the participation of technical people and no representation from senior management.

22.   OIOS feels there is scope for the setting up of an ICT Board to coordinate aspects of ICT such as governance, strategic planning and business continuity planning at the Geneva level. This Board would be made up of persons designated as CIO and the Chiefs of IT of the individual entities.

Recommendation:

➢   UNECE should coordinate with UNOG/ICTS and other UN entities based in Geneva to form an ICT Board at the Geneva level (Rec. 04).

Management response: *UNECE fully accepts recommendation 04. The success of establishing an ICT Board will also depend on other UN organisations in Geneva.*
Implementation: Second quarter 2006, third quarter 2007.

OIOS takes note of management's response and acknowledges the fact that its successful implementation depends on third parties. It will keep this recommendation open until an ICT Board at the Geneva level has been set up.

B. Implementing an ICT strategy for UNECE

1. ICT strategy

23. UNECE does not have a formal strategy for information technology systems. Such a plan is necessary to ensure that the Commission has the right systems to support its mandate and is able to provide the best service to Member States and other users.

24. A document, also titled "Towards an E-Strategy for the UNECE" (E/ECE/1422) dated 22 December 2004 was on the provisional agenda of the Sixtieth session of the Economic Commission for Europe. OIOS understands that this is now being updated and will be presented at the forthcoming Annual Session.

25. This document provides a review of the existing ICT initiatives within the various sub-programmes but it is more of a status report and the little there is by way of strategic direction is set out at a very high level. In one of its conclusions, the paper does call upon the Principal Subsidiary Bodies to contribute towards the preparation of an UNECE e-strategy and Action Plan (para. 85). OIOS also notes that the document does not make reference to compliance with ICT policies set at the Secretarial level and does not take into account the advantages and restrictions of the ICT infrastructure within UNOG.

26. The absence of a clear and well-structured ICT strategy for UNECE was identified as an important gap in an internal management paper also entitled "Towards an E-Strategy for the UNECE" that was approved by the Directors' in September 2003. This paper correctly identified the existing shortcomings, such as the fact that the management of ICT was technically-oriented and on a needs-basis, and was not necessarily in line with the Commission's mandate and service orientation. One of the benefits of this exercise was the setting up of the ICTMG.

27. UNECE needs to develop an ICT strategy for the medium term. This should take into account the on-going UNECE reform process. The strategy should contribute towards improved overall governance and facilitate the drive towards more efficiency and Member State satisfaction; in particular by providing the infrastructure for better access to and dissemination of information by Member States.

28. Considering rapid changes in technology, OIOS is recommending the drawing up of a rolling strategy, which can be reviewed at the end of each year and revised accordingly. ICT-related funding would be based on the strategy. The strategy document would take into consideration the already approved procedures and policies (e.g. the Project Review Committee process within the UNECE and standards for UNECE's PC's and laptops).

29. As noted in the introductory note by the Secretariat to the December 2004 document, the implementation of an e-strategy is not resources neutral. It will require input from all Business Owners. OIOS also appreciates that on a number of ICT strategic and planning issues, UNECE

cannot act unilaterally since these depend on other parties. This is an area where UNECE can work jointly with UNOG and the other UN entities based in Geneva.

Recommendation:

➤ UNECE, ICTMG should request the Chief, ISU to coordinate with the Commission's Business Owners to draw up a rolling strategic plan supporting the Commission's mandate and policies for IT services and applications covering the next two biennia. The strategy should continue to use applications and services that are already available through other UN entities such as the Information Technology Service Division at UN Headquarters, UNOG/ICTS and the ICC. Once approved by the ICTMG, the ICT strategy should be submitted for review and endorsement by the Directors' Meeting and the Executive Secretary and should serve as the basis for determining UNECE's ICT budget requirements for the 2008-2009 biennium (Rec. 05).

Management response: *UNECE accepts recommendation 05. A rolling ICT Strategy will be developed for 2007-2009. The process will start during first quarter 2006. Implementation: Fourth quarter 2006.*

OIOS takes note of management's response. It will keep this recommendation open pending receipt of a copy of the ICT strategy endorsed by Executive Secretary.

