

A Comparative Study on Cartography and GIS

Guo Renzhong

Department of Cartography

Wuhan Technical University of Surveying and Mapping

39 Luoyu Road, Wuhan 430070

P.R.China

FAX : 86 27 7814185

GIS has attracted great attentions from cartographers and scientists of other fields, a widely discussed question is "what is the relationship between cartography and GIS", "cartography makes a part of GIS" or "GIS is a branch of cartography"? No agreement has been achieved. In this paper, we try to express our opinion about this problem in a comparative way.

Both cartography and GIS are techniques oriented to spatial information processing, it is often thought that cartography lays emphasis on graphic information communication, but GIS on spatial data management and analysis. If we admit that cartography contains two main parts : map making and map using, and these two parts are of same importance, we will have difficulties to find any difference in essence between cartography and GIS. In traditional cartography, map using was less studied because it was separated from map making, and was left by cartographers to users of related application fields. With a GIS, the whole information processing process from data input, analyzing to output is executed in an integrated environment, those who make maps use maps. Integration is a major distinction of GIS from cartography, besides the integration of map making and map using, GIS is tending to integrate itself with OA, MIS and other application fields, but GIS itself remains with cartography in the field of spatial data processing. We may say that GIS is the development of cartography in information society