



OIOS

Office of Internal Oversight Services

INTERNAL AUDIT DIVISION

AUDIT REPORT

Management of ICT operations in UNAMI

**Internal controls over ICT governance and
security management need to be strengthened**

26 February 2010

Assignment No. AP2009/812/07

United Nations  Nations Unies

INTEROFFICE MEMORANDUM

MEMORANDUM INTERIEUR

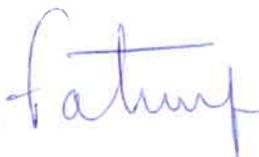
OFFICE OF INTERNAL OVERSIGHT SERVICES · BUREAU DES SERVICES DE CONTRÔLE INTÉRIEURE
INTERNAL AUDIT DIVISION · DIVISION DE L'AUDIT INTÉRIEURE

TO: Mr. Ad Melkert
A: Special Representative of the Secretary General
United Nations Assistant Mission for Iraq (UNAMI)

DATE: 26 February 2010

REFERENCE: IAD: 10- 00103

FROM: Fatoumata Ndiaye, Director
DE: Internal Audit Division, OIOS



SUBJECT: **Assignment No. AP2009/812/07 - Audit of the management of ICT operations in UNAMI**

OBJET:

1. I am pleased to present the report on the above-mentioned audit.
2. Based on your comments, we are pleased to inform you that we will close recommendations 6, 13 and 17 in the OIOS recommendations database as indicated in Annex 1. In order for us to close the remaining recommendations, we request that you provide us with the additional information as discussed in the text of the report and also summarized in Annex 1.
3. Your response indicated that you did not accept recommendations 9 and 11. In OIOS' opinion however, these recommendations seek to address significant risk areas. We are therefore reiterating them and requesting that you reconsider your initial response based on the additional information provided in the report.
4. Please note that OIOS will report on the progress made to implement its recommendations, particularly those designated as high risk (i.e., recommendations 1, 3 and 8) in its annual report to the General Assembly and semi-annual report to the Secretary-General.

cc: Mr. Robin Sellers, Chief of Mission Support, UNAMI
Mr. Robert Cannon, Chief Technical Services, UNAMI
Mr. Predrag Milicevic, Chief Communication and Information Technology Section, UNAMI
Mr. Swatantra Goolsarran, Executive Secretary, UN Board of Auditors
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Ms. Eleanor T. Burns, Chief, Peacekeeping Audit Services, IAD, OIOS

INTERNAL AUDIT DIVISION

FUNCTION

“The Office shall, in accordance with the relevant provisions of the Financial Regulations and Rules of the United Nations examine, review and appraise the use of financial resources of the United Nations in order to guarantee the implementation of programmes and legislative mandates, ascertain compliance of programme managers with the financial and administrative regulations and rules, as well as with the approved recommendations of external oversight bodies, undertake management audits, reviews and surveys to improve the structure of the Organization and its responsiveness to the requirements of programmes and legislative mandates, and monitor the effectiveness of the systems of internal control of the Organization” (General Assembly Resolution 48/218 B).

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EXECUTIVE SUMMARY

Audit of the management of ICT operations in UNAMI

OIOS conducted an audit of the management of information and communications technology (ICT) operations in the United Nations Assistance Mission for Iraq (UNAMI). The overall objective of the audit was to assess the adequacy and effectiveness of internal controls over ICT governance and security management. The audit was conducted in accordance with the International Standards for the Professional Practice of Internal Auditing.

The Communication and Information Technology Section (CITS) was generally providing adequate ICT services to the Mission. However, there were opportunities to improve services and to strengthen internal controls in ICT governance and security management as follows:

- UNAMI had not established the necessary ICT governance structures, which are required by ST/SGB/2003/17 on Information and Communications Technology Board to ensure proper planning and monitoring of ICT activities. There were no project documentation showing the purpose of the project, resources requirement, deliverables and monitoring mechanism.
- There were no written functional descriptions of various units of the CITS and roles and responsibilities of staff were not formalized.
- The ICT security measures implemented in the Mission were not adequate and effective. There were no threats and vulnerability assessments, security incidents were not tracked and reported, and staff had not been trained on security management.
- The Mission procured excessive numbers of mobile phones and blackberry devices. Due to the excessive number devices, the Mission maintained excessive stock and violated its standard operating procedure by issuing devices to staff that were not entitled to them.

OIOS made a number of recommendations to address the issues identified during the audit to further strengthen existing controls and improve operations.

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I. INTRODUCTION

1. The Office of Internal Oversight Services (OIOS) conducted an audit of the management of the information and communication technology (ICT) operations in the United Nations Assistance Mission for Iraq (UNAMI). The audit was conducted in accordance with the International Standards for the Professional Practice of Internal Auditing.

