

# ***Report on the Information System***

## ***Regional Office***

### ***UNDP***

#### ***Suva, Fiji***

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***SOPAC Miscellaneous Report 267***

## CONTENTS

1. INTRODUCTION .....	1
2. ASSESSMENT AND TASKS COMPLETED .....	1
3. UPGRADE .....	1
3.1 Electronic Mail .....	1
3.2 Network Cabling .....	1
3.3 Server caching.....	2
3.4 Backup .....	2
3.5 Connectivity.....	2
3.6 Desktops .....	2
3.7 Mobile computing .....	3
3.8 Environment .....	3
3.9 Web site development .....	3
3.10 Technical support .....	3
4. SUPPLIERS.....	4
4.1 Hardware, Software, Consumables .....	4
4.2 Hardware – hard drives, memory.....	4
4.3 Software .....	4
4.4 Consumables.....	4
ATTACHMENT A – TERMS OF REFERENCE	
ATTACHMENT B – ASSESSMENT AND TASKS COMPLETED	
ATTACHMENT C - SUMMARY AND DETAILED COSTS	

## 1. INTRODUCTION

Organisations need access to up-to-date tools that will provide accurate and timely information to assist in discharging the obligations under their mandate and that will allow for the maximum economic benefits to be achieved through increases in efficiency of operations.

The area of Information Systems is one of the most important of these tools for analysing the large amount and various types of data which comprise the input to the government sectors of the Pacific Island states responsible for the development of their people.

An upgraded Information System can achieve outputs and outcomes that are detailed in the following section while a description of the specific tools that comprise the upgrade is outlined in the Implementation section.

This report was prepared during a 2-day period, 19-20 November 1997, under a short term consultancy for "Diagnostics and Repair" of the Information System at the Regional Office, UNDP, Suva.

The objectives are detailed in the Terms of Reference and included as Attachment A.

## 2. ASSESSMENT AND TASKS COMPLETED

The assessment and tasks completed list is included as Attachment B.

## 3. UPGRADE

This section describes the upgrades needed to achieve the objectives of the Regional Office. Costs are summarised where specified as well as being fully detailed in Attachment C.

### 3.1 Electronic Mail

There are several mail systems installed that are incompatible. There is a local postoffice (MS Workgroup Postoffice), an Internet postoffice (EMWAC), a proprietary postoffice/mailbox (Higgins) and traces of an incorrectly installed integrated postoffice (MS Exchange 4.0 server).

It is understood that Higgins will be discontinued Jan/Feb 1998 but there is an urgent need to provide an integrated solution.

***It is recommended that an upgrade to MS Exchange Server 5.5 be implemented.***

This will allow a full range of clients (Outlook, Exchange, Messaging, Eudora, Netscape, Internet Explorer) to access internal and external mail. However, only Outlook can take advantage of the features of Exchange Server that include calendar, scheduling, mailing-lists.

***It is recommended that Outlook be the selected mail client.***

### 3.2 Network Cabling

The current network cabling is a mix of 10Base-T and 10Base-2 that limits the speed to 10 Mbps and does not allow effective management.

***It is recommended that the topology be upgraded to a uniform star configuration and that cables meeting 1 GB or 100 Mbps be installed.***

### **3.3 Server caching**

Caching is necessary to most effectively use the available bandwidth and MS Proxy is the software of choice.

***It is recommended MS Proxy 2.0 be acquired.***

### **3.4 Backup**

The backup system is inadequate and requires upgrading to a more robust and flexible system.

***It is recommended that an external HP DDS-3 tape unit and ArcServe software be acquired.***

### **3.5 Connectivity**

There are currently only 3 modems available for users to connect remotely with the Regional Office and it is perceived that there will be an increasing trend for staff to work from home.

It should be noted that 56K technology may not be available at TFL Internet Services until 1999 and FIG would need a digital line to TFL that is something that TFL may object to.

***It is recommended that 56K modems be selected as they have become mainstream and while there are currently 2 incompatible standards (x2 and K56flex) there will be a unifying ITU standard by 1999.***

***It is recommended that an 8 port multi-IO device (Digiboard) be installed on the communications server and additional 3 modems (3Com Sportster 56K Faxmodem) be acquired together with additional lines.***

### **3.6 Desktops**

All desktops computers that are 486/66 should be upgraded in memory and disk capacity to allow adequate operation of the MS Office 97 suite.

All desktops computers that are Pentium should be upgraded in memory and disk capacity to allow adequate operation of the MS Office 97 suite.

***It is recommended that all 486 and Pentium desktop computers be upgraded to 32MB RAM.***

***It is recommended that all 486 and Pentium desktop computers with less than 1 GB hard drives be upgraded to 2.5 GB capacity drives.***

The costs have not been included as this upgrade may be a project in itself but an approximate cost for upgrading a desktop from 16MB to 32MB is approximately USD 80 for a 486 (2 x 8MB SIMM) and USD 200 for a 2.1 GB hard drive where these are prices for direct purchase from USA.

### **3.7 Mobile computing**

Using a portable computer as a single workstation for both “in office” and “on the road” has presented several problems in the past which include proprietary, unreliable and costly docking stations as well as underpowered and overpriced notebook computers.

