



**Office of Internal Oversight Services
Internal Audit Division II**

Reference: AA – ICTY (005/05)

01 March 2005

TO: Mr. Hans Holthuis, Registrar
International Criminal Tribunal for the Former Yugoslavia

FROM: Egbert Kaltenbach, Director
Internal Audit Division II, Office of Internal Oversight Services (OIOS)

SUBJECT: **OIOS Audit of ICTY Information Technology Management
(AA2004/270/01)**

1. I am pleased to submit the final report on the OIOS audit of ICTY Information Technology (IT) Management, which was conducted during June and October 2004, by Bharat B. Manocha and June Tan, in The Hague, Netherlands. A draft of the report was shared with the Chief Administrative Officer in December 2004 whose comments, which were received on 18 January 2005 and further clarifications on 9 February 2005, are reflected in the final report.
2. I am pleased to note that most of the audit recommendations contained in this final report have been accepted and that ICTY has initiated their implementation. The table in paragraph 51 of the report identifies those recommendations, which require further action to be closed. I wish to draw to your attention that OIOS considers recommendations 1, 2, 3, 4, 6, 7, and 8 as being of critical importance.
3. I would appreciate it if you could provide Mr Manocha, the ICTY resident auditor, with an update on the status of implementation of the audit recommendations not later than 30 October 2005.
4. Please note that OIOS is assessing the overall quality of its audit process. I therefore request that you consult with your managers who dealt directly with the auditors, complete the attached client satisfaction survey form and return it to me under confidential cover.
5. I would like to take this opportunity to thank you and your staff for the assistance and cooperation extended to the audit team.

Attachments: Final Report and Client Satisfaction Survey Form

Copy: Mr. Kevin St. Louis, Chief Administrative Officer, ICTY (by e-mail)
Mr. David Falces, Chief, ITSS, ICTY (by e-mail)
Mr. S. Goolsarran, Executive Secretary, UN Board of Auditors (by e-mail)
Mr. C. F. Bagot, Chief Nairobi Audit Section, IAD II/OIOS (by e-mail)
Mr. M Tapio, Programme Officer, OUSG, OIOS (by e-mail)
Mr. B B. Manocha, Resident Auditor (by email)
Ms. L. Kiarie, Auditing Assistant (by e-mail)

United Nations
Office of Internal Oversight Services
Internal Audit Division II

AUDIT REPORT

**AUDIT OF ICTY INFORMATION TECHNOLOGY
MANAGEMENT
(AA2004/270/01)**

Report date: 01 March 2005

**Auditors: Bharat B. Manocha
Hui Ming June Tan**



**Office of Internal Oversight Services
Internal Audit Division II**

OIOS AUDIT OF ICTY INFORMATION TECHNOLOGY MANAGEMENT

(AA2004/270/01)

EXECUTIVE SUMMARY

From June to October 2004, OIOS conducted an audit to assess the adequacy of ICTY's arrangements for Information Technology (IT) Management. The total expenditure was approximately US\$18 million in 2002-2003. OIOS concluded that ICTY had given insufficient attention to the nature and type of IT services that would be required for the completion strategy and that it needed to strengthen its arrangements to get maximum leverage out of its investment in IT as described in more detail below.

Governance

At the time of the audit, ICTY did not have an effective governance mechanism for oversight of IT activities. ICTY needed to establish an Information and Communications Technology Committee to comply with ST/SGB/2003/17 and to ensure effective coordination and prevent overlapping between different organs of the Tribunal. OIOS is pleased to note that ICTY established the Committee in August 2004.

Planning and Monitoring

To ensure that ICTY has the right level and type of services to meet the challenges of the completion strategy, OIOS recommended that ICTY formulate an IT strategy, which should be supported by a long range plan covering the remaining period of the completion strategy and short range plans. These would provide a basis for: allocating and monitoring resources; communicating to interested parties how the IT strategy will be delivered; and demonstrating how IT activities have been prioritised to meet the Tribunal's needs. OIOS is pleased to note that ICTY management and the ICT Committee have supported the creation of a strategy.

Whilst ITSS had developed tools to monitor some of its services, there was no overall monitoring framework in place to apprise senior management how IT resources were being used to meet their needs. OIOS recommended the creation of such a framework covering targets and performance indicators, the use of monitoring tools (including customer satisfaction surveys), whom to report and what to report.

Organizational Structure

ICTY had not undertaken an analysis how and in what way current IT support might change as a consequence of ICTY downsizing its activities as it nears its completion date. OIOS recommended such an exercise be carried out which should consider: cost effectiveness of outsourcing compared to maintaining resources in house; the merger / reorganisation of units as a consequence of reducing work load; and, whether ITSS should continue to maintain and support all current projects and applications or whether some could be discontinued to save costs.

Application Development

ICTY needed to undertake a review of the type and nature of application development needed over the remaining life of ICTY. If a need for major application development was identified, OIOS further recommended a review of the existing methodology, which should include the creation of a Project Selection Committee.

Training

There was no assurance that the IT training provided had added value since training was conducted based on historical trends and not on training needs analysis and there was no evaluation if training had improved staff efficiency. There was also substantial scope for improving utilization of training resources, as staff were performing tasks not required.

Inventory Management

There was no assurance that all ICT assets assigned to ITSS were properly accounted for. Some 200 assets with an acquisition value of US\$380,000 were reported to be missing or lost in 2003. The reasons adduced for these losses reinforced OIOS assessment that ITSS needed to take urgent additional steps to comply with ST/AI/374 and to safeguard its assets. Certain of these matters have been referred to OIOS Investigations Division for their consideration and work was ongoing at the time this final report was issued.

