# Review of the current status of implementation of TCP/IP procedures and applications at WIS centers

## GISC Seoul Network connection:

1. Internet Access

GISC Seoul has connected to research network(KREONET) for public internet. DAR service of GISC Seoul is provided through KREONET. In addition, GISC Seoul has harvested metadata from operational GISCs via KREONET. KMA is accessible to KREONET in 10Gbps. However this research network is not exclusive one for not only GISC Seoul but also disseminating numerical products and other bilateral data exchanges.

Internal GISC Seoul backup has been deployed in supercomputer center in Ochang, 100km south to Seoul. GISC Seoul backup is connected to another research network(KOREN) which is shared with supercomputer service and its bandwidth is 4Gbps.

1. RMDCN Access

KMA has joined in RMDCN network since 2009 and migrated to NG-RMDCN with upgrading 2Mbps to 4Mbps in January 2014 according to implementation plan of NG-RMDCN. RMDCN is now exclusively used in GISC Seoul for cache data exchange.

## IPv6 Progress

KMA has planned to participate IPv6 initiative project but its progress is still retarded. The environment of IPv6 supported by service provider is fully mature in Korea. Nonetheless KMA had difficulty to secure computing resources compatible with IPv6. After securing a resources, KMA is deploying IPv6 infrastructure in cooperation with network service provider in the beginning of 2014. As finishing deployment of internal IPv6 structure, KMA will be able to join the initiative as a new participant.

Fig.1. Diagram of IPv6 planned by KMA

## Cache exchange

GISC Seoul has exchanged Cache data with 3 GISCs, Tokyo, Tulouse and Offenbach via RMDCN, Internet and GTS. GISC Seoul has difficulty to synchronize cache data with operational GISCS, even though 7 GISCs are in operational step. The margin of bilateral data exchange still appears in several respects.

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| GISC | Traffic volume/day | Inbound | Outbound |
| Tokyo | 1.4GB | Internet | GTS |
| Tulouse | 284MB | RMDCN | RMDCN |
| Offenbach | 150MB | RMDCN&Internet | RMDCN |

Tab.1. Status of Cache exchanges via GISC Seoul

## References

[1] Manual on WIS(WMO-No.1060)

## Recommended Text

GIS Seoul provides DAR service through research network for public internet. GISC Seoul has done in migration of RMDCN-NG upgrading 2Mbps to 4Mbps in January 2014. KMA is deploying IPv6 infrastructure in cooperation with network service provider in the beginning of 2014 and will be able to join the initiative as a new participant.

GISCs still have difficulty to exchange Cache data in terms of effectiveness and efficiency even though all GISCs synchronize Cache data according to manual on WIS. GISC Seoul remarks appropriate method for exchanging globally distributed data should be identified.

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