



Proposing to Host the Fourth Global Data Center at Korea Astronomy Observatory

Pil-Ho Park(phpark@kao.re.kr)¹, Kwan-Dong Park², Jong-Uk Park¹,
Hyung-Chul Lim¹, Jeong-Ho Joh¹

¹Korea Astronomy Observatory, South Korea

²College of Forest Science, Kookmin University, South Korea



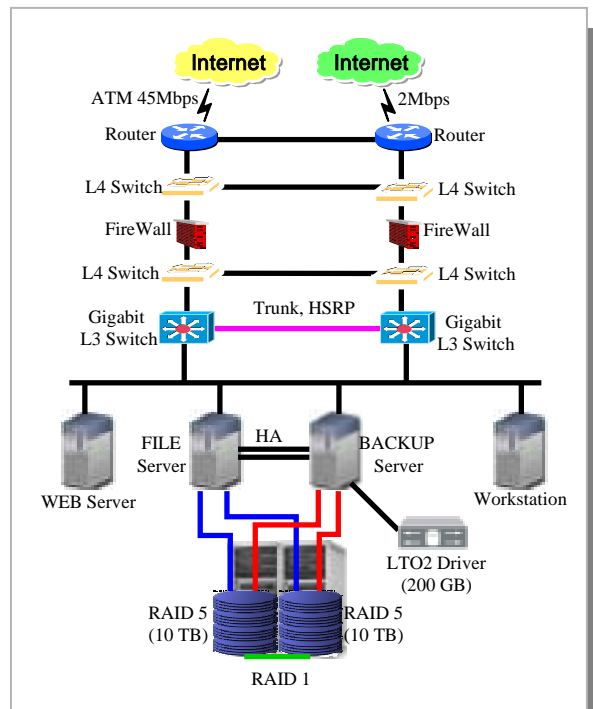
Abstract

We are proposing to host the fourth Global Data Center (GDC) at Korea Astronomy Observatory (KAO). KAO has a long history of active researches in GPS geodesy in Korea and has been operating a global IGS site (TAEJ, which was moved to DAEJ in 1999) since 1994. KAO is building three VLBI sites, which are to be completed by 2008, and proposing to have a SLR system. By adding VLBI and SLR, we will have three most important tools in space geodesy.

We are aware that there are three GDCs in operation: two in USA and another in France. We regret that there is no GDC in Asia, even though there are ~1000 permanent GPS sites in Japan and ~400 in China. Korea itself has more than 70 as of January 2004. Considering the fact that Korea is geographically located between Japan and China and the eastern Asia is an important area in geophysical studies, we firmly believe that the IGS needs to have a new GDC in Korea. Starting early 2003, we have been contacting IGS Governing Board members including the chairman Dr. John Dow, Network Coordinator Dr. Angie Moore and Central Bureau Director Ruth Neilan. They are positive about our proposal to build a GDC in Korea. Our plan to host a GDC was recently funded by our government, which is eager to act as a R&D hub country connecting all east Asian countries.

In this presentation, a preliminary system configuration is presented for GDC. In addition, we will show a preliminary plan of the fourth GDC and have a chance to discuss our plan.

Preliminary System Configuration for GDC



Motives for the 4th GDC in Korea

- ❑ There are about 1500 permanent GPS sites in east Asia
 - about 1000 in Japan
 - about 400 in China
 - about 70 in South Korea
 - about 200 in Taiwan
- ❑ East Asia is an important area for geophysics researches
 - Boundary for many tectonic plates
 - Geophysically important for other space geodesy studies
- ❑ There is no GDC in Asia
 - Two GDCs in U.S. and one GDC in Europe
- ❑ Reason to have the fourth GDC in Korea
 - Geographically between in China and Japan
 - Korea has one of the most advanced IT capabilities
 - Korean government is very committed to the project

Future Plan for GDC Construction at KAO

1. Contract between KAO and Korean Government for GDC
 - 2 million US dollars for five years
 - Contract will be signed in May, 2004
2. Provide an official letter stating the commitment of KAO to IGS for establishing a GDC
 - Provide a letter by June, 2004
3. System Design for GDC
 - Technical discussions with the IGS Central Bureau and the IGS Data Center Working Group
 - System design by August, 2004
4. Construct a GDC facility in KAO
 - Establish a network, file servers and backup systems during two months
5. Operate as a provisional IGS GDC
 - Test operation for one year or over
6. Operate as a IGS GDC after an IGS approval