2. The UNAMI Communication and Information Technology Section (CITS) is responsible for the overall management of the Mission's ICT operations. CITS is mandated to deliver voice, video, high-speed data systems, network and applications that satisfy the requirements of the Organization. The major services rendered by the Section are classified at four different levels and are shown below:

- Critical services: These services (e.g., voice communications, fax, radio and mail routing/replication) require continuous availability. Breaks in service are intolerable and availability is required at almost any price.
- Essential services: These services (e.g., network connectivity, storage printing, telephone billing, internet access and web mail hosting) are essential to the operations of the Mission. Only minimal disruptions can be absorbed by the Mission with respect to these services.
- Necessary services: These services (e.g., enterprise applications, mission applications, virtual private network, desktop and notebook support) are used by most of the Organization's units and sections in their day-to-day activities.
- Desirable services: These are services (e.g., internet protocol television, departmental-wide applications) provided by CITS to Mission staff as a convenience and may be services specific to a certain department.

3. CITS is headed by a Chief who reports to the Chief of Technical Services, who in turn reports to the Chief of Mission Support. There are three major units within the Chief of CITS, namely the Systems and Applications, Operations and Budget, Planning and Logistics Units. As of September 2009, the Section had 82 authorized and 59 encumbered posts with a 28 per cent vacancy rate.

4. As of 9 September 2009, CITS had an inventory of non-expendable items totaling \$19 million (with a depreciated value of \$9.9 million) and expendable items totaling \$4.5 million.

5. Comments made by UNAMI are shown in *italics*.

II. AUDIT OBJECTIVES

6. The main objective of the audit was to ascertain the adequacy and effectiveness of internal controls over ICT governance and security management and to determine compliance with applicable UN regulations, rules, policies and procedures.

III. AUDIT SCOPE AND METHODOLOGY

7. The audit covered the period from January 2008 to November 2009.

8. The audit methodology included a preliminary assessment of the internal controls over ICT operations. The auditors conducted interviews with personnel, reviews of relevant documentation and site visits to the Kuwait, Amman, Erbil and Baghdad locations. The audit did not include testing of controls such as those regarding identification and authentication, logical access, cryptography, configuration of security infrastructure and security devices.

IV. AUDIT FINDINGS AND RECOMMENDATIONS

A. ICT planning and strategic process

ICT plans

9. According to professional best practices on ICT governance, organizations should ensure the strategic alignment of ICT operations with the organization's operations. The alignment between business and ICT operations should be subject to performance measurement, tracking and monitoring strategy, project completion, resource usage, process performance and service delivery. In implementing its ICT plans, CITS should have strategic plans and identify priorities taking into consideration the inherent constraints, available opportunities and resources in the Mission.

10. CITS had an operational plan covering the period from March 2008 to March 2009. The plan for the period after March 2009 was still in draft. The draft plan did not include resource requirements, opportunities and constraints, performance matrix/indicators, or monitoring and evaluation mechanisms. A review of a sample of 15 projects selected from the 2008 and 2009 annual plans indicated the absence of project documentation showing the objectives of the project, plan of action, resource requirements, monitoring mechanism and success criteria. Moreover, performance reports on the completion of projects were not prepared.

11. UNAMI had not established the necessary ICT governance structures, which are required by ST/SGB/2003/17 on Information and Communications Technology Board to ensure proper planning and monitoring of ICT activities. In particular, the Mission did not have an ICT committee to: (a) ensure strategic

oversight of the activities of CITS; (b) determine prioritization and effective utilization of ICT resources in-line with Organization goals; and (c) help resolve issues during the implementation phase of the ICT projects.

Recommendation 1

(1) The UNAMI Office of Mission Support should establish an information and communications technology (ICT) committee to provide strategic oversight, coordination and alignment of ICT activities with the Mission's operations.

12. *The UNAMI Office of Mission Support accepted recommendation 1 and explained that the ICT Steering Committee will be formed by July 2010. The Committee will be entrusted to approve changes in CITS infrastructure that would have major operational impact and resource implications. It will also discuss requests for new services, security threats, disaster recovery and business continuity plans, review policies and standard operating procedures, proposals, projects and other strategic issues.* Recommendation 1 remains open pending the receipt of documentation showing that the ICT committee has been formed.

ICT risk management

13. As a best practice, an ICT risk management framework should be established including a common and agreed-upon level of ICT risks and related mitigation strategies. In addition, risk mitigation strategies should be adopted to reduce residual risk to an accepted level.