ICTY commented that the report was balanced and fair in the issues that it did present. Although not generally part of the format of this type of report, ICTY would have appreciated some discussion of the calibre of services which ITSS provides to the Tribunal, as in general it is believed that they are considered as being an important and productive partner in helping the organisation achieve its mandate. OIOS appreciates the comments and would like to thank ICTY for the excellent co-operation received in the conduct of this audit, and the positive response it received to the issues raised. OIOS is fully supportive and adheres to the concept of positive reporting and would like to recognise the important role played by ITSS. No specific conclusion was drawn on the quality of services provided by ITSS because the focus of the audit was on the overall management of IT, and part played by ITSS, which is commented upon extensively throughout the report.

February 2005

TABLE OF CONTENTS

CHAPTER	Paragraphs
I. INTRODUCTION	1- 4
II. AUDIT OBJECTIVES	5
III. AUDIT SCOPE AND METHODOLOGY	6
IV. AUDIT FINDINGS AND RECOMMENDATIONS	7 - 50
A. Governance	7 – 8
(a) Information and Communications Technology (ICT) Committee	7 – 8
B. Planning	9 – 12
(a) IT strategy	9 – 11
(b) Long and short term planning	12
C. Monitoring IT activities	13 – 15
D. Organisation Structure	16 – 24
(a) Integration of SDU with ITSS	16 - 19
(b) Organization and management of IT support	20 - 22
(c) Management span of control within Operations Unit	23 - 24
E. Application Development Methodology	25 – 28
F. IT Training	29 - 30
G. Contract Management	31 - 36
(a) Management of repair and maintenance contracts	31 – 32
(b) Services not included in the contract	33
(c) Controls over repair and maintenance of equipment	34 – 36
H. Asset Management	37 - 50
(a) Monitoring of ICT assets	37 - 40
(b) Procurement and management of ICT assets	41 – 42
(c) Loss of ICT assets	43 – 50
V. FURTHER ACTIONS REQUIRED ON RECOMMENDATIONS	51
VI. ACKNOWLEDGEMENT	52

I. INTRODUCTION

1. This report discusses the results of an OIOS audit of ICTY Information Technology (IT) Management. The audit was carried out between June and October 2004 in accordance with the International Standards for the Professional Practice of Internal Auditing.

2. Information Technology Support Section (ITSS), a section under the ICTY Registry, is responsible for providing Information and Communication Technology (ICT) services to all the three organs in ICTY; Registry, Chambers and Office of the Prosecutor (OTP). ITSS comprises five units: Development Unit, Operations Unit, Training Unit, Systems Development Unit (SDU) and the Office of the Chief ITSS. As at October 2004 ITSS had 71 staff [13 Professional (P) and 58 General Service (GS)]. The Chief, ITSS reports to the Chief Administrative Officer, Registry.

3. IT related expenditure for both staff and IT non staff items were as follows

Table 1: Total IT costs in ICTY (US\$ in'000)

Description	Total expenditure 2002-2003	Budget for 2004 -2005
Staffing costs (Note 1)	7,753	7,213
Non staffing costs (Note 2)	10,419	9,444
Total IT costs in ICTY	18,172	16,657

Note 1: Staffing costs for 2002-2003 were based on staffing levels in ITSS and SDU as at 31 December 2003 multiplied by the standard salary costs for ICTY. Staffing costs for 2004-2005 were based on the ITSS regular budget-staffing table for the current biennium and the 11 posts from OTP transferred to ITSS during 2004, multiplied by standard salary costs for ICTY.

Note 2: Total expenditure certified by the Chief, ITSS during the biennium 2002-2003, as per ICTY accounting records.

4. A draft of the report was shared with the ICTY, Chief Administrative Officer (CAO) in December 2004 whose comments, were received on 18 January 2005. ICTY provided further clarification/correction of their response on 09 February 2005. The responses have been reflected in this final report.

II. AUDIT OBJECTIVES

5. The overall objective of the audit was to provide the ICTY Registrar with an assessment of the adequacy of ICTY's arrangements for management of IT. This included assessing:

- a) The IT governance and planning framework;
- b) IT activities undertaken by ITSS and the adequacy of the arrangements for identification and oversight of these activities; and,
- c) Whether IT activities were being carried out in compliance with UN Regulations and Rules;

III. AUDIT SCOPE AND METHODOLOGY

6. The audit focused on the adequacy of arrangements for managing IT, in particular, ITSS activities during January 2002 to September 2004. It excluded communications. The audit included a review and assessment of internal control systems, interviews with staff, analysis of applicable data and a review of the available documents and other relevant records.

IV. AUDIT FINDINGS AND RECOMMENDATIONS

A. Governance

(a) ICTY Information and Communications Technology (ICT) Committee

7. ST/SGB/2003/17 dealing with the Information and Communications Technology Board (ICTB) directed that all Departments and Offices Away from Headquarters (OAH) create internal or local information and technology groups or committees following the pattern of the ICTB whose responsibilities would be to ensure;

- a) Departmental strategies are aligned with the overall objectives of the Secretariat;
- b) Information on departmental systems, resources and assets is maintained and updated on a regular basis;
- c) Existing systems are reviewed to confirm their cost effectiveness; and
- d) Standard methodologies are developed and consistently used for ICT projects.

8. ICTY did not establish an Information and Communications Technology (ICT) Committee as required. While Chief, ITSS had established an informal working group to discuss requirements and share information within the three organs, it was not formally constituted and did not have the mandate to take decisions. Consequently, the working group could not provide an effective substitute for the ICT Committee. In the absence of such a committee, there was limited coordination within the three organs leading to duplication of effort across ICTY, inconsistent systems being used and an inability to transfer some information between the various systems. At the time of the audit, Chief, ITSS informed the audit team that ICTY was in the process of establishing an ICTY ICT Committee along the lines required by ST/SGB/2003/17. *ICTY commented that as from 23 August 2004 the Tribunal had established the local ICT Committee in accordance with the referenced Secretary General's Bulletin. Membership of the Committee has been strategically determined so that senior management from all of the organs of the organization are well represented.* In view of this additional information, no recommendation is raised.