2.   Compliance with the Secretariat's global ICT policies

30.   UNECE's ICT strategy will need to take into consideration, and comply with the global ICT policies of the UN Secretariat.

31.   UNECE has been represented on the Secretariat's ICT Board indirectly through the UNOG representative. In June of this year, the Executive Secretary wrote to the Chairman of the ICT Board, requesting direct representation. This was granted and the Commission is now represented on the Board by the Chairman of the ICTMG. OIOS welcomes this initiative on the part of UNECE.

32.   A number of official documents have been issued with the aim of ensuring a coherent and coordinated global management of ICT initiatives across departments and duty stations. These include:
- GA Document A/55/780 "Information Technology in the Secretariat: a plan of action"
- GA Document A/57/620 "Information and Communication Technology Strategy"
- ST/SGB/2003/17 "Information and Communications Technology Board"
- ST/SGB/2004/15 "Use of Information and communication technology resources and data"
- ST/AI/2005/10 "Information and communication technology initiatives"

33.   OIOS notes the steps that have been taken by the ICTMG, which is now monitoring overall systems development within UNECE, and the ISU, to comply with the requirements of these official documents. These include the setting up of a Project Review Committee at the Commission level

and documenting the procedures to be followed for ICT projects and initiatives, including a requirement to submit a business case for the project in question. This procedure has in fact been applied on three occasions.

34. It is important that senior management is appraised of these developments since they also place a responsibility on it. One appreciates that certain cultures and concepts (e.g. that of Business Owner) are new, not only to UNECE but also to the Organization in general. For example Business Owners should formally take over the ownership of an application once this has been delivered and they are satisfied it meets their requirements, but this is something that has practically never taken place.

Recommendations:

> UNECE, ISU should:
> (a) Continue to ensure that the future strategic plan for the Commission's overall IT services and applications is aligned with the global ICT strategy of the United Nations Secretariat and remains in conformity with the global ICT policies of the Secretariat;
> (b) Present senior management with an update on the ICT policies and procedures, including those pertaining to the implementation of new systems, that are in place within the United Nations Secretariat; and
> (c) Implement procedures for user acceptance testing and formal sign-off of project outputs (Rec. 06).

Management response: *UNECE accepts recommendation 06.*
Implementation: (a) will be implemented in parallel with recommendation 05(fourth quarter 2006); (b) during the third quarter of 2006 and (c) during the first half of 2007.

OIOS takes note of management's response. It advices management to try and bring forward as much as possible the implementation of (c). It will keep this recommendation open pending receipt of documentation evidencing implementation.

C. ICT services provided to users

1. Service agreements

35. The September 2003 paper, "Towards an E-Strategy for the UNECE" identified the need for a "service agreement-based approach" towards ICT management. As the paper noted, this is common practice in the private sector and has also been introduced in certain areas of the Secretariat. OIOS has also been recommending the introduction of these types of agreements between the providers and users of ICT services at entities where they were not yet in place.

36. The nature and scope of services that ISU is responsible to provide to users are only defined in one Service Agreement with the Statistical Division for the development and maintenance of the Statistical Databases. A Network of ICT Focal Points meets on a needs basis. Seven meetings were

held in 2004 and seven in 2005 (up to 30 September). The meetings are chaired by the Chief, ISU.

37. OIOS welcomes the existence of a forum that can help IT services become more client-oriented. However, the standard services expected of ISU should be clearly defined and formalized in a service catalogue between ISU and UNECE. This service catalogue should be developed in cooperation with the ICT Focal Points and approved by the ICTMG. Any additional services outside the standard catalogue would be defined in a bilateral service delivery agreement between the ISU and the Division concerned, which should also address any resource implications. The implementation of these measures should help to clarify the roles and responsibilities of all the players concerned.

Recommendation:

> UNECE, ISU should:
> (a) Identify all those ICT services that it is mandated to provide to each of the Divisions and the rest of the user community, and have these services and respective responsibilities defined in a service catalogue, a copy of which should be made available on the intranet; and
> (b) Negotiate bilateral Service Delivery Agreements for any services to be provided in addition to the service catalogue (Rec. 07).

Management response: *UNECE fully accepts recommendation 07.*
Implementation: (a) third quarter 2006; (b) during 2007.