14. There was no ICT risk management process in the Mission including risk assessment methodology, guidelines, and ICT related risk remedial action plans mainly due to the Section being short of staff. The lack of a risk management process exposes the Mission to increased ICT risks including the interruption of operations resulting from ICT failures.

Recommendation 2

(2) The UNAMI Office of Mission Support should develop and implement a risk management framework ensuring that risk management is fully embedded in the information and communications technology management process.

15. *The UNAMI Office of Mission Support accepted recommendation 2 and stated that the new P-2 position designated as the "ICT Security Officer" will be assigned the risk management duties under the overall responsibility of the Chief of CITS.* Recommendation 2 remains open pending the receipt of documentation showing that the risk management framework has been developed and implemented.

B. ICT organization and human resources

ICT organization

16. In order to discharge its responsibilities efficiently and effectively, CITS needs to have a transparent, flexible and responsive ICT organizational structure, with clearly defined roles and responsibilities of its units and staff.

17. There was no formal description of the functions of the various units of the CITS. Moreover, staff members in each unit had only generic job descriptions intended for recruitment purposes and therefore do not reflect the actual duties that should be performed. Roles and responsibilities were neither formalized nor enforced. As a result, staff members lacked clear direction which may impact the performance of key ICT activities and result in inadequately segregated duties.

Recommendation 3

(3) The UNAMI Office of Mission Support should review its organizational structure with the view to formalizing the functions of the units and staff of the Communication and Information Technology Section.

18. *The UNAMI Office of Mission Support accepted recommendation 3 and stated that the organizational structure of the CITS will be reviewed as part of the budget process for the Mission budget for 2011. The staffing elements of the budget will be finalized by June 2010. Recommendation 3 remains open pending the receipt of documentation showing that the organizational restructure together with the formalized functions of the units and staff of CITS have been completed.*

ICT human resources

19. As of September 2009, CITS had 82 authorized and 59 encumbered posts with a 28 per cent vacancy rate (see Table 1).

Table 1: CITS staffing

Description	National	International	Total
Authorized	53	29	82
Encumbered	41	18	59
Number of vacant posts	12	11	23
Vacant rate	23%	38%	28%

20. The posts of systems and applications IT officer, operations manager and budget, planning and logistics officer were all vacant. Moreover, in Baghdad, the post of communication centre (COMCEN) clerk had been vacant for more than a

year and was covered by communications technicians. The Baghdad warehouse storing ICT equipment was staffed with one national staff. In Erbil, there was no full-time warehouse assistant, and this position was covered by a COMCEN clerk. Since national staff members in Baghdad were required to leave work at 3:30 pm due to security reasons, the international IT duty officer was the only person to support all locations in Baghdad after 3:30 pm. Moreover, OIOS noted that the level of ICT services and support provided to locations such as Kirkuk, Basra, Najaf and Mosul had not been sufficient due to staff shortage and ceiling issues in Iraq.

21. While it may be difficult to attract applicants for UNAMI, the Mission did not take measures in a timely manner to fill key vacant positions.

22. Due to vacancies in the CITS, key activities such as management of ICT risks, preparation of detailed project plans, contingency testing, ICT security threats and vulnerabilities assessments, and development of physical security standards were not performed. Technicians were assigned to perform administrative duties in addition to their technical responsibilities, resulting in staff stress. Customer service has been impaired.

Recommendation 4

(4) The UNAMI Office of Mission Support should expedite the recruitment process to fill the vacant posts relating to information and communications technology operations.

23. *The UNAMI Office of Mission Support accepted recommendation 4 and explained that all of the vacant posts, except the P-2 (ICT Security Officer) and the P-3 (Budget, Logistics and Planning Officer) are under recruitment. A Mission specific vacancy announcement for the P-3 position has been submitted to Human Resources Section (HRS) and the Mission intends to fill all the vacant posts by the middle of 2010. Recommendation 4 remains open pending confirmation that vacant posts in CITS have been filled.*

C. System and physical security

Systems security and awareness initiative

24. In accordance with DPKO/DFS' ICT Security, Business Continuity and Emergency Preparedness Policy, CITS should ensure the implementation of ICT security policies in the Mission.

25. The Mission had not implemented adequate ICT security measures. CITS had not conducted ICT security threats and vulnerability assessments for any of its operations. Security incidents were not tracked and reported and staff had not been trained on security related issues.

26. The lack of adequate ICT security measures was mainly attributed to the shortage of staff. The absence of effective security management exposes the Mission to security vulnerability and incidents which may impact its operation.

Recommendation 5

(5) The UNAMI Office of Mission Support should ensure the implementation and continuous monitoring of information and communications technology (ICT) security policies and measures in the Mission, including an ICT security threats and vulnerability assessment.

