

Development of Information Server System for IMPAC-T

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My mission

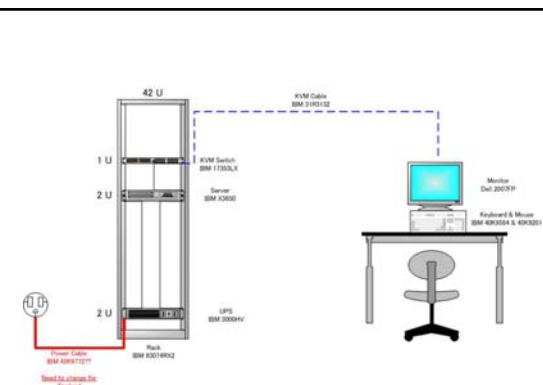
- a) 1-4-1 To develop a quasi real time monitoring system at Mae Waang basin, Wang Thong basin, and Sakae Krang basin
- b) 2-5-1 To install test server and develop necessary tools and user interface on test server.
- c) 3-4 To develop a system of estimating quasi-real-time risk indices for adaptation measures to water-related disasters under climate change.

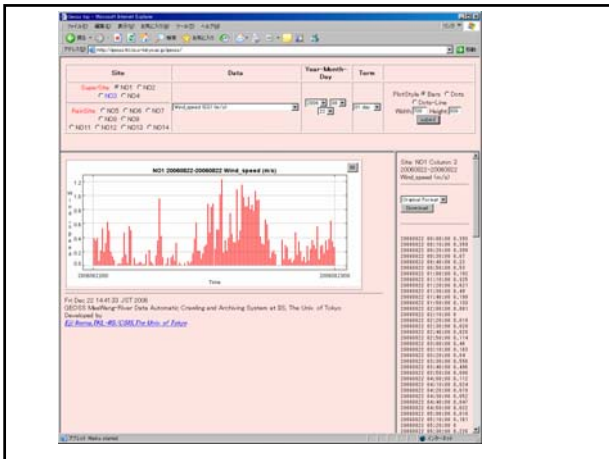
a) To Develop Real Time Monitoring System Server

- To collect observation data from telemetry system + Archive all data on "Telemetry Data Server"
- In 2009, We discuss the "spec" about IMPAC-T Information Server and start to buying process....
- On March 2010, Server Hardware has just come.
- From April 2010, setup process of this server will start.

Plan on 2010

- Server Setup (install basic application and environment) → by Jun~Jul.2010 ?
- If more than 1 telemetry system start to work and can send data to "telemetry data server", we start to develop and install following tool:
 - Tools for receiving data
 - Tools for checking data
 - Tools for archiving data
- I hope this server will work in stable condition as "data archiver" in 2010.





and more..

- I understand that observation data is very important = Data backup system is required. Not only RAID system (=Hardware) but also some other methods (ex.mirror to other server, backup to optical media by hand....) are required.
- To running this server = first server on IMPAC-T, we should learn to run server in stable condition. (setting of OS's services, network, security policy, UPS, RAID.....)
- We should also organize "system administrator team" for all IMPAC-T system.

b) To develop observation/model-output data archiving system + data providing system

- Not only observation data (collected by "Telemetry Data Server") but also model-output data are archived on this server.
 - This server has also some function to provide data to users = User Interface is required.
- ↓
- This server is required to handle lots of volume & variety data, so we need to consider the schema and framework of Database system
 - (a)server is handling data as "data file", but (b)server should handle data as "information".

Plan of 2010

- Until 2011? (=to introduce next server), we develop "prototype version" of (b)server on (a) system.
- On 2010, we will develop basic application for managing data (format modification, data visualization etc..).
- We need to collect User requirement of this system.
- Based on them, we will start to examine DB schema.

and more..

- Data providing methods are not only "user interface for download and visualization". To collaborate with other system and share data is also interesting. = This is also good for data backup.
- Missing pattern of observation data and User log on Interface are also interesting information for research.

c) To develop a system of estimating quasi-real-time risk indices

- I understand this theme is "to develop a system where user can run model/application software using observation data".



- STEP1=Data **Correct and Archive** = (a)
- STEP2=Data **Management and Providing** = (b)
- STEP3=**Using** Data on each application = (c)

This (c) system is the final goal of IMPAC-T Servers.

Plan of 2010

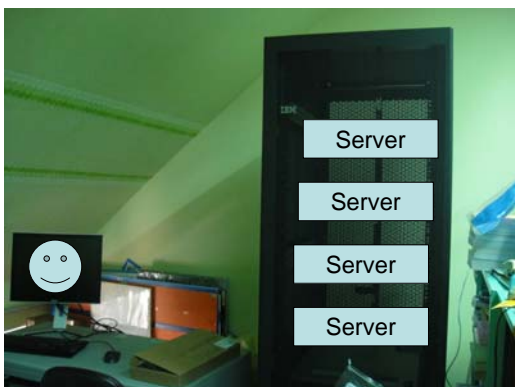
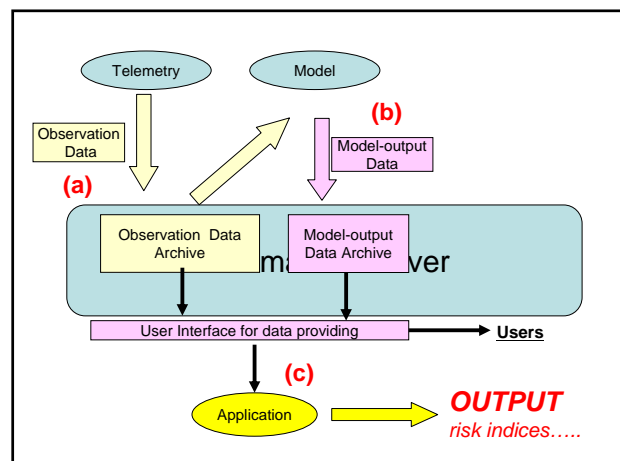
- (c) system can be developed after (a) and (b) servers are running.
- So, on 2010, we should discuss and collect information about application, user requirement, and trend of server hardware for introducing future (c)server.

and more..

- I think (c)server will be most difficult.
- To prepare the environment for each application, accessing to data server on every time, processing user's request,....etc.
- To develop good (c) server, we need to build (a) and (b) server with high levels of stability.

Summary

- All server systems are of course depend on other research group.
 - (a) → Observation, Telemetry
 - (b) → (a) + Model
 - (c) → (a) + (b) + Theme3 research.
- To develop good server systems, I think Japan-side and Thai-side should discuss as often as possible with face-to-face.



Thank you for your attention.