OIOS takes note of management's response. It will keep this recommendation open pending receipt of a copy of the service catalogue.

2. Training

38. The September 2003 paper, "Towards an E-Strategy for the UNECE" identified the need to increase IT training, not only for IT staff, but also for staff in general. The report by the Chairman to senior management for the period October 2003 to December 2004 summarising the work of the ICTMG also identified the issue of ICT training as an area where improvement can be achieved. ICTMG members, however, have not yet reached a consensus on how the process should be structured and funding allocated.

39. Funds for ICT training are allocated on the basis of proportionality. This could mean that staff training requirements are not addressed in a manner that takes into account the Commission's overall priorities rather than those of a particular Division. OIOS is of the opinion that the ICTMG should identify the ICT training priorities at an entity level and develop a strategy and a set of criteria for the allocation of these funds.

40. ISU regularly coordinates training classes for ICT with UNOG's Staff Development and Learning Section. A pilot group of UNECE users has participated in the European/International Computer Driving Licence (ECDL/ICDL) certification. OIOS proposes that all UNECE staff should

obtain ECDL/ICDL certification.

Recommendation:

> ➢ UNECE, ICTMG should:
> (a) Draw up a strategy, develop criteria and provide a mechanism
> for the utilization of ICT-related training funds; and
> (b) Set up a programme through which all UNECE staff will
> obtain ECDL/ICDL certification (Rec. 08).

Management response: *UNECE accepts recommendation 08 with a proposed minor change; whereas a clear strategy and a transparent mechanism for the allocation of funds can be developed, a set of criteria applicable to all types of needs is likely to be too ambitious.*
The generalisation of the ECDL (or ICDL) certification programme will require coordination with SDLS-UNOG. Any cost for systematic training of staff in view of the certification, and for the certification itself, will have to be covered by SDLS-UNOG; the ECE ICT training fund is far too limited for this purpose. Furthermore, sufficient time will be necessary before this recommendation will be fully implemented. Due to their limitation, the ICT training funds will have to be used for specific and well-targeted actions, related both to the various sub-programmes and to the needs of ISU staff.
Implementation: (a) first half of 2007; (b) informally during 2006, formally starting in 2007.

OIOS takes note of management's response. It remains of the opinion that setting up some fund allocation criteria is necessary for this exercise to be properly carried out. Examples of such criteria may include: evidence of demand, direct application of acquired knowledge/skills, duration, cost and willingness to cost share. Management can set up a points system and utilize the training funds accordingly. This use of criteria would also show more transparency in the allocation of funds. OIOS will keep this recommendation open pending receipt of a copy of the training strategy and programme for certification.

D. Access security

1. General policies

41. UNECE does not have a documented computer security policy that covers logical and physical access control procedures over its ICT systems, data and equipment. Such a policy would set out the roles and responsibilities regarding access to systems, applications and data (including data held off-line). The policy would identify the persons who are assigned the most powerful access rights, both within and outside of UNECE, and can view or delete the data of others. These people should be identifiable and their rights and responsibilities should be clearly set out and approved by management.

42. All requests for new accounts to network resources are channelled through the Administrative Assistants to ISU (except interns in which case the Intern Coordinator submits the request). ISU enables the necessary access rights by taking into consideration the job specific needs. Once access rights are granted, UNECE does not have a formal procedure for "identity management". There is no formal notification to ISU with respect to separation or movement of

staff members, or in cases of contract breaks.

43.   There are currently no UN-wide rules over confidentiality. The Chief of ICTS said that this falls under the responsibility of UNHQ and they plan to act on this. The UN does not yet have a clear policy with regard to the retention or deletion of data after separation. OIOS understands that UNECE was going to acquire software to assist in managing this area but were informed that UNHQ was going to act on this. This matter is still pending.

2.   <u>E-mail system</u>

44.   The Chief, ISU is responsible for access control over the e-mail system. He may not always by informed of terminated employees and consultants in order to close their e-mail account, and these accounts may still be accessed remotely via the Internet. The Chief, ICTS confirmed that UNECE could run its own retention policy for e-mail. Such a policy is currently employed by ISU but it has never been endorsed by the ICTMG.

