



Mekong River Commission

P.O. Box 6101, 184 Fa Ngoum Road, Unit 18,
Ban Sithane Neua, Sikhottabong District, Vientiane 01000, Lao PDR
Telephone: (856-21) 263 263. Facsimile: (856-21) 263 264

Terms of Reference for an Assignment of MRC IT System and Network

25 July 2017

Type of service:	Short term consultancy
Position:	Computer Network Expert
Reports to:	Director of the Administration Division
Duration:	A maximum of 8 working days from 2 – 12 October 2017
Starting date:	2/Oct/2017
Duty station:	Based in Vientiane, Lao PDR, at MRC Secretariat's headquarters
Deadline for proposals:	September 4 th , 2017
Proposals to be sent to:	Mr. Saysoth Keoduangsine, IT officer, saysoth@mrcmekong.org and Director of AD, Dr. Naruepon Sukumansavin, naruepon@mrcmekong.org

1. Background

The Mekong River Commission (MRC) was established by the 1995 *Agreement on Co-operation for the Sustainable Development of the Mekong River Basin*, between the governments of Cambodia, Laos, Thailand and Vietnam. In accordance with this Agreement, the mission of the MRC is: "To promote and coordinate sustainable management and development of water and related resources for the countries' mutual benefit and the people's well-being by implementing strategic programmed and activities and providing scientific information and policy advice."

The MRC has a three-fold governance structure, consisting of the Council as the highest-level decision-making body (at ministerial level), the Joint Committee (JC) and the MRC Secretariat(MRCS) – complemented by National Mekong Committees (NMCs) in each MRC Member Country. The MRC Secretariat is the operational arm of the MRCS. It provides technical and administrative services to the



JC and the Council to achieve the MRCS's mission.

Since 2016, two divisions in Phnom Penh, were moved to MRC Secretariat in Vientiane. Currently, MRCS consist of the MRCS headquarters in Vientiane, Lao PDR, and a Regional Flood Mitigation and Management Center(RFMMC) based in Phnom Penh, Cambodia.

In line with this, the current MRC information system uses the ETL internet service of bandwidth 15Mbps to access global public network via Thailand, Vietnam and China and uses the leased line to communicate between headquarters in Vientiane and RFMMC in Phnom Penh, particularly for video facilities, voice calls, share drives and user management.

The existing Information Technology Management System is based on Microsoft and Linux operating system: Microsoft Windows 2008/2012, CentOS, Debian and SQL 2014/2016. Network Devices consist of the routers and switches includes 3Com, Dell and Cisco some of them were in place for more than 10 years. MRCS email system is cloud-based and using Microsoft office365.

IT Unit and Administrative division have planned to improve MRC IT infrastructure by applying virtual private network(VPN), then the leased line will be cut off after a successful replacement. Parallely the new firewall hardware will be installed in Vientiane office and RFMMC to filter traffic bandwidth, scan malware and manage users.

2. Current IT System and Issues

The current MRC IT system connects to public network with bandwidth of 15Mbps up/link. Within LAN users use wired intranet connecting to desktops, printers and scanners, while laptops and mobile phones are connecting to network via Wi-Fi access points (WAP). There are about 250 devices connecting to internet during working hours.

The network equipment is a mixed-network device including 3com hubs, dell switches and cisco router connecting within LAN between users and devices, 3com patch panel and Cat5 which these peripherals were installed for more than 10 years.

However, there is problem during working hours: staff have experienced an unstable network connection, slow data transferring, and unbalanced bandwidth between users, data collision and network disconnection.

Therefore, it is necessary to require an experienced IT expertise who network analysis skills to analyze full functions of the current MRC IT System and network, following by producing a report of the analysis with recommendation of the best practice, then submit to director administration division and IT Unit so that to implement of a new proposed MRC IT System Infrastructure.

3. Objective of the assignment

The main objective of this work is to provide IT Network System expert to conduct as following task:

1. To analysis MRC IT system and network including hardware and software
2. To make recommendation of improvement
3. To draft the TOR for upgrade the MRC IT system including the budget requirement

After this consultancy, the MRC IT team should be able to monitor the system, networking, manage user, and timely supports.

4. Description of tasks and deliverables

The consultant will be requested to undertake the following tasks:

1. To analyze a whole MRC IT infrastructure
2. To conduct to analyze the network system including hardware and software
3. To identify issues of the system on:
 - Internet speed
 - Internet bandwidth management and monitoring
 - User management and allocate resources
 - Document management
 - System monitoring
4. To identify network's issue risks on:
 - Cyber security and end-user protection
 - Backdoor access, loophole, security breach and virus-malware prevention
5. To produce a report with recommendation solution/reconfiguration for the system and network based on the above issues
6. To draft a current network topology and the recommendation one for improvement
7. To draft the TOR for upgrade the MRC IT system and its network including the budget requirement
8. Other accounting tasks required by the director of the administration division and IT officer

The delivery of value from this intervention will be contained almost wholly within the IT system and functional themselves. A comprehensive IT system analyze report is however expected, included also the identification of major risks for the future implementation and respective recommendations, and should be submitted no later than Oct 23th, 2017.

5. Timeframe

A maximum of 8 days is expected. The assignment will tentatively start on 2 October 2017. The consultancy is to be undertaken at the MRC Headquarters in Vientiane, Lao PDR only.

6. Working relationship and contractual arrangements

The Consultant will work closely with IT unit, Administration Division and IT specialist. S/he will report to the Director of the Administration Division and IT officer.

7. Qualifications and Requirements

1. At least Bachelor degree in computer science/information technology or relevant field.
2. A minimum 5 years of experience in large cooperate network engineering/management.
3. Demonstrated 3 years' hands-on experience in computer forensic/Cisco/Microsoft/Linux.
4. Knowledge of System Software Analyst/Network Analyst/Computer Forensic.
5. Troubleshooting and support experience with System Loophole Analyze/System Forensic.
6. Excellent English verbal and written skills and general communication skills.
7. All staff and employee once enter into MRC work contract should show their TOEIC score taken recently preferably in 2 years' now.

8. Key reference documents

The consultant will have full access to all relevant documents as needed to undertake the assignment:

- The current MRC IT system's topology
- Current MRC IT policy
- Plan and recommendations of reform an IT infrastructure and network improvement.