

Development in Theory and Application of Geographic Information System at Turn of the 21st Century

Fu Suxing

(*Special Committee of Cartography & GIS, Geographical Society of China*)

Abstract

This paper highlights the application and development of geographic information system in the past more than thirty years, briefs the progress in GIS software technique, introduces the deepening of the geo-information mechanisms, self-organization, self-correlation theory and temporal-spatial thematic high dimensional data model as well as studies on comprehensive integrated technical system centered around GIS at the turn of the 21st century.

It also discusses information times and network world in the new century and points out in the rapid development of high & new technologies such as "information expressway", "digital earth", in-depth study and application of GIS should be included into the State information technology development planning, make GIS offer deepening and all-directional service to the national sustainable development and global change studies.

Key words: Geographic information system Basic theory Geo-information mechanism High dimensional data model

迎接信息技术与教育多层次全面融合的新时代

我国自 80 年代初开始搞中小学计算机普及教育至今, 累计不同程度接受了计算机普及教育的人已超过 2000 万, 他们是 21 世纪易上手应用计算机的人群。但其仅占我国人口的不足 2%, 加上其它的总计也只约 5%。可见, 在我国 95% 的人不懂计算机。

据调查, 到 1999 年底, 我国计算机保有量将为 1 600 万台 (1998 年底为 1 300 万台), 我国平均近 100 人拥有 1 台计算机, 而美国 2 人拥有 1 台。

1996 年美国提出“教育技术规划”, 到 2000 年全美国的每一间教室和每一个图书馆都将连上信息高速公路; 澳大利亚通过 Internet 覆盖其全国所有的中小学; 而新加坡将全岛学校以网络武装, …。足见, 标志着信息技术与教育多层次全面融合的时代正在到来。

可以认为, 懂计算机将成为 21 世纪的一张通行证; 计算机决定着我们的生存。所以, 计算机普及教育势必成为 21 世纪我国又一项巨大的建设工程。

(傅肃性摘自中国计算机报, 1999 年 82 期)