Recommendation:

> UNECE, ISU should
> (a) Develop a security policy covering all aspects of IT security within UNECE. The policy should define the roles and responsibilities of staff associated with computer security, including non-UNECE staff. It should be supported by written procedures over the granting and modification of access rights and the removal of profiles in the case of terminated users. The security policy would be approved by the ICTMG;
> (b) Carrying out periodic or cyclical reviews of access rights to ensure they conform with the policy;
> (c) Implement a mechanism (e.g. assign responsibility to the Executive Office or the person's direct supervisor) so that ISU is immediately informed of all staff movements;
> (d) Follow-up on the issues of data confidentiality and data retention with the Secretariat ICT Board; and
> (e) Establish a policy over the granting and administering of access rights to the e-mail system, including remote access, and the closure of e-mail accounts. This policy would form part of the overall security policy (Rec. 09).

Management response: *UNECE accepts recommendation 09. Reviews of access rights will be carried out on a cycle to be determined.*
Implementation: first half of 2007.

OIOS takes note of management's response. It advices management to try and bring forward the implementation of those measures that can be immediately taken in hand.

E. Contingency and Business Continuity Planning

1. Back-up and recovery of systems

45.   ISU does not run or operate a server or computer room. All of UNECE's production servers are outsourced to UNOG/ICTS, ICC or private companies. The back-up-and-restore services for all production servers are also outsourced to UNOG/ICTS and ICC. These services are noted in the respective service agreement. Security arrangements over back-up media are also the responsibility of the service provider; however, there is only limited explanation of this in either of the agreements.

46.   There is no mention, in either of the agreements, what the provider's liability would be if the services were not met. It may be difficult for UNECE to obtain some form of financial compensation given that UNOG/ICTS and ICC are both UN entities. UNECE should at least establish a formalized incident-reporting procedure with its service providers whereby the latter would provide ISU with a detailed report of any incident affecting its systems or data, and the action taken to resolve this.

Recommendation:

➢   UNECE, ISU should:
(a) Establish a formalized incident-reporting procedure with its service providers;
(b) See that responsibility for ensuring proper security arrangements over back-up media are detailed in the Service Agreements with the service providers; and
(c) In coordination with ICTS and ICC respectively, carry out a recovery exercise and determine the optimal period when such an exercise should be conducted. The procedures for this exercise would form part of the disaster recovery plan (Rec. 10).

Management response: *UNECE accepts recommendation 10 but notes that there is no guarantee that the respective service providers will agree on the inclusion of such clauses. In particular, for changes in the SDAs with ICC, an ICC Management Committee resolution may be required. Implementation: (a) and (b) fourth quarter 2006 (change in service agreements); (c) starting in 2007.*

OIOS takes note of management's response. It advices management to try and bring forward the implementation of (c) and will keep the recommendation open pending receipt of supporting documentation evidencing implementation

2. Disaster recovery and business continuity planning

47.   UNECE does not have a plan aimed at ensuring that in the event of a major disaster affecting its computer facilities, management would be able to mobilise alternate arrangements for processing data and continue to provide its core services efficiently while the facilities are being properly restored.

48.   Business continuity planning (BCP) is wide in scope and requires input from all user departments. Senior management needs to be aware of the wider aspects of BCP and the fact that this is not something that is restricted to, or can be handled solely, by ISU.

49.   BCP also requires coordination with external parties such as the suppliers of hardware, software and communications service and equipment. In the case of UNECE, this means close coordination with UNOG/ICTS, ICC and the Information Technology Services Division (ITSD) at UNHQ in New York. It also places restrictions on how far the Commission can move ahead. For example, UNOG/ICTS has acquired a Storage Area Network (SAN). This will undergo a test period of about 6 months and it will not be possible to perform a simulation of a disaster scenario until the lines are in place. UNECE should monitor developments in this area.

50.   An effective business continuity plan needs to be preceded by a risk assessment to define the mission-critical functions and data, and the systems supporting them. UNOG/ICTS, in cooperation with ITSD, is leading this project for the UN in Geneva. A first assessment of clients' needs using a Business Impact Analysis (BIA) has been carried out but this will probably need revisiting. Business Owners need to correctly identify and define the mission-critical data. OIOS understands that there has been significant divergence in the Business Owners' interpretation of which data is mission-critical. The importance of data also needs to be evaluated at the entity level.