B. Planning

(a) IT strategy

9. General Assembly (GA) resolution 57/304 of 16 May 2003 welcomed the significant step the UN ICT strategy (A/57/620 dated 20 November 2002) represented in developing a strategic framework to further guide the development of ICT within the UN and requested that the IT requirements for the various duty stations be fully integrated into the strategy.

10. In the opinion of OIOS, the above meant that ICTY needed to create its own IT strategy document, which included those elements of the UN ICT strategy applicable to ICTY, and included any other specific ICT issues relevant to it. At the time of the audit, ITSS did not have an ICTY IT strategy. While ITSS had a budget document outlining resources required, in the opinion of OIOS, this is not a substitute for a strategy document explaining how IT will support achievement of the ICTY mandate, and the completion strategy. The absence of such a strategy is also seen as a contributory factor to other findings made in this report.

Recommendation:

To ensure compliance with A/57/620 (the UN ICT strategy) and to assist ICTY in optimising its resources for achievement of the completion strategy, the ICTY Information and Communications Technology Committee should oversee the creation and implementation of an ICTY Information Technology strategy document (Rec. 01).

11. *ICTY commented that it agrees with this recommendation, as do the members of the local ICT Committee. The draft strategy will be presented for review and comment at the next meeting of the Committee, which will be held in early February. OIOS welcomes and supports the proposed initiative and will close the recommendation upon receipt and review of the ICTY Information Technology strategy document.*

(b) Long and short term planning

12. ITSS had a work plan for 2003–2004 that described goals to be achieved. At the time of the audit, this plan had not been updated for 2004–2005 to include the more recent challenges facing ICTY such as the financial uncertainty and the need to serve OTP after the merger of the Systems Development Unit (SDU) with ITSS. In the view of OIOS, there also needed to be consideration of the type and nature of IT short and long-range plans required to link with the biennium work plans. These types of plans are important because they provide a basis for: allocating and monitoring use of resources; communicating to interested parties, how the IT strategy will be delivered; and demonstrating how IT activities have been prioritised to meet the ICTY's needs. This is considered especially important to ensure that IT resources are correctly matched with the aims and objectives of the completion strategy. *ICTY commented that this will be implemented via the ICT Committee's IT strategy, the associated detailed programmes of work, and ITSS' use of project*

management discipline. Since ITSS work activities are structured around the requirements of the substantive and support offices, appropriate budget planning guidance will be prepared and disseminated to all parties as part of the budget process of the 2006-2007 biennium. In view of this additional information, no recommendation is raised.

C. Monitoring IT activities

13. In the opinion of OIOS, Registry had a responsibility to ensure that ICTY had a monitoring framework in place to apprise senior management of the three organs how IT resources were being used to meet their needs.

14. ITSS, who were responsible for monitoring IT, had implemented software to monitor some of the IT services provided. However, monitoring activities were not being undertaken in the context of any approved monitoring framework or supported by any customer satisfaction surveys. There was also an absence of monitoring information such as targets and performance indicators and hence ITSS was not in a position to assess the impact of services provided or to demonstrate the adequacy of resources as explained below:

- a) ITSS could not assess if the Development Unit (DU) completed projects on schedule or experienced time and cost overruns;
- b) There was no evaluation if the projects developed by DU delivered the planned benefits;
- c) There was limited monitoring of resources deployed in SDU during the period 01 April to 30 September 2004.
- d) The training capacity was not fully utilized (the average fill rate being 55 percent). The ITSS Training Unit did not conduct any evaluation to ascertain the reason for low fill rates.

Recommendation:

To ensure that ICTY is able to leverage the maximum benefit from Information Technology implemented and to meet programmatic needs, Chief, Information Technology Service Section should develop a monitoring framework that should be approved by the ICTY Information and Communications Technology Committee (Rec. 02).

15. *ICTY commented that it agreed with the recommendation and added that. "we strongly believe that the central setting of standards by ITSD/HQ, would save us and other non-HQ offices from reinventing the wheel. The setting of standards by each individual UN office, gives none of us the benefits and efficiencies of a centralised standard by which to compare ourselves with. I intend to raise the issue with ITSD to see if such standards exist and if they can assist us with providing guidelines, methodology and/or other pertinent information". OIOS appreciates the response and will close the recommendation upon notification of the implementation of the monitoring framework.*

D. Organisation Structure

(a) Integration of SDU with ITSS

16. As part of the implementation of an OIOS recommendation in its audit of Office of the Prosecutor (OTP) (Review of the Office of the Prosecutor at the International Criminal Tribunals for Rwanda and former Yugoslavia A/58/677), OTP transferred the Systems Development Unit of OTP (SDU), comprising 10 staff, to ITSS on 31 March 2004. OIOS expected that ITSS would have undertaken advance planning to determine how to maximise the benefits of this transfer, in particular whether there would be synergies and savings through a merger with similar units within ITSS. No merger took place, the OTP staff continuing to operate as a separate unit until September 2004. In OIOS's opinion, a merger could save at least one post, the Head of SDU (P3), with a potential saving of approximately US\$240,000 per biennium. ITSS has yet to realize these potential savings.

17. *ICTY pointed out some of the concrete steps it had taken in the period April through August 2004:*

- *The SDU was fully integrated in with the human resources administration of the rest of the Section.*
- *Uptake meetings were held with incoming staff to determine their personal and professional objectives.*
- *Extensive discovery exercises were undertaken to determine the scope of SDU duties and responsibilities.*
- *An analysis was done to determine how if at all, the SDU and ITSS processes mapped onto each other's existing organisational structures.*
- *In recognition of the major differences in culture and mission between the two organisations, careful moves were made to ensure that all parties were adequately consulted. This process was hailed by the Staff Union as a model by which other sections could seek to pre-empt conflict and discord.*

18. OIOS thanks ICTY for the clarification, but would like to emphasize that to maximise the benefits of the merger, action could have been taken earlier. This would have enabled ITSS to share staff and other resources with SDU to provide a better service to OTP.

