Aggregation and Processing of the National Land Cover Data

Yousong Zhao, Lijun Chen, Jingwei Li
National Geomatics Center of China
Beijing 100044 China

As the ideas of protecting the environment is getting stronger and stronger in china, most policy makers have been aware of the importance of using land cover data to plan and make decisions scientifically in the fields related environment, agriculture, forestry ,etc. To meet this need, SBSM (State Bureau of Surveying and Mapping) decides to build national land cover fundamental data set (NLCD2001) based on TM images, which is the subset of the 1:50,000 geomatics database. The paper describes the content, the format, the projection, the organization of the land cover data, and focuses on the technology on how to resolve the conflicts among the land cover data and the work flow on how to aggregate the National Land Cover Data before these data are put into the data set. In a word, The key of the paper is to put forward the normative way to regularize the difference among the land cover data and make the land cover data set to be one of the series of the national fundamental data sets having been created by SBSM since 1984(such as 1:1,000,000 Geospatial Database, 1:500,000 digital base-map database, National-wide 1:250,000 scale topographic database, 1:50,000 Geomatics database (in processing)) so that the user of the national fundamental database can use these data easily at will. 1. Normative rules to regularize the data difference There are two kinds of the land cover data to construct the NLCD2001, one is the west land cover data from the National bureau of environment protecting, which includes 12 province's land cover data created in 2000 based on Landsat TM and SPOT images. Another is the east land cover data produced by SBSM in 2001 based on Landsat ETM+ image, which includes 22 province's land cover data. The west and the east land cover data are different in classification system, data format, work flow, projecting and size, so we use three normative rules to regularize all land cover data. 2. Work flow Introduce the work flow on how to process the Land cover data. Such as modify the classification code, data projection transfer, datum change, data mosaic, data subset, and etc. it also introduce some test results. 3. Analysis and Suggestion Summarize the experience of creating NLCD2001 and also give some comments.