Evolving Infrastructure: Growth and Evolution of Spatial Portals

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SUMMARY

The term Spatial Portal appeared in the mid to late 1990s to describe the interface to spatial clearinghouses and data infrastructure projects. Since then portals have developed dramatically and now play a central role in the way we discover and consume spatial resources. Their role will increase as developments in technology, design and policy consolidate SDIs and offer new and exciting opportunities for distributed computing. This paper reviews the evolution of spatial portals illustrating different approaches with case studies drawn from around the world, and considers the future and issues that must be overcome if they are to realize their full potential.

Issues considered include the construction and maintenance of resource catalogs, harvesting strategies, quality control and data validation. Of key importance, particularly in international portal initiatives, are the range, depth and consistency of metadata. Attention is also turning to cataloguing metadata of unstructured text, statistical or image documents so often excluded from traditional SDI. Drawing on experience of a number of portal initiatives, thoughts on achieving an effective balance in metadata policy are outlined.

As portals evolve beyond simple search engines, visualization becomes increasingly important. The paper goes on to consider techniques for visualization including current Web mapping capabilities and limitations, and the opportunities to visualize portal search results with traditional desktop applications and the move towards Service Oriented Architectures.

Finally the paper looks how spatial portals build relationships and strengthening communities within SDI initiatives. It considers management techniques and portal interface designs that have been developed to achieve this.

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