Recommendation:

To maximise savings from the transfer of IT staff from the Office of the Prosecutor to ITSS, Chief, Information Technology Service Section, ICTY should review the possible integration of these staff within existing ITSS units with the potential saving of one P-3 post, approximately US\$240,000 per biennium (Rec. 03).

19. *ICTY agreed that the functions of the SDU manager were no longer required, but ICTY may need to redeploy the actual post to cover the newly emerging functions, which are an organisational governance obligation (SG/SGB/2003/17).*

OIOS appreciates the response and will close the recommendation upon receipt of documentation that the post has been abolished and / or documentation explaining the re-use of the post, including the revised classified job description.

(b) Organisation and management of IT Support

20. OIOS expected that ICTY would have analysed how and in what way current IT support might change as a consequence of ICTY downsizing its activities as it nears its completion date; for example the closure of field offices and reduction of activities in ICTY headquarters. Chief, ITSS explained that no such analysis had been requested or had taken place so far. OIOS is of the opinion that the following analysis is urgently needed to provide senior management with an understanding of the options for the provision of IT support over the remaining life of ICTY:

- a) Analysis of when it is more cost effective to outsource than to maintain resources in house – for example, OIOS is pleased to note that repairs and maintenance have already been outsourced. However, OIOS is of opinion that services such as help desk and application development have potential to be outsourced.
- b) Analysis of which units may need to be merged or reorganised as a consequence of reducing workload. For example, it appears as if the workload of Workshop and Audio Visual Unit has already reached a point where merger should be considered.
- c) Analysis of the changing nature and functions of management required as a consequence of reorganisation, integration, and outsourcing. For example, whether ITSS should continue to maintain and support all projects / applications currently supported or some of these can be discontinued to save costs.

Recommendation:

To assist in determining the optimum utilization of resources for Information Technology support over the remaining life of ICTY, Chief, Information Technology Service Section should submit a paper to the Information and Communication Technology Committee outlining: whether it is more cost effective to outsource than to maintain resources in house; a strategy for merging / reorganising units as a consequence of reducing work load; and, whether ITSS should continue to maintain and support all current projects / applications or some could be discontinued to save costs (Rec. 04).

21. *ICTY commented that “contrary to OIOS assertion that nearing the completion equates to a significant reduction in activity, ICTY management would like to observe that while the activities associated with investigations are being reduced, the completion strategy calls for the Tribunal to operate at full capacity until trials-in-chief are completed at the end of 2008... support of field offices and field activities has already been optimised. Consequently, due to the efficiency with which the offices are already supported, a reduction in the number and functioning of the offices would not result in significant associated reductions in staffing. Back at the Headquarters in The Hague, the ICTY management has determined that there*

will be only minor reduction of activity through 2008. As only minor staff reductions are anticipated, specific critical milestones such as the closure of the Annex and Administration buildings, which would have an impact on IT support as well as other administrative support, are now not deemed plausible until end of 2007. Similarly, until the ICT Board can and does prioritise the outstanding IT projects, it would be premature for ITSS to independently initiate an analysis. It would make more sense to first determine the priorities and set forth a timeframe for completion. ITSS can then set forth to determine appropriate staffing levels as the Organization downsizes. Having noted this, it should be made clear that ITSS has already invested significant effort in investigating the principle and practice of outsourcing over the last years...Finally returning to the matter of presumed workload decreases, it is ICTY Administration's opinion that as the ICTY has matured, so its staff and management team have increasingly viewed the IT component as a means of developing further efficiencies and innovations...ICTY management is fully aware that not all the current backlog of projects can or should be undertaken. But this is exactly the reason why ICTY intends to submit each project to a HLBC review so that it can be determined whether such projects will reap a suitable benefit as we near the completion of the ICTY mandate. It seems that the workload is chiefly determined not by the raw numbers of staff or by the number of physical facilities, but by the number, complexity and criticality of systems deployed”.

22. *ICTY concluded that “in general however the proposal that ITSS continue to review, with the involvement of the ICT Committee, the opportunities for outsourcing, merger, reorganization and system discontinuation is sound, and ICTY Management fully supports this recommendation”.* OIOS notes the response and will close the recommendation upon receipt of a strategy paper to the ICT Committee outlining whether it is more cost effective to outsource than to maintain resources in-house; a strategy for merging / reorganising units as a consequence of reducing work load; and, whether ITSS should continue to maintain and support all current projects/applications or some could be discontinued to save costs and the decision of the ICT committee.

(c) Management span of control within Operations Unit

23. While the Head, Operations Unit (P-4) supervised approximately 50 GS staff, the P-2 supervised 7 GS staff, and the P-3 did not have any direct supervisory responsibility as he was entrusted with recruitment, procurement and implementing special projects such as the OTP Evidence Digitizing Project. Activity in the areas supervised by the P-3 has decreased because of the cash flow crisis and the completion strategy. In view of this and the wide span of control of the P-4, OIOS is of the opinion that the Operations Unit should be restructured to assign additional supervision responsibilities to the two professional staff in the Unit.

Recommendation:

To improve the management span of control within the Operational Unit, Chief, Information Technology Service Section, ICTY should review and restructure management responsibility for staff between the professional grades (Rec. 05).

24. *ICTY commented that ITSS is currently considering a re-vamp of the organizational structure of the Section and the concerns noted by OIOS will be taken into account at the time of the reorganization.* OIOS thanks ICTY for the prompt action taken and will close the recommendation upon receipt and review of a copy of the new organisational structure, which deals with issue of the span of control within the Operational Unit.

