

# **The Research Regarding the Environmental DBMS For Environmental Manager Support**

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## **Abstract:**

From the later half of the 20<sup>th</sup> Century, human population movement, land development, and rapid increase in the usage of harmful chemicals has led to wildlife extinction and destruction of the ecosystem. Practical environmental research is necessary to solve these issues.

In order to promote interdisciplinary research among a wide range of different fields, it is important to create a unified database capable of integrating, managing and transmitting research results.

In particular, techniques for constructing a database for supporting geospatial analysis have not been developed for interdisciplinary environmental and ecological research, where sharing information among various fields is very important.

Specially, Sharing of information quite is important about the environment, eco-field that is various research areas. But the technique about construction of the spatial database and the spatial database, which supports interdisciplinary research, is not established yet.

This report summarizes a data sharing system capable of supporting interdisciplinary environmental research made using GIS at Yokohama National University in Japan.

## **Body:**

1. Construction of "Geographic Information Data Common Infrastructure System" for the researcher in the University. It is efficient and useful for the improvement in the research result by integrating the spatial data, which can use even a different research field, and providing it.

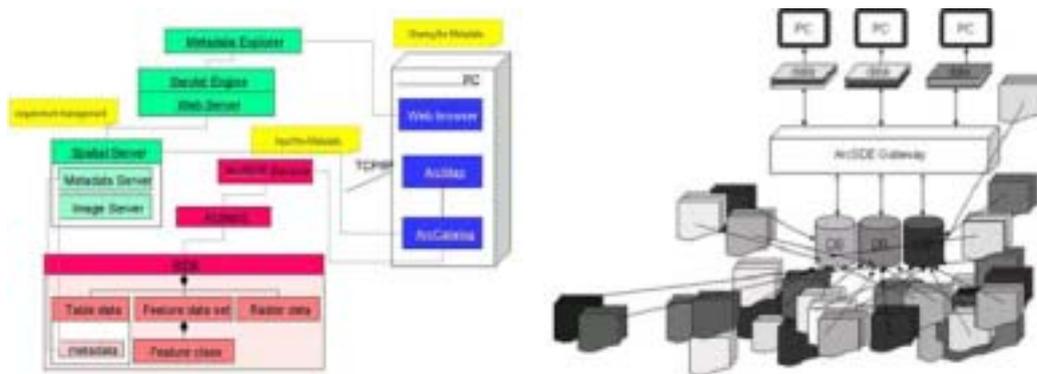


Figure1. System plan

2. GIS spatial data and social statistics data were collected, and Geodatabase-ization was built for the whole area of Japanese Kanagawa Prefecture in Japan and all the Chinese (For Soil, Industry and so on). Our Yokohama National University begins to introduce the space data, which a researcher made and which were analyzed to the public by using Metadataexplorer.

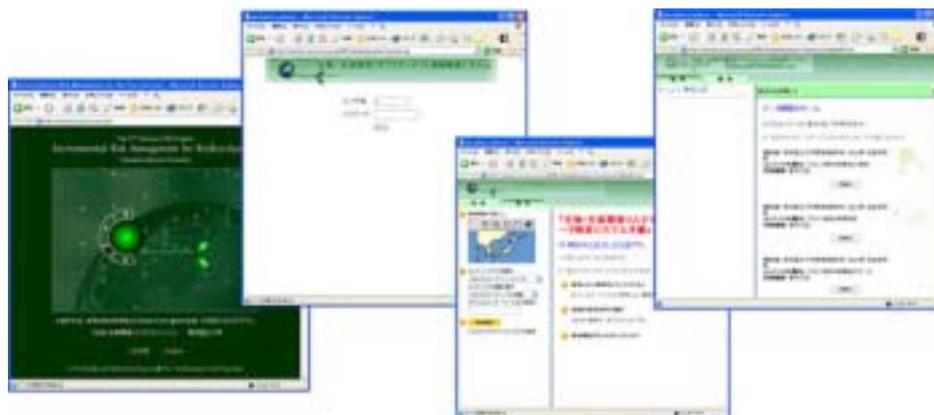


Figure2. MetadaService Using MetadaExplorer

3. Moreover, connecting of ArcIMS and MetadaService , Spatial data are introduced to the public on Internet.( The service is being given only inside school at now.) So, It is making use of these effectively as a subject of the class and the information sharing between the researchers.

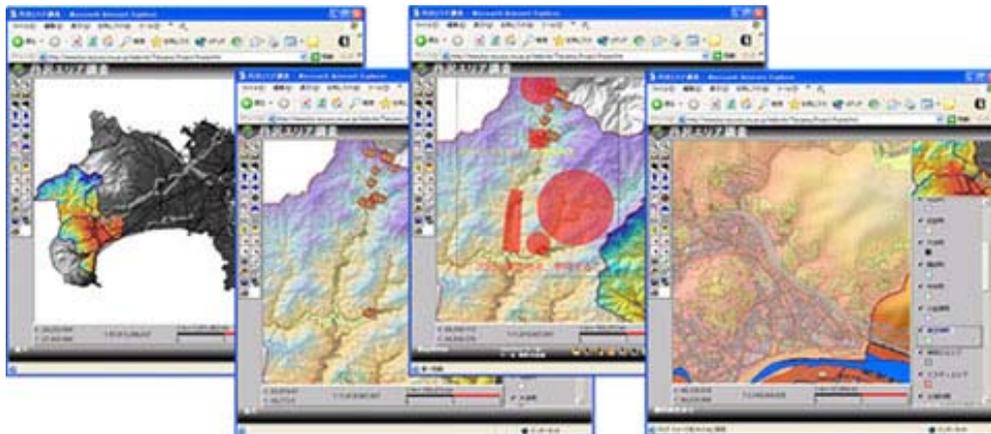


Figure3. Sservice Usinig ArcIMS server(Kanagawa Area in Japan)

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