27. *The UNAMI Office of Mission Support accepted recommendation 5 and stated that the new P-2 ICT Security Officer will be assigned these duties. UNAMI has purchased the Network Admission Control equipment, which will further strengthen infrastructure security. Furthermore, this will be brought under the scope of ICT Risk Management process. Recommendation 5 remains open pending the receipt of documentation showing that ICT security policies and measures, including the security threats and vulnerability assessments have been fully implemented.*

Problem management

28. Effective problem management requires the identification and classification of problems, root cause analysis and resolution of problems. The problem management process also includes the formulation of recommendations for improvement, maintenance of problem records and review of the status of corrective actions.

29. Problem management was not addressed in a concerted manner in prior years. CITS was in the process of implementing a centralized service desk project, which will address the issue of problem management. Although the service desk project was established in April 2009, a system of problem management has not been fully implemented due to staff shortage. Without a problem management system, the Mission is precluded from improving its service levels, reducing unnecessary costs and improving customer convenience and satisfaction.

Recommendation 6

(6) The UNAMI Office of Mission Support should design a problem management system which requires root cause analyses of reported problems, trend analyses and implementation of appropriate resolution.

30. *The UNAMI Office of Mission Support accepted recommendation 6 and stated that the Mission has created a Project Initiation Document and a Project Manager has been appointed. Problem management process will be delivered by*

March 2010. Based on the action taken by the Mission, recommendation 6 has been closed.

Physical security

31. Protection for computer equipment and personnel requires well-designed and well-managed physical facilities. The process of managing the physical environment includes defining the physical site requirements, selecting appropriate facilities and designing effective processes for monitoring environmental factors and managing physical access. Access to the server rooms should be controlled and logged via security cards, biometrics or other auditable methods.

32. OIOS conducted site visits to inspect the ICT installations in the Mission's locations of Kuwait, Amman, Erbil and Baghdad. Proper controls were in place in Kuwait, where the server rooms had a key card access control system, and in Baghdad, which utilized an installed biometric access control. However, access to the server rooms in Amman and Erbil was controlled using a lock key, which was kept at a central location to give access to those staff members who worked in the server rooms. There was no system to track access to the server rooms as the use of the lock key was not logged.

33. In Baghdad, there was not enough space for accessing the side and back of server racks. Packing a server room with server racks and an uninterruptible power supply too close together not only made it difficult to work in the room but also restricted the necessary flow of air for cooling. The electrical wires were not properly covered, exposing servers to a potential fire hazard. OIOS was informed that the server room in Baghdad had a fire incident in 2006.

34. The server rooms at all locations had a fire extinguisher to suppress minor fire incidents. While the server room in Baghdad had a fire alarm and suppression mechanism, this system had not been approved by the Fire Safety Officer in the Mission. As a result, the alarm system was not implemented in other locations.

35. The absence of effective management of the physical environment may expose the Mission to the risk of business interruptions and damage to computer equipment and personnel.

Recommendation 7

(7) The UNAMI Office of Mission Support should implement information and communications technology (ICT) physical security standards to ensure controlled access to and security of ICT installations.

36. *The UNAMI Office of Mission Support accepted recommendation 7 and stated that the Mission has placed orders for the fingerprint locks, which will be installed by July 2010. Recommendation 7 remains open pending the receipt of documentation showing that the ICT physical security standards have been implemented.*

D. Disaster recovery and business continuity plan

37. In accordance with Sections 5.7 and 5.8 of the DPKO/DFS ICT Security, Business Continuity and Emergency Preparedness Policy, the accuracy of the ICT disaster recovery and business continuity (DRBC) plan should be reviewed and updated regularly in order to ensure that the plan adequately reflects the changing conditions of the environment. Periodic exercises and simulations should also be carried out to test the effectiveness of the plan.

38. The DRBC plan was developed in 2007 and was reviewed and updated frequently during 2007. Since then, it was up-dated in late 2008 and it was not up-dated in 2009. The reason for not updating the DRBC plan regularly was attributed to staff shortage. Moreover, the Mission lacked a business continuity plan with a prioritized list of critical applications and data that each unit and section identified for recovery in the event of disaster. This priority list would enable testing of the plan with a particular focus on the recovery of critical information for various sections. In view of this, the DRBC plan may not be adequate to achieve its intended objectives in the event of disaster.

39. A DRBC drill was conducted from 2-7 September 2007 at the United Nations Logistics Base in Brindisi with the participation of seven staff members from UNAMI. No other DRBC drills have been performed since because of the lack of funding. In OIOS' opinion, other alternatives could be adopted for smaller simulations of the DRBC plan that may provide for regular testing of the plan and the identification of workable and timely improvements.