E. Application Development Methodology

25. Given the limited life span and the financial crisis facing ICTY at the time of the audit, OIOS expected that ICTY would have undertaken a review of the type and nature of application development needed over the remaining life of ICTY. OIOS observed that ICTY had not established mechanisms to review the following key issues:

- a) How much new application development is required over the next four to five years and what criteria should be used to determine what represent cost effective development at this stage of ICTY's life; and
- b) Whether Development Unit (DU) should continue to maintain and support the projects it developed or whether this function should be entrusted to the Operations Unit to derive synergy of operations as well as to enable DU to focus on its core business of developing applications.

26. Should ICTY establish that there is still a need to develop major applications during the remaining period of its life, it should review and modify its existing project methodology. The current methodology is neither comprehensive nor in line with UN Secretariat's global ICT strategy stipulated in A/57/620. Its value as a guide to ensure that the staff were familiar with the process and that all adopted a consistent process for identifying and developing projects was therefore limited. OIOS noted that the existing methodology had the following weaknesses:

- a) The existing project management methodology had not been updated since 1999 and did not include guidelines on areas such as the criteria for selection, prioritization of projects, monitoring, and post implementation review;
- b) Cost benefit analysis was not undertaken; hence there was no assurance that the projects developed were those that generated the best returns;
- c) A project selection committee was not established to ensure that similar needs or opportunities within the three organs were identified and reconciled.
- d) There was no post-implementation review of applications developed to determine if the projects delivered the expected benefits;
- e) Actual time and resources expended on the projects were not monitored, to assist in identifying whether projects were managed in an efficient and effective manner or projects experienced time and cost overruns.

Recommendations:

To determine what resources are required for application development over the remaining life of ICTY, Chief, Information Technology Service Section should submit a paper to the Information and Communication Technology Committee outlining:

the extent of new application development foreseen and whether it is worthwhile to undertake the development at this stage of ICTY's life. The paper should also discuss whether the Development Unit should continue to maintain and support the projects it developed or this function could be transferred to the Operations Unit (Rec. 06).

27. *ICTY commented that "the current (High Level Business Case) HLBC analyses seem to conclude that with even five years remaining in the Tribunal's lifespan, investment in development is showing strong payback, and still continues to make sense. Clearly there will be a point at some point in the life of the Tribunal when, due to the diminishing amount of time left, it will become increasingly difficult to extract sufficient benefit to justify the cost of investment. ICTY Management agrees that it would be helpful if the Tribunal could foresee at which point in time dismantling the development capacity becomes sensible, and ITSS will attempt to make this educated guess in the IT strategy document. However, in spite of this estimate, ICTY Management feels that it makes sense for the ICT Committee to continue to review the individual programmes and projects that make up the IT strategy and tactical plans, and based on its on-going assessment that these activities concretely assist the Tribunal in achieving its mandate in a cost-effective and efficient way, decide on a case-by-case basis whether or not to proceed with development... With regard to the question of the DU continuing to maintain applications, it is important to understand what is meant by maintenance. The term software maintenance has more to it than one would initially assume. It includes adding and subtracting system functionality, performance tuning, data conversion, migration and debugging. This is in contrast to software support, which entails screening calls, acting as a focal point, creating user accounts, providing application access to application, installation of the application, and helping users to work around known bugs. Presently, in majority of the cases, user calls are already handled by ITSS Operations/ Dispatchers, and if any support activities are currently performed by DU, they can be transferred to Operations/Help Desk. Nonetheless, the maintenance tasks, as defined above, must be done by a qualified programmer or data manager, who possesses specific application, database and programming knowledge".* OIOS thanks ICTY for the additional clarification which outlines the issues that OIOS wishes to see addressed in the paper it proposes should be presented to the ICT Committee. The recommendation will be closed upon receipt of the paper to the ICT Committee outlining: the extent of new application development foreseen and whether it is worthwhile to undertake the development; and, whether the Development Unit should continue to maintain and support the projects it developed or this function could be transferred to the Operations Unit and the decision of the ICT Committee on the paper.

Recommendations:

Should ICTY determine a need for major application development over its remaining life, to ensure the effective and efficient implementation of these projects and to ensure compliance with A/57/620, Chief, Information Technology Service Section should update the project management methodology in line with industry norms such as Control Objectives for Information and related Technology (COBIT) and ensure that all staff are aware of

how to follow the methodology (Rec. 07).

28. *ICTY commented that “it agrees with the general observations; however, we would like to mention a few points which are as follows: in line with the OIOS’ recommendation of 1998, ITSS/DU has been following an application development methodology, CMM, which is also a part of ITIL application management, and is widely practiced by both governmental and commercial organizations throughout the world. The current report recommends adopting COBIT as a model; however, it is vital to note that COBIT unlike ITIL, does not specifically incorporate application development. We concur that current methodology must be updated according to A/57/620 and ST/SGB/2003/17. Nevertheless, we would like to point out that although not strictly in line with ST/SGBI2003/17 a framework in ITSS/DU is in place for project selection, monitoring and post implementation review. Thanks to this approach, ITSS/DU has been able to meet users’ requirements successfully and so far, there is no record of project failure. In stark contrast, it is worth pointing out that on an average every year 60 % of worldwide software development projects are considered failures (Economist, Nov 25th 2004), indicating that ITSS has been extraordinarily successful at managing development projects”.* OIOS appreciates the additional clarification. COBIT is a high-level organisational tool, which would require the adoption of a methodology such as ITIL, at the implementation level, which is recognised within the COBIT framework itself. OIOS will close the recommendation upon receipt and review of the revised project management methodology approved by the ICT Committee.

