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Development of GeoPack, The Software Tool for Higher Education of Geospatial Information Technology

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1. Introduction

The Japanese Government encourages the dissemination of Geographic Information Systems (GIS) for the people by enact of the basic low on the promotion of application of Geospatial Information in 2007. We can easily reuse and exchange geographic information, if it is in compliance with the industrial standards. The Japanese government assigns technical standards in the basic plan provided under the low in order to realize such a situation. However, the knowledge such as Object Oriented Modeling, UML and XML are the basic knowledge of Geographic Information Standards, and the user must understand them before utilize the standards.

Meanwhile, the author had got the opportunity to teach the half year course of the Introduction to Geographic Information Technology three years in the University of Tokyo, and was the member of the research project on the design of university curriculum for GIS education since 2007 to 2009. These experiences are the motivation to develop the software tool for GIS education.

2. GeoPack, Its Aim and Characteristics

The name of software tool is GeoPack. The aim of the developing GeoPack is that the student can learn not only the fundamental knowledge of GI-technology but also how to develop GIS. The student may experience the GI knowledge through using GeoPack and the software explain how to use and how to realize the functions in GeoPack.

3. The Functions of GeoPack

The Body of Knowledge for GI Technology consists of modeling, acquisition, management, analysis, exchange and representation. Application schemas can be designed at the modeling window. Feature instances and their multimedia attributes can be acquired on the acquisition manager window. The student can input metadata of the spatial data file and get a file using metadata on the management window. Fundamental spatial analysis can be run on the analysis window. User readable XML documents are provided by using exchange function on the exchange window. Finally, symbol style design and map representation are possible on the representation window. The student can learn the knowledge by reading the manual, description and source program provided through each window.

4. The Future Work

Most of functions are already developed. However implementation of temporal attributes, coordinate operations, map representation in compliance with the symbol style definition are still under construction. And we must brash-up the manual and descriptions. We have a plan to complete the development until the end of 2013.

5. Acknowledgment

References

[1] Ota, M., Arikawa, M., A Curriculum for Geospatial Information Technology and Its Experimental Practice, Proceedings of 6th International Symposium on Digital Earth, Beijing, China, Sept., 9-12, 2009

[2] Ota, M., Basic Schema on The Geographic Information Developed for Higher Education, Proceedings of Digital Earth Summit, Nessebar, Bulgaria, June, 12-14, 2010

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