Recommendations 8 to 10

The UNAMI Office of Mission Support should ensure:

(8) The disaster recovery and business continuity plan is reviewed and updated regularly.

(9) The Communication and Information Technology Section identifies and maintains an updated list of critical applications and data to be recovered in the event of disaster.

(10) Periodic testing of the disaster recovery and business continuity plan, documenting lessons learned, remedial actions and opportunities for improvement.

40. *The UNAMI Office of Mission Support accepted recommendation 8 and stated that the CITS DRBC plan is reviewed twice a year at the operational level. The next review is scheduled for 1 April 2010. The DRBC will also be reviewed*

by the ICT Steering Committee. The revision history as provided in the DRBC plan does not show that the DRBC plan was reviewed and or updated in 2009. Recommendation 8 remains open pending the receipt of documentation showing that the DRBC plan has been reviewed and updated periodically.

41. *The UNAMI Office of Mission Support did not accept recommendation 9 and stated that the level of criticality for services and data for all Missions is defined by a DFS wide policy which has been incorporated in the DRBC plan.* The Mission's DRBC plan identifies some of the critical, essential, necessary and desirable services and provides different recovery periods such as 12, 24, 48 and 72 hours based on priority levels of services. The priority list seems to be general and may not be able to identify some of the critical services/data of each section/unit that are essential to be recovered in the event of disaster. In OIOS' opinion, unless a detailed consultation has been made with each section chief and programme manager to identify the prioritized list of critical applications and data in their domain, the priority list may not be complete. Therefore, OIOS is reiterating recommendation 9 and requests Management to reconsider its position. Recommendation 9 remains open pending confirmation that critical applications and data that are to be recovered in the event of disaster has been reviewed and updated in consultation with the section chiefs and programme managers.

42. *The UNAMI Office of Mission Support accepted recommendation 10 and stated that periodic DRBC exercises are conducted under the direction of the CCITS and the results are documented.* No documentation, except one (as explained in paragraph 39) of such drill exercises was provided to OIOS for review. Recommendation 10 remains open pending the receipt of documentation showing that periodic DRBC exercises have been conducted.

E. ICT asset management

Stock level

43. The Logistic Support Division (LSD) established a maximum unit stock at 15 per cent for all CITS assets, including spares and contingency units. LSD issued generic guidelines regarding unit stock ratios and instructed missions to develop their own ratios considering the missions' individual circumstances.

44. CITS neither developed its mission-specific standard ratios nor complied with the ratios developed by LSD for holding reasonable stock levels of CITS assets. Approximately 30 per cent of non-expendable assets was in unit stock against the 15 per cent standard set by LSD. Approximately 50 per cent of communication and 33 per cent of electronic data processing assets were in unit stock for over 12 months.

45. Holding unit stock in excess of the established standard was justified by the unique environment of the Mission including the considerable lead-time for moving assets from one location to another. In OIOS' opinion, due to technological changes, the requirement for an item may change making excessive inventory obsolete.

46. An analysis of unit stock of desktop computers, laptop computers and printers revealed that there was a lack of unit stock of laptops and printers in Erbil and the lack of unit stock of printers in Baghdad as of 9 September 2009. Although laptops and printers were sent to the Erbil and Baghdad offices in March and August 2009, these items had not been delivered at the time of the audit. This was attributed to the protracted cargo movements within the Mission area. There was no standard for minimum stock levels. As a result, there was no compelling reason for the Mission to maintain unit stock of all items.

Recommendation 11

(11) The UNAMI Office of Mission Support should develop mission-specific standard ratios based on the Mission's circumstances and related procedures for maintaining the required stock levels at all times.

47. *The UNAMI Office of Mission Support did not accept recommendation 11 and explained that the ratios are established by the General Assembly, based on various criteria, to be implemented globally. Therefore, it may be feasible to implement these ratios within a specific Mission context. However, in UNAMI entitlements to equipment or services are generally determined by a staff member's requirements, grade, and type of appointment with approval of the Sections Chiefs. OIOS appreciates that a certain reserve of stock, above that normally held by other missions may be required. However, as mentioned above in paragraph 43, the LSD has established standard ratios for maintaining maximum unit stock and also instructed Missions to develop their own ratios considering the missions' individual circumstances in line with the given guidelines. This will enable Mission Management to better monitor stock levels against requirements, and to ensure excess stock does not accumulate. Therefore, OIOS is reiterating recommendation 11 and requests Management to reconsider its position. Recommendation 11 remains open pending the documentation showing that mission-specific standards ratios have been developed and implemented.*

Regular physical inventory verification

48. According to UNAMI's standard operating procedures for asset management, a minimum of 10 per cent of the assets should be physically verified on a monthly basis for each location. Moreover, the ICT roadmap for the field mission emphasizes that the Mission should ensure that assets are managed effectively and that inventory records are continuously updated.

