

## §36. Activities of Network Working Group

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Network Working Group (NWG) has been established on April 2007, as one of the successor to “Computer & Information Network Center”. NWG provides the various network services for steady and secure condition.

### 1) Operations and administrations of information network

a) The e-mail is a basic communication tool for the research activities. NGW has operated the mail server for NIFS to realize the effective communication. 52 news accounts (e-mail address) were created and 53 accounts were deleted in FY 2008. The mailing list service has also provided. 45 lists were created and 55 lists were deleted in FY 2008.

b) To manage the network, NGW has administrated the following information system;

- \* Mail, SSL-VPN, DNS and DHCP servers
- \* Router and HUB (L2 / L3 switch).

For example, 157 hosts were added to DNS server and 122 hosts were deleted in FY 2008. NGW also guides the staff of NIFS on network and information systems.

### 2) Security improvements

To keep the high-level security, NIFS-LAN has introduced the firewall and other security equipments. In FY 2008, the following activities were performed to maintain the network security.

a) Owners of PCs who bring them from outside of NIFS are requested to make a security check before connecting them to NIFS network. The quarantine network room was offered for such a security check and supports of quarantine processing to be sanity. This room was used more than 230 times in FY 2008.

b) Secure Socket Layer-Virtual Private Network (SSL-VPN) is a kind of VPN, which uses web browser as a client's software. The SSL-VPN in the NIFS has also the function to check the security level of the client before VPN connection is established. The user is needed to use the One-Time Password (OTP) token as the authentication. Eight accounts are created and five accounts were removed in FY 2008.

### 3) New activities in FY 2008

#### a) New mail system

The mail server of NIFS was replaced with Mirapoint M600 system. This system has two M600 servers and the

system is operated as active-standby mode. The active server sends the update data, which include the mail data, information of user accounts and system configuration, to the standby server periodically. If the active server were out of service, the standby server can continue the mail service with recent mail data. The new mail system also has a hard disk backup system which is introduced in FY 2007.

#### b) UPS in the network device room

The power supply in the network device room, which has most of network equipments, had been supported by CVCF which is shared with LHD numerical analysis system. At the same time as the upgrade of the Plasma Simulator, the power supply system of this building has been also replaced and the power supply of the network room is not supported by CVCF. In compensation for lack of CVCF, NGW has installed independent UPS system; Eight UPSs of 2200VA and six UPSs of 1500VA. The automatic shutdown of the servers which synchronizes with UPS is the future issue.

#### c) Lecture for MAC address registrar

The lecture class on the subject of the campus network of NIFS, information security and how to register the MAC address were delivered on July 2008 and 139 staffs joined. Only the attendance of this lecture can be the MAC address registrar and can register MAC address of PC to DHCP system.

#### d) Supports for the connection between Gifu JSHW and SINET3

NIFS-LAN is connected to SINET3 for the general purpose and to Gifu Joho Super Highway (Gifu JSHW) for visitor's network which is called “external network”. Gifu JSHW is a metro network in Gifu prefecture.

Gifu Pharmaceutical University has been newly connected to SINET3 through Gifu JSHW on April 2008. NGW supported this connection at SINET node room on NIFS.