The first problem of docking stations has been overcome by the wide acceptance of the PCMCIA bus and the range of PC Card products that include network interface, modem and SCSI. Docking stations can therefore be eliminated as full functionality can be achieved through PC Cards.

The cost performance of notebooks is being addressed by new Intel Tillamook technology that will allow MMX chips up to 266 MHz to be in production early 1998. Currently 200 and 233 MHz CPUs are available. Furthermore Intel has introduced Mobile Module format (MMO) that allows OEMs as well as users upgrade their hardware to Pentium II. A move that maximises an organisation's investment in mobile computing

It should be noted that combination PC Cards with both network connections and modems cause conflicts when connecting to corporate LANs and these should be avoided at all costs.

***It is recommended that suitable notebook computers be identified together with appropriate PC Cards to allow remote as well as local connection to the Regional Office Information System.***

### **3.8 Environment**

The area in which the servers are located is only air-conditioned during normal office hours and the size of the area is not large. In addition, the area may require increased security.

***It is recommended that air-conditioning that is separate from the main office be installed to ensure continual temperature and humidity control.***

***It is recommended that due to the size of the server room, that it not be used as a normal office area by any IT staff.***

***It is recommended that access to the area be restricted to authorised staff.***

### **3.9 Web site development**

There is a staff member responsible for web site development and it is considered that MS InterDev is an essential tool for managing a growing site and in particular where there are multiple webs such as an Internet and intranet. However, there will be an increasing need for other users or groups to develop sub webs, page sets or single pages and MS FrontPage is the accepted software.

***It is recommended that MS InterDev and FrontPage be purchased***

### **3.10 Technical support**

It is increasingly important to have access to regular updates, patches, bug fixes for corporate software as well as documentation.

***It is recommended that MS Technet be purchased from a Fiji based Microsoft supplier as an annual subscription.***

## **4. SUPPLIERS**

### **4.1 Hardware, Software, Consumables**

ABS Microfirm Pty Ltd  
624 Forest Road  
Bexley NSW 2207  
Australia

Tel: +61 2 95885186 (office)  
Tel: +61 2 95409312 (res)  
Fax: +61 2 95885335

John Mamacan

Email: [jman@world.net](mailto:jman@world.net)

### **4.2 Hardware – hard drives, memory**

SEG Technologies, Inc  
78 Tomlinson Road, Suite B  
Huntingdon Valley PA 19006  
USA

Tel: +1 215 947 7666  
Fax: +1 215 947 7440

Steven May, Sales Representative

Email: [segtech@pond.com](mailto:segtech@pond.com)

### **4.3 Software**

Pacsoft  
PO Box 16940  
Suva, Fiji

Tel: +679 387410  
Fax: +679 387340  
Email: [pacsoft@is.com.fj](mailto:pacsoft@is.com.fj)

Pati Reeder, General Manager

### **4.4 Consumables**

Jedi Electronics  
38 Waimanu Road  
Suva, Fiji

Tel: +679 301276  
Fax: +679 301146

Jayash Patel, Managing Director

# **ATTACHMENT A – TERMS OF REFERENCE**

## **UNITED NATIONS DEVELOPMENT PROGRAMME**

### **TERMS OF REFERENCE FOR CONSULTANCY**

**12 November 1997**

#### **OBJECTIVES OF STUDY/CONTRACT**

The consultancy is aimed at diagnosing and repairing and/or recommending for any additional equipment/enhancements needed to enable efficient performance of the UNDP Office network system.

The general areas of concern are as follows:

- WIN NT Server configuration;
- Internet/Intranet system configuration;
- MS Exchange e-mail and Internet e-mail system;
- Network Printing;
- Remote Access Service;
- Network cabling system;
- Backup System;

#### **SPECIFIC TASKS/OUTPUTS**

In particular, the Study, will:

- Review the current network system and recommend suitable backbone that will enhance the performance of the network;
- Review the Internet/Intranet and E-mail system to see if there is need to separate it from the current server;
- Review the current hardware/software and advise if there is a need for any upgrade to handle current systems;
- Review the system regarding virus and recommend effective virus control software program;
- Review network backup system;

The above consultancy will be for 2 days duration at USD300 per day to be paid to South Pacific Applied Geoscience Commission (SOPAC). The consultant will work closely with our staffmember, Mr. Ujjain Kumar, who will assist him during this period.

The consultant will provide this office with a brief report on his findings and recommendations.

Tentative consulting dates are Wednesday 19<sup>th</sup> and Thursday 20<sup>th</sup> November.