F. IT Training

29. As a consequence of the integration of SDU within ITSS, ITSS had an ITSS Training Unit and an OTP SDU Training Unit. The three staff of ITSS Training Unit (1 P-2 and 2 GS) provided general training on standard desktop applications to all ICTY staff. The OTP SDU Training Unit with three GS staff provided training in OTP specific applications. The activities of both training units were reviewed and a number of general issues were identified which have been referred to under the sections above on ‘Monitoring’ and ‘Organization Structure’. In addition to these general issues OIOS noted inadequate assessment of the need for and inadequate planning of training activities as discussed below:

- a) The two Training Units did not carry out any training need analysis to determine the training requirements of respective staff. The input from staff and managers was minimal and courses were conducted based on the historic trend.
- b) More than 80 percent of the training conducted by the ITSS Training Unit was on standard desktop applications although almost every job description stated that staff should be proficient in these applications.
- c) The two Training Units did not evaluate if the training imparted had added value in enhancing the efficiency of the staff members’ work.
- d) The ITSS Training unit spent over 200 hours preparing course materials that were to be provided by the vendor¹.

¹ Extract of contracts with vendors: *“The Contractor shall provide all course materials and documentation required for the training, with permission to duplicate and distribute these materials to UN-ICTY staff.”*

- e) The details of the courses conducted by OTP Training Unit staff were not available and ITSS did not evaluate the efficiency of staff resources.
- f) The ITSS Training Unit spent over 2,000 hours re-working training materials prepared by UN Headquarters (UNHQ) for the Galaxy system. Chief ITSS explained that UNHQ and ICTY management encouraged them so that these materials could be shared with other UN offices. However, when ITSS Training Unit forwarded the draft material there was no follow up from UNHQ and as a result; the material was not shared with other UN offices. The training material was not even used in ICTY since it stopped using the Galaxy system in August 2004.

Recommendation:

To maximize the efficiency and effectiveness of training provided, Chief, Information Technology Service Section should develop a training framework that includes a needs analysis of the training required over the remaining life of ICTY, and evaluate if the training conducted enhanced staff efficiency. The basis for the inclusion of each course should be documented and submitted to Information and Communication Technology Committee for approval (Rec. 08).

30. *ICTY commented “that although ITSS had not conducted needs analyses during period indicated in the audit, ITSS Training Unit had carried out two training needs analyses in 2001 and 2002. Based on the surveys, the course curriculum was determined. Post training results showed that staff members felt that they saved on average 45 minutes a day at carrying out their regular duties. The Training Unit recognizes that 80% of its classroom curricula are on standard desktop applications, however a 55% fill rate shows that this training is still required, further indicating that screening of staff IT skills upon uptake is not as effective as it could be. In terms of the training materials provided as part of the Sanction and CaseMap, it was never the intention that the vendors delivered the final training materials as part of their contracts. Considering the extensive custom procedures for the use of these products in the OTP would need to be developed, it was accepted that the vendors would only able to deliver generic materials for later adaptation by ICTY. In response to the comments in regard to Galaxy, the Training Unit made frequent formal requests to UN Headquarters in NY for Galaxy training materials. UNHQ was unable to provide them as they did not exist. Therefore, in support of ICTY’s scheduled implementation of Galaxy in April 2003, ICTY HRS submitted a formal request to the Training Unit for development of training materials. The Training Unit is working on a follow-up targeted questionnaire that will evaluate whether staff members feel that they have benefited from the training. The Training Unit plan to send out questionnaire at regular intervals after training including conducting an annual review of each staff member’s training records. We have nearly completed a pilot program with CLSS where we determine in conjunction with the target office’s management, a skill standard for each basic job. The Training Unit will develop a personalised training program for each staff designed to address the identified deficits. Should this be successful with CLSS, we intend to scale up the exercise. This approach is more labour intensive but it removes the inherent inefficiency of the voluntary broadcast training and it directly involves the management of the target Section”.* OIOS is

pleased to note that ITSS Training Unit had initiated actions to address some of the audit findings but would like to point out that OIOS was not informed about the assertion of the 45 minutes savings during the audit. Additional information provided to OIOS recently revealed that the average savings of 45 minutes claim was based on the response of seven staff members in 2002. Further, some staff surveyed felt that they did not save any time at all. ICTY was unable to provide OIOS with any supporting evidence on the statement made in their response on training materials for Sanctions and CaseMap. As regards Galaxy, ICTY Chief, Human Resource Section confirmed that he had requested ITSS to prepare some training materials, which he thought to be a one to two weeks assignment. He was therefore surprised to learn from OIOS that ITSS had spent more than 2,000 hours and stated that he would not have requested this if ITSS had informed him of the extent of resources required. OIOS will close this recommendation upon receipt and review of documentation that training needs analysis has been conducted and benefits of training provided have been undertaken and the list of training courses approved by the ICT Committee.

G. Contract Management

(a) Management of repair and maintenance contracts

31. During 2004, ICTY entered into eleven contracts at a total value of approximately Euro 121,000 (US\$145,000) for repair and maintenance of ICT equipment valued at approximately US\$13 million. OIOS reviewed three of the eleven contracts and noted overpayments arising from non-adherence to contract terms and conditions on contract no. ICTY/CON/03/026. ICTY Procurement Section informed the audit team that the amount invoiced by the contractor and certified by ITSS was correct and hence there was no overpayment, as they had inadvertently incorporated incorrect prices in the contract. At the time of the audit, Procurement Section was in the process of amending the contract and no recommendation has therefore been made.

32. ITSS also agreed with the audit team that contract terms and conditions had not always been adhered to. To rectify this situation ITSS made arrangements for concerned staff to attend briefings on their procurement responsibilities. It was also agreed that for future contracts an initial briefing would be held prior to commencement of services, with Procurement Section, the Project Manager and the contractor. In addition, Procurement Section will request the contractor to provide a detailed cost breakdown of equipment repaired and maintained which will be reviewed by both Procurement section and ITSS. In view of the actions taken OIOS is making no recommendation.