49. OIOS was informed that equipment was physically verified on an annual basis, with inspection exercises done quarterly in each location. OIOS' review of procedures and the Property Control and Inventory Unit schedule noted that a physical inventory was conducted only for non-expendable items. Moreover, CITS did not do a rolling 10 per cent physical count, as required by their SOP. CITS informed OIOS however that periodic physical inventories were regularly

conducted within the CITS Asset Management Unit but these checks were not documented.

50. OIOS conducted a physical count, on a sample basis, of non-expendable and expendable items in Kuwait, Amman, Erbil and Baghdad warehouses, noting that the results of the physical count did not match the records in the asset management system (Galileo). Out of 220 non-expendable items selected for physical count, two items could not be located in the Amman warehouse. Out of 220 expendable items selected, there were 112 discrepancies noted. In 41 of the 112 cases, the physical count was greater than the record in Galileo and in 59 of the cases, the physical count was less than the record. Moreover, 12 items randomly picked from the floor for physical count were not included in the Galileo system.

51. The discrepancies in expendable items were attributed to less control over expendables as compared to non-expendable items. For example, for expendable items, there was no periodic physical verification. The lack of proper controls over expendable items may result in unnecessary procurement and excessive inventory carrying costs.

Recommendation 12

(12) The UNAMI Office of Mission Support should conduct physical verification of expendable items and take appropriate actions to rectify discrepancies.

52. *The UNAMI Office of Mission Support accepted recommendation 12 and stated that the Mission is currently undertaking the physical verification of expendable items and this will be completed by April 2010.* Recommendation 12 remains open pending the receipt of documentation showing that the physical verification of expendable items has been completed.

Inventory storage conditions

53. Section 5.3 of the ICT roadmap for field missions states that missions should ensure that all communications and IT assets are properly stored and safeguarded in a suitable climate and humidity controlled environment to ensure that the equipment's operational capability is never compromised. A proper warehousing system should facilitate the identification and retrieval of items.

54. The storing shelves in the Kuwait warehouse were not adequate to hold large quantities of CITS equipment. In Amman, items and equipment procured by CITS were stored in sea containers contrary to the ICT roadmap for field missions. The Mission lacked appropriate space in Amman and was forced to use sea containers as storerooms. Two of the eight sea containers used had no air conditioner and there were no ventilations. The sea container storerooms had no shelves and no bin locations to organize the smaller items. In most of the sea container storerooms in Amman, items and equipment were piled on each other leaving no space for air circulation. In Baghdad, the roof of Store "A" was damaged by an indirect fire and some water leakage spots were observed.

55. Failure to maintain appropriate warehousing facilities could result in damage of assets and financial losses.

Recommendation 13

(13) The UNAMI Office of Mission Support should conduct an assessment of the warehousing and other storage facilities at all locations to ensure the storage of assets in compliance with Information and Communication Technology roadmap for field missions.

56. *The UNAMI Office of Mission Support explained that the required assessments have been completed. Some shortcomings such as electrical forklifts, shelving, air conditioning, doors and partitioning, fire alarms etc. were noted and necessary corrective actions have been initiated. Based on the action taken by the Mission, recommendation 13 has been closed.*

F. Telecommunications

Management of mobile phones and blackberry devices

57. According to the Mission's standard operating procedure (SOP) for telephone service, mobile phones with local SIM cards should be issued to all international staff permanently assigned to a location. The issuance of mobile phones to locally recruited staff members is restricted but it may be authorized by the Chief of Mission Support (CMS). The SOP also states that the Mission provides for staff at the P-5 level and above with a blackberry device and, upon special request, the CMS may approve issuance to other staff according to need.

58. The Mission procured excessive numbers of mobile phones and blackberry devices. The total numbers of staff in UNAMI was 770 (316 international staff, and 454 national staff) as of 30 September 2009. However, the total number of mobile phones purchased was 1,150, representing 49 per cent more than the requirement. The Mission also procured 100 blackberry devices although it had only 29 staff at P-5 level and above.

