

GIS AS PLANNING SUPPORT SYSTEM

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ABSTRACT

The development of GIS has a very close relationship with urban planning. GRIDS in the 1960s and IMGRID in the 1970s were developed to carry out map overlap analysis which is fundamental to urban and regional planning. In the early days of the development of GIS in the 1960s and 1970s, there were very few planning departments that installed GIS because of their expensive hardware and limited software and data. The decrease in the price of hardware, computer storage and devices, and accompanying improvement in the performance of hardware and software (particularly the speed of computer processors) and advancement in the data structure and related algorithms of vector-based GIS, has made the once expensive and time consuming GIS to be more affordable and workable. GIS is now more accessible to planners and is an important tool and database for urban planning both in the developed and developing countries. Recent development in the integration of GIS with planning models, 3-D visualization, virtual reality and the internet will make GIS more useful as a planning support system for urban and regional planning. Today, the main constraints in the use of GIS in urban planning are no longer technical issues, but the availability of data, organizational change, and training. If these constraints can be removed, GIS will be a more effective planning support system for urban and regional planning.