(b) Services not included in the contract

33. ITSS requested preventive maintenance services from one of the contractors, which were not specifically included in the contract, no. ICTY/CON/03/031. ITSS accepted that they had made an error and Chief, ITSS and Chief, Procurement Section have taken the steps described in the previous section to address this issue. No recommendation is therefore raised.

(c) Controls over repair and maintenance of equipment

34. OIOS expected ITSS to maintain a maintenance log for equipment detailing when machines were repaired, what was repaired and the cost of repairs. An analysis of these logs would then assist ITSS in determining when it is more economic to replace equipment than to repair, the reliability of suppliers to take into account for future purchases and to monitor the effectiveness of repairs being carried out. Though ICTY maintained details of invoices received and paid each year for repairs a complete history of repair undertaken for each machine was not available. The information in the Communication Assets Tracking System was neither complete nor accurate.

35. OIOS also noted that ITSS did not have an adequate quality control system in place (in two of the three contracts) to ensure that when the contractor replaced the fuser unit, or other parts, the replaced parts were returned and, to ascertain whether asserted repairs and maintenance by the contractor had been fully completed.

Recommendation:

To assist ICTY management in determining when it is more economic to replace equipment than to repair; assessing the reliability of suppliers for future purchases, and, monitoring the effectiveness of repairs being carried out, Chief, Information Technology Service Section should establish a mechanism, such as an equipment maintenance log, together with procedures on the collection, processing and reporting and information of details about equipment repair and replacement (Rec. 09).

36. *ICTY commented that this would be implemented by mid-May 2005.* OIOS thanks ICTY for the prompt action taken and will close the recommendation upon receipt and review of details of proposed mechanism, determining when it is more economic to replace equipment than to repair; assessing the reliability of suppliers for future purchases, and, monitoring the effectiveness of repairs being carried out.

H. Asset Management

(a) Monitoring of ICT assets

37. ICTY, Property Control Inventory Unit (PCIU) is responsible for recording and reporting all non-expendable assets in accordance with the ST/AI/374 (Property Records and Inventory Control under Revised Definition of Non-Expendable Property). PCIU assigns all ICT assets to the ITSS, the asset manager for all these equipment.

38. The Chief, ITSS entrusted the responsibility of inventory management to the Coordination Cell within ITSS, which used the Communication Assets Tracking System (CATS) to keep track of approximately 8,000 items with a total value of approximately US\$13 million as at 30 June 2004. Because ITSS was not updating CATS promptly and correctly and was not aware where equipment was located, or who was using it, OIOS noted that as at 30 June 2004:

- a) 314 items assigned to ITSS did not have information on their status (i.e. in stock, in use, in repair etc).
- b) 98 items shown as “in use” were assigned to former staff.
- c) 37 items shown as “in use” were not assigned to any staff and there were also no information on the location of these assets.

39. Therefore, there were no assurances that all assets assigned to ITSS were properly accounted for and as a result OIOS noted substantial ICT assets had been lost as discussed below.

Recommendation:

To ensure that ICTY has a complete and accurate inventory of its ICT equipment, the Chief of Information Technology Service Section should develop procedures for updating the Communication Assets Tracking System database accurately and promptly and undertake an exercise to confirm the existence and location of all the assets entrusted to ITSS (Rec. 10).

40. *ICTY commented that the review of the database contents has already been undertaken and completed. Considering the possible perception of a lack of independent verification, and because ITSS is not staffed to independently conduct full-scale physical inventories, the verifying inventory exercise will be conducted in conjunction with PCIU. The timeframe for completion will be confirmed with PCIU and reported to OIOS.* OIOS notes the response and will close the recommendation upon receipt and review of procedures for updating the Communication Assets Tracking System database and receipt of the results of the exercise to confirm the existence and location of the assets entrusted to ITSS.

(b) Procurement and management of ICT assets

41. The ICT assets in stock with ITSS were kept in four storerooms. There were indications that ITSS did not plan the procurement of ICT equipments resulting in surplus stocks as at 30 June 2004. OIOS noted 474 items valuing approximately US\$513,000 remained in stock for over a year resulting in possible stock obsolescence and loss in value. In addition, ITSS did not manage the assets in stores properly:

- a) 23 items remained as “for repair” for over a year.
- b) Five items remained “in repair” for a period between nine months to three years.
- c) Though there were four locations for storing assets, the location (i.e. room number) of the assets was not entered into CATS;
- d) During a surprise physical inventory check, we noted that there were more items for repair than shown in CATS.

Recommendation:

To ensure efficient and effective utilization of ICT assets

and to comply with ST/AI/374, the Chief, Information Technology Service Section, ICTY should: review if assets in stocks for more than one year should be disposed off; procurement for items in stocks should not be made unless justified; and closely monitor assets sent for repairs (Rec. 11).

42. *ICTY commented that “due to the hiring freeze, many computers and printers slated for replacement and/or other deployment remained in stock. In addition, the shortage in staffing within ITSS itself meant that certain deployment projects were put on hold, again resulting in equipment remaining unexpectedly in stock. Furthermore, for small items such as ink-jet printers, instead of opting for what would be cost-ineffective repairs, we maintain a stock of new printers, which can be issued as replacements for malfunctioning units. These circumstances and practices have meant that OIOS observed what appears to have been an unusually high numbers of new equipment left in stock. In spite of this, a review of the new in-stock items has been undertaken to determine if there are any items, which should not have been either acquired or held for unjustifiable reasons. Efforts will be made to improve the logging, tracking and follow-up of items out for repair”.* OIOS appreciates the clarification and will close the recommendation upon receipt and review of the exercise undertaken to review if assets in stocks for more than one year should be disposed off, steps taken to ensure that procurement for items in stocks is not made unless justified, and details of the procedures developed for monitoring assets sent for repairs.