   Recommendation:

   ➤   UNECE, ICTMG should collaborate with UNOG/ICTS and
        UNHQ/ITSD, and:
        (a) Hold a workshop for the members of the ICTMG to advice on
        the categorization of mission-critical systems and data. This would
        take into consideration any changes resulting from the on-going
        reform of UNECE; and
        (b) Draw up a project plan for the implementation of a Business
        Continuity Plan that details the stages to be followed to ensure that
        the critical business functions are properly recovered and become
        operational within acceptable timeframes (Rec. 11).

Management response: *UNECE would like to establish a suitable procedure for the definition of a Business Continuity Plan and accepts recommendation 11.*
Implementation: second half of 2007.

OIOS takes note of management's response. It will keep this recommendation open until it receives a copy of the Business Continuity Plan for UNECE.

V.   FURTHER ACTIONS REQUIRED ON RECOMMENDATIONS

51.   OIOS monitors the implementation of its audit recommendations for reporting to the Secretary-General and to the General Assembly. The responses received on the audit recommendations contained in the draft report have already been recorded in the recommendations database. In order to record full implementation, the actions/documents described in the following table are required:

Recommendation No.	Additional actions and/or documents required from UNECE for closure of the open recommendations
AE2005/720/01/01	Copy of the relevant extract from the first Directors' meeting minutes and/or agenda pertaining to the review and decision of strategic and high-level ICT policy matters.
AE2005/720/01/02	Document showing the functions associated with the role of Chief Information and Communications Technology Officer and terms of reference for the senior manager assigned this role.
AE2005/720/01/03	Copy of the documentation listing the ICT-related tasks applicable to the Commission and the role of the ISU; copy of the relevant extract from the first Directors' meeting minutes and/or agenda for which the Chief, ISU attended.
AE2005/720/01/04	Copy of the Geneva ICT Board's Terms of Reference and minutes of the Board's first meeting.
AE2005/720/01/05	Copy of the ICT strategy for UNECE endorsed by the Executive Secretary.
AE2005/720/01/06	Copies of: (a) the ICT Strategy; (b) presentation to senior management on ICT policies and procedures; (c) procedures for user acceptance testing and formal sign-off of project outputs.
AE2005/720/01/07	Copy of the service catalogue.
AE2005/720/01/08	Copy of the training strategy and programme for certification.
AE2005/720/01/09	Copy of the overall security policy and procedures approved by the ICTMG; copy of the policy over the granting and administering of access rights to the e-mail system and confirmation of completed review of access rights.
AE2005/720/01/10	(a) Copy of formalized incident-reporting procedure with service providers; (b) copy of updated Service Agreements with the service providers detailing security arrangements over back-up media; (c) evidence that a recovery exercise has been carried out, and the related procedures.
AE2005/720/01/11	Copy of the Business Continuity Plan for UNECE.

VI.   ACKNOWLEDGEMENT

52.   I wish to express my appreciation for the assistance and cooperation extended to the auditors by the staff of the UNECE, in particular those of the ISU.

Egbert C. Kaltenbach, Director
Internal Audit Division II
Office of Internal Oversight Services

Chief ICT Officer responsibilities

The responsibilities of a Chief Information and Communications Technology Officer within UNECE could include the following:

- Keep the organization's information management strategy and IT in alignment with its overall management strategy and priorities;

- Ensure that the information management policies and standards are strictly followed and the ICT infrastructure is well managed;

- Chair ICTMG meetings (unless these call for the presence of the Executive Secretary - Rec. 01);

- Represent the Commission on the Secretariat's ICT Board;

- Monitor compliance with the UNECE's ICT strategy and the global ICT policies of the Secretariat, including those over any new ICT initiatives;

- Ensure that accurate and timely information for decision-making is available to UNECE's senior executives;

- See that security policies and procedures over access rights to the network, e-mail and application systems, as well as physical access to computer and communications equipment are implemented;

- Oversee the purchase and allocation of hardware and other IT equipment;

- Monitor procedures over the back-up and recovery of systems and data; and

- Coordinate business continuity planning.