59. Due to the excessive number of devices, the Mission maintained excessive stock and violated the SOP by issuing devices to staff that were not entitled to them. From the information provided, OIOS noted 375 mobile phones were issued, but the Mission did not provide OIOS with the requested records of the names and grades of the staff to whom they were issued. Out of 100 blackberry devices, 78 were reported as issued as of 7 September 2009. However, the Telephone and Billing Unit (TBU) of CITS provided a list of 57 staff members. It is therefore not clear to whom the other 21 blackberry devices were issued. Only 10 of the 57 staff members on the list were P-5s and above. This means that the Mission violated its own procedures by issuing 47 blackberry devices to staff who were not entitled to them. The 47 were issued as follows: (a) 16 to professional staff below P-5; (b) 30 to field service staff; and (c) one to a local CITS technician. Proper documentation of the approval of the CMS for

the issuance of blackberries to staff members below P-5 was not always maintained.

Recommendations 14 to 16

The UNAMI Office of Mission Support should:

(14) Assess the need of mobile phones and blackberry devices to avoid excess stock and expenditures;

(15) Ensure compliance with the standard operating procedure for the issuance of the telecommunications devices to staff members by retrieving devices from staff who are not entitled to them or recovering from the staff the purchase cost of those devices;

(16) Ensure the maintenance of up-to-date records on the issuance and stock of mobile phone and blackberry devices.

60. *The UNAMI Office of Mission Support accepted recommendation 14 and stated that this will be one of the agenda issues for the ICT Steering Committee. The Committee will set the criteria for the issuance of equipment. Recommendation 14 remains open pending the receipt of documentation showing that a need assessment for mobile phones and blackberry devices has been done and action has been taken to reduce excess stock.*

61. *The UNAMI Office of Mission Support accepted recommendation 15 and explained that the Mission will review all issued telecommunication device records. If any issuance that is not in conformity with the applicable procedures will be retrieved. CITS staff are instructed not to issue cellular phones, or any other expendable item, within one year from previous issuance. The Mission also maintained that 499 SIM cards are issued currently and considering the fact that some international staff members might have at least two SIM cards due to poor Global System for Mobile Communications coverage in Iraq, this is not an excessive number. Further, 55 SIM cards are issued to various UN agencies staff members on a reimbursable basis. Recommendation 15 remains open pending the receipt of documentation showing that the Mission has completed the review process of the issuance of cellular phones including blackberry devices and the retrieval of equipment and or recovery of cost as appropriate has been completed.*

62. *The UNAMI Office of Mission Support accepted recommendation 16 and stated that with the implementation of automated telephone billing application, which is bundled with SIM tracking, this issue will be addressed. Recommendation 16 remains open pending the receipt of up-to-date records on the issuance and stock of mobile phone and blackberry devices.*

Settlement of telephone bills

63. The Mission did not always receive commercial telephone bills from the network carrier on time. For example, bills for August 2008 and April 2009 had not been received. Moreover, the TBU received 8 months of bills in June 2009 (bills comprising 2008 and 2009) in a PDF format. The service contract did not specify the method and time limit for submission of bills which contributed to the delay. OIOS was also informed that the monthly bills from the vendor in Iraq had never been matched with the detailed data records. This created additional work for the TBU staff who had to convert PDF files into Excel documents to analyze the data. The TBU staff sorted the data (between 53,000 and 61,000 lines every month), verifying it with the service providers, correcting errors and ensuring compliance with the deadline for submission of bills to the Finance Section.

64. Delays in the settlement of telephone bills exposes the Mission to the risk of interruption in communications and financial losses resulting from the inability of the Mission to recover from staff members who leave the Mission.

65. UNAMI had a practice of withholding \$1,000 from the amount payable to a staff member during the check-out process if his/her assignment is either terminated or reassigned outside the UN Secretariat. The withheld amount is then released three months after separation of the staff member. This procedure was not applied if a staff member is reassigned within the Secretariat. Therefore, delays in submitting telephone bills would have an impact on the settlement of amounts due and either inflate accounts receivable or result in financial loss to the organization.

Recommendation 17

(17) The UNAMI Chief of Mission Support should review the billing procedures established with the network carrier and ensure timely receipt and processing of bills.

66. *The UNAMI Office of Mission Support stated that the vendor in Iraq adopts a standard billing procedure and due to the vendor's internal problems, the delivery of the invoices has been late. UNAMI had on several occasions reminded the vendor to provide the bills on time and will continue to request this. Based on Management's assurances, recommendation 17 has been closed.*

V. ACKNOWLEDGEMENT

67. We wish to express our appreciation to the Management and staff of UNAMI for the assistance and cooperation extended to the auditors during this assignment.