(c) Loss of ICT assets

43. ICTY’s Property Control and Inventory Unit (PCIU) carried out an annual physical inspection of all assets to ensure that they are available. Their review in 2003 revealed that a significant number of ICT equipment was missing. While ITSS managed to locate some of the missing items, it reported the loss of ICT items with an acquisition value of US\$380,000 to Security and Safety Section (SSS) during February to July 2004. The reasons adduced by ITSS for these losses indicated weak controls over safeguarding ITSS assets:

- a) 59 computers with an acquisition value of approximately US\$108,000, placed on pallets, apparently ended up on the disposal truck;
- b) Seven Spectra vehicle radios were disposed off along with the vehicles in which they were mounted;
- c) Eight computers with an acquisition value of approximately US\$9,000, which had been sent to ICTR, Arusha in 2000, did not reach them.

44. SSS investigated the losses and submitted copies of its reports to the Chief, Operations Unit of ITSS during February to July 2004. As the assets could not be located, ITSS proposed that the missing equipment be written off. The ICTY, Local Property Survey Board (LPSB) considered the proposal in its meeting of 11 November 2004 and noted that it would like to know “*what procedures (SOP’s) have been put in place to avoid this type of discrepancy in future and --- who is responsible should the procedures which are in place not work*”. LPSB therefore recommended that all cases be deferred until further clarifications.

45. The SSS investigation report was a copy of the information provided by ITSS and there was no evidence of any work undertaken to establish the causes of the losses. OIOS is of the opinion that an investigation of the reasons why the losses occurred has not been properly conducted and is very concerned given the size of the loss. The matter has been referred to the OIOS, Investigations Division for their consideration and appropriate action. No recommendation is therefore raised on this matter in this report.

46. *ICTY commented that “In its narrative, OIOS observed the ongoing process of accounting for a group of assets, which has proven difficult to finalise. This is a process begun in 2001, which was later noted in the 2002 report of the external Board of Auditors, and of which a snapshot was revealed in the PCIU 2003 physical inventory. At the beginning of the whole process, PCIU determined that there was a significant list of some 2000 inventory items, which could not be immediately accounted for in a physical check.*

47. *In the intervening period since then, the majority of the items have been cleared from the list, many by being found, some identified as mistaken data entry errors, some with duplicate or incorrect asset tags, and some as being identified as actually being lost or stolen. This has involved hundreds of hours of staff time and meant significant, in-depth efforts on many staff members’ parts to ascertain asset status. In conjunction with ITSS, the PCIU has been involved in a long-term, painstaking process of trying to make a final determination.*

48. *What remained when observed by OIOS in this audit was some 200 items valued at around US\$380,000 when originally acquired. Although the identification of these items had been ongoing for several years, following the receipt of the informal comments of the auditors, ICTY management immediately undertook an intensified review with the assistance of ITSS, Security and PCIU. As of this date, we have further reduced this list to about 140 items with a residual value of about US\$104,000. We are sharing this information locally with the resident auditors and the OIOS investigator”.*

49. *In its further response of 11 February 2005, ICTY clarified that “With respect to the overall number and value of missing equipment, our internal investigation is ongoing and we will be reporting back to both the OIOS Investigator and to the resident auditors”.*

50. While OIOS appreciates the action taken by ICTY management, it observed that the 60 items asserted to be resolved / located by ICTY are yet to be verified by PCIU. Further the acquisition value of 140 items still missing is US\$304,000 (residual value of US\$104,000). OIOS noted that the issue is being investigated both by ICTY Security and OIOS Investigations Division.

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 been recorded in our recommendations database. In order to record full implementation, the actions described in the following table are required:

Recommendation No.	Action Required
Rec. 01	Receipt and review of the ICTY Information Technology strategy document.
Rec. 02	Notification of the implementation of the monitoring framework.
Rec. 03	Receipt of documentation that the post has been abolished and documentation explaining the re-use of the post, including the revised classified job description.
Rec. 04	Receipt of a strategy paper to the ICT Committee outlining whether it is more cost effective to outsource than to maintain resources in house; a strategy for merging / reorganising units as a consequence of reducing work load; and, whether ITSS should continue to maintain and support all current projects / applications or some could be discontinued to save costs and the decision of the ICT committee.
Rec. 05	Receipt and review of a copy of the new organisational structure, which deals with issue of the span of control within the Operational Unit.
Rec. 06	Receipt of (i) the paper to the ICT Committee outlining: the extent of new application development foreseen and whether it is worthwhile to undertake the development; and, whether the Development Unit should continue to maintain and support the projects it developed or this function could be transferred to the Operations Unit and (ii) decision of the ICT committee on the paper. .
Rec. 07	Receipt of the revised project management methodology approved by the ICT Committee.
Rec. 08	Receipt and review of documentation that (i) training needs analysis has been conducted and benefits of training provided have been undertaken and (ii) the list of training courses approved by the ICT Committee.
Rec. 09	Receipt and review of document (i) determining when it is more economic to replace equipment than to repair; (ii) assessing the reliability of suppliers for future purchases, and, (iii) monitoring the effectiveness of repairs being carried out.
Rec. 10	(i) Receipt and review of procedures for updating the Communication Assets Tracking System database and (ii) receipt of the results of the exercise to confirm the existence and location of the assets entrusted to ITSS.
Rec. 11	Receipt and review of (i) the exercise undertaken to review if assets in stocks for more than one year should be disposed off, (ii) steps taken to ensure that procurement for items in stocks is not be made unless justified, and (iii) details of the procedures developed for monitoring assets sent for repairs.

VI. ACKNOWLEDGEMENT

52. I wish to express my appreciation for the assistance and cooperation extended to the audit team by the staff and management of ITSS.

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