## ATTACHMENT B – ASSESSMENT AND TASKS COMPLETED

Problem	Solution	Status
There is no Logon profile replication between the PDC and the BDC. Each computer on the network set itself to UNDP Network policies 1 out of 2 times depending on the server they log on to.	Install the replication by setting the replicator service on both the PDC and BDC. Set the NETLOGON directory on the PDC as %SYSTEM%\SYSTEM32\REPL\EXPORTS\SCRIPTS and as %SYSTEM%\SYSTEM32\REPL\IMPORTS\SCRIPTS on the BDC. Use the Server applet in the control Panel	Fixed.
Workstations using Share Level Access. This option duplicates the number of passwords to be known. Each share on each computer can be associated with a different password.	Use Domain Level Access. On each computer change the settings in the Network Applet in the Control Panel. Enforce Domain policies with the config.pol file in the NETLOGON directory, edit the config.pol file	Config.pol file was modified using Poledit.exe.
Some computers don't connect to the domain	Change the setting in the Client for Microsoft Network in the Network Applet in the Control Panel to Log on to UNDP Domain.	All computers to be checked Manually.
The Home directory is not set in User Manager for Domains	Set the user directory to connect drive F: to \\Fij02\Personnal\%USERNAME%	Fixed.
The modem connected on 308203 is not answering	Replace the modem	Fixed
Some printers are protected by password	It is recommended to give free access to any printer in the organization to any staff. Use of Domain Level Access.	Outstanding
IMS EMWAC and MS-MAIL Workgroup used as Mail server. It is a duplication of services that lead to more troubleshooting and a lack of uniform interface. Users get confused.	Purchase an upgrade to MS-Exchange server 5.5 from Exchange 4.0 already purchased but not installed.	Outstanding
Computers profiles are not Individually set.	Allow users to set their profiles in Windows95. Editing the config.pol file could easily modify the computers..	Adopting this policy may require more Hard Drive space to store users profile, but may enable to have roaming profiles.



<b>Problem</b>	<b>Solution</b>	<b>Status</b>
Intranet Access through main web site. It gives the opportunity for outsider to detect the location of potential confidential documents and encourages them to hack the web. Also the Intranet is protected only at the ACL level in the NTFS partition holding the Intranet	Install IIS on the BDC with IP range restriction. Use this IIS as main web site for UNDP with a link to the UNDP Internet web site.	Outstanding
UNDP Network use 10Base2 except for 10 10BaseT computers.	It is recommended to upgrade all computers to 100BaseTX (100Mb/s) with appropriate hub(s)	Outstanding
Netware and NT user names and password are not synchronised asking the user to log in NT AND Netware	Synchronize user name and password of Netware as set on NT, or phase out Netware.	Outstanding
Higgins Mail system used. Higgins use a lot of network resources (Network Packet Collisions) and is not anymore needed	Phase out Higgins	Outstanding
BDC is badly configured, all services are not starting and a dll is declared missing at boot up. This may due to the installation of NT4SP3 and MPR with the removal of MPR for Internet trial.	Reinstalled NT4SP3 and MPR with appropriate configuration	Fixed.
BDC Low on virtual memory	Increase the virtual memory from the System Applet in Control Panel	Fixed
PDC only running SP2 which is know to contains bugs	Install SP3 on PDC	Fixed
Use on WinCron on BDC instead of AT Scheduler	Replace WinCron by Scheduler Win interface from NT resource Kit.	Outstanding
Poor Backup of server using Jazz drives and file copy across servers	Install a proper backup system with DDS-3 Drive and appropriate backup software	Outstanding
No Antivirus installed on all computers, even if Thunderbyte is on evaluation	Select quickly an appropriate anti-virus software	Outstanding
Search engine on the Web is not running	Re-install MS-Index for IIS	Fixed
Lack of troubleshooting database	Subscribe to MS-TECHNET Knowledgebase CDS	Outstanding
WINS not installed in conjunction with TCP/IP	Install WINS and configure computers to use it by setting the DHCP server.	Outstanding

<b>Problem</b>	<b>Solution</b>	<b>Status</b>
Everyone Group account is used on shared directories which may open a security hole	Create a staff Global Group containing UNDP staff only and use this group each time the group Everyone should have been used	UNDP Staff Local group created, permissions need to be changed on shared directories.
Too many shares exist with Everyone group too often used	Do a security audit by evaluating the need of each share and the permissions associated with each.	Outstanding
Groupol.dll not installed on computers. This dll must be installed for config.pol (corporate policies) to work properly.	Install group policies from Window95 CD Poledit directory	Each computer to be set up manually

## ATTACHMENT C - SUMMARY AND DETAILED COSTS

### RECOMMENDATION FOR UPGRADE OF INFORMATION SYSTEM UNDP, SUVA

NO. ITEM	PART NO.	UNIT AUD	TOTAL AUD
<b>HARDWARE</b>			
1 HP SureStore DAT24E ext. 12GB drive		2,325	2,325
1 Digiboard multi I/O card		1,750	1,750
3 3Com 56K Sportster external modem		250	750
<b>SOFTWARE</b>			
1 MS Exchange 5.5 upgrade		499	499
1 MS Proxy 2.0		1,424	1,424
1 ArcServe Enterprise 6.5 NT		1,695	1,695
1 MS FrontPage 98		178	178
1 MS Visual InterDev		737	737
1 Technet CD annual subscription		444	444
<b>CONSUMABLES</b>			
5 HP DDS-3 tapes 5 pack		252	1,260
			<u>11,062</u>

### SUMMARY

	AUD
Hardware	<u>4,825</u>
Software	<u>4,977</u>
Consumables	<u>1,260</u>
	<u>11,062</u>