Development of the Satellite Image Data Web System in KARI for the ASEAN+3 Satellite Image Archive for Environment Study Project

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Abstract: Korea Aerospace Research Institute (KARI) had finished developing the ISO19115 XML schema for the unified satellite image data DB table (KOMPSAT-1 EOC & OSMI, MODIS) that KARI holds at the beginning of this year. At once, KARI has developed the web system using JAVA from the ISO19115 XML schema to be a member system for the ASEAN+3 Satellite Image Archive for Environment Study Project. An external user can accesses this web system in internet and search several data he wants in several conditions, and display and generate XML files from the searched data.
Keywords: Satellite image data, Database, Metadata, XML

1. Introduction

The most of countries, having the remote sensing satellites of their own to observe the Earth's ground, have developed and used the peculiar format and content of the metadata of their own of the satellite image data up to recently. Thus, the user who gives to try to get the any information from a remotely sensed satellite image data has to know the peculiar format and content of the metadata of it from the user manual for it. Fortunately, the trend of the standardization of the format and content of the metadata of it had been begun by some international organizations, and International Organization for Standardization (ISO) has published ISO19115 document, 'Geographic information — Metadata', in 2003 [2]. According to the trend of the standardization of it, KARI has been following up with it through the ASEAN+3 Satellite Image Archive for Environment Study Project [1], and finished developing the ISO19115 XML schema and the **XML web service system** for the unified satellite image data DB table (KOMPSAT-1 EOC & OSMI, MODIS) that KARI holds at the beginning of this year [3].
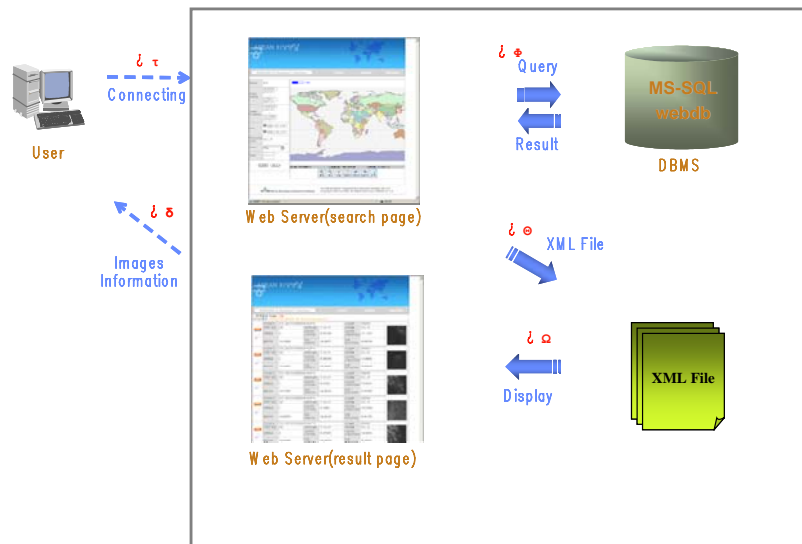
2. XML web service system

Figure 1. Work Flow of the XML web service system

The user can access the XML web service system in internet , query on the search window , get the result window of it, choose the image metadata with the XML file or not , display the XML file of it , and generate the XML file of it (see Figure. 1).
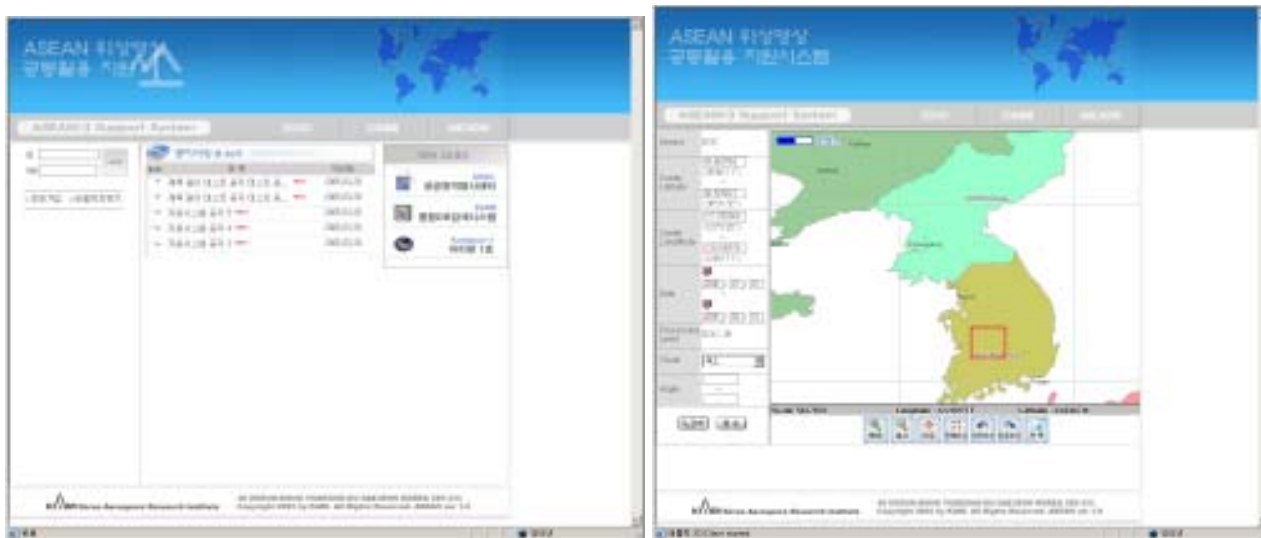

Figure 2. Main and Search Window

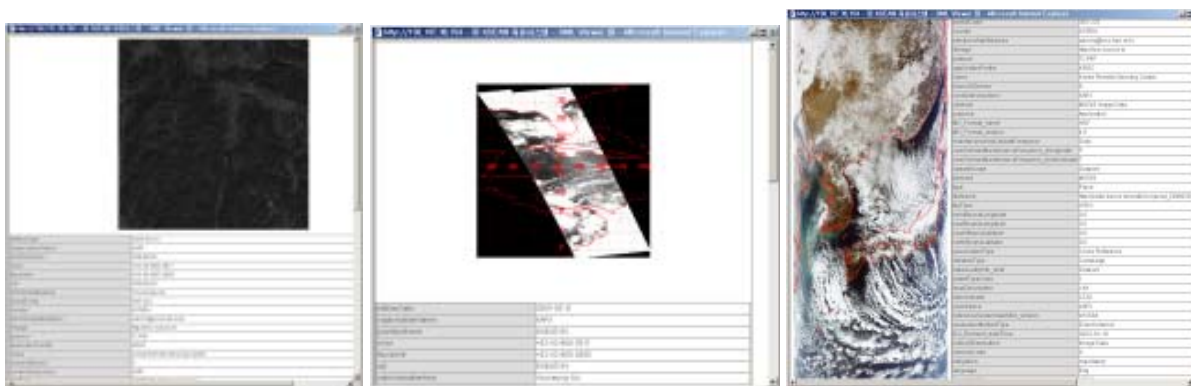Figure 3. Result Window of EOC, OSMI and MODIS

Figure 4. Display Window of XML file

Figure 5. Generated XML file of EOC, OSMI and MODIS

3. Future work

Although the XML web service system has been developed, this system doesn't be opened for the general user for a while. KARI and GISTDA in Thailand co-design and co-develop the interface between the center system in GISTDA and the member system in KARI using the XML web service system just now. This system will be showed up for the user at the middle of next year.

References

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