STATUS OF AUDIT RECOMMENDATIONS

Recom. no.	Recommendation	Risk category	Risk rating	C/O ¹	Actions needed to close recommendation	Implementation date ²
1	The UNAMI Office of Mission Support should establish an information and communications technology (ICT) committee to provide strategic oversight, coordination and alignment of ICT activities with the Mission's operations.	Governance	High	O	Documentation showing that the ICT committee has been formed.	July 2010
2	The UNAMI Office of Mission Support should develop and implement a risk management framework ensuring that risk management is fully embedded in the information and communications technology management process.	Governance	Medium	O	Documentation showing that the risk management framework has been developed and implemented.	June 2010
3	The UNAMI Office of Mission Support should review its organizational structure with the view to formalizing the functions of the units and staff of the Communication and Information Technology Section.	Governance	High	O	Documentation showing that the organizational restructure together with the formalized functions of the units and staff of CITS have been completed.	June 2010
4	The UNAMI Office of Mission Support should expedite the recruitment process to fill the vacant posts relating to information and communications technology operations.	Governance	Medium	O	Receipt of confirmation from the Mission that the vacant posts of CITS have been filled.	June 2010
5	The UNAMI Office of Mission Support should ensure the implementation and continuous monitoring of information and communications technology (ICT) security policies and measures in the Mission, including an ICT security threats and vulnerability assessments.	Governance	Medium	O	Documentation showing that ICT security policies and measures, including the security threats and vulnerability assessments have been fully implemented.	September 2010
6	The UNAMI Office of Mission Support should design a problem management system which requires root cause analyses	Operational	Medium	C	Action taken	Implemented

Recom. no.	Recommendation	Risk category	Risk rating	C/O ¹	Actions needed to close recommendation	Implementation date ²
7	of reported problems, trend analyses and implementation of appropriate resolution. The UNAMI Office of Mission Support should implement information and communications technology (ICT) physical security standards to ensure controlled access to and security of ICT installations.	Operational	Medium	0	Documentation showing that the ICT physical security standards have been implemented.	July 2010
8	The UNAMI Office of Mission Support should ensure that the disaster recovery and business continuity plan is reviewed and updated regularly.	Operational	High	0	Receipt of documentation showing that the DRBC plan has been reviewed and updated periodically.	On-going
9	The UNAMI Office of Mission Support should ensure the Communication and Information Technology Section identifies and maintains an updated list of critical applications and data to be recovered in the event of disaster.	Operational	Medium	0	Documentation showing that the critical applications and data that are to be recovered in the event of disaster has been reviewed and updated in consultation with the Section chiefs and Programme managers.	Not provided
10	The UNAMI Office of Mission Support should ensure periodic testing of the disaster recovery and business continuity plan, documenting lessons learnt, remedial actions and opportunities for improvement.	Operational	Medium	0	Documentation showing that periodic DRBC exercises have been conducted.	On-going
11	The UNAMI Office of Mission Support should develop mission-specific standard ratios based on the Mission's circumstances and related procedures for maintaining the required stock levels at all times.	Operational	Medium	0	Documentation showing that mission-specific standards ratios have been developed and implemented.	Not provided
12	The UNAMI Office of Mission Support should conduct physical verification of expendable items and take appropriate actions to rectify discrepancies.	Operational	Medium	0	Documentation showing that the physical verification of expendable items has been completed.	On-going
13	The UNAMI Office of Mission Support should conduct an assessment of the warehousing and other storage facilities at all locations to ensure the storage of assets in compliance with Information and	Compliance	Medium	C	Action taken.	Implemented

Recom. no.	Recommendation	Risk category	Risk rating	C/O ¹	Actions needed to close recommendation	Implementation date ²
14	Communication Technology roadmap for field missions The UNAMI Office of Mission Support should assess the need of mobile phones and blackberry devices to avoid excess stock and expenditures.	Operational	Medium	O	Documentation showing that need assessment for mobile phones and blackberry devices has been done and excess stocks are not in the stock.	July 2010
15	The UNAMI Office of Mission Support should ensure compliance with the standard operating procedure for the issuance of the telecommunications devices to staff members by retrieving devices from staff who are not entitled to them or recovering from the staff the purchase cost of those devices.	Compliance	Medium	O	Documentation showing that the Mission has completed the review process of the issuance of cellular phones including blackberry devices and the retrieval of equipment and or recovery of cost as appropriate has been completed.	May 2010
16	The UNAMI Office of Mission Support should ensure the maintenance of up-to-date records on the issuance and stock of mobile phone and blackberry devices.	Operational	Medium	O	Receipt of up-to-date records on the issuance and stock of mobile phone and blackberry devices.	March 2010
17	The UNAMI Chief of Mission Support should review the billing procedures established with the network carrier in Iraq and ensure timely receipt and processing of bills.	Operational	Medium	C	Action taken	Implemented

1. C = closed, O = open
2. Date provided by UNAMI in response to recommendations.