The Design of Internet-based GIS Service Provider

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GIS service provider (GISSP) is an attempt to implement the concepts of IT outsourcing in the GIS industry by employing network technology (WAN or Internet). In GISSP model, customers are not expected to buy data or software but rather than buy services from the providers. In the suggested model a customer subscribes to a GIS service provider instead of launching his own GIS department and get access to the application and data hosted on the provider's side. All technical details of accessing the provider have to be hidden from the user by the software. Provider and customer can be connected either via public network or any other kind of communication link. The paper will explain the design of GISSP from 7 sides. First, the objective and concept of GISSP, a brief introduction is given to describe its aim and mission. Second, Commercial and technical benefits, It mainly includes savings on system maintenance, fast entrance into GIS, enhanced security, performance and reliability, and deeper penetration of customer business process by GIS. In addition, Innovation GISSP also faces the challenges that are not purely technologies. It is concerned with development of a GIS outsourcing management model at the provider side, competition with established desktop GIS technology, and security and property concerns about data stored at the provider side. Third, existing solutions and problems. An analysis towards different commercial Internet GIS software from the view of Internet-based spatial services. Fourth, the architecture of GISSP. It integrates the IT and GIS solutions to show a whole service model. It mainly includes display system, analytical system, user support and administrator system, and spatial data transport system. Fifth, the implementation architecture of each subsystem is given to show the workflow and technology strategy of internal structure of GISSP. Sixth, Based on above design and consideration, an example is given to verify the idea of GISSP. Finally, a summary to generalize the characteristics of GISSP and further improvement.