

“The fastest, most efficient way to serve maps on the Internet”

Overview

CubeSERV® Web Map Tile Server is based on Open GIS Consortium specifications. It provides a powerful tool for publishing spatial information and integrating distributed map data on the Web using standard Web browsers and existing HTTP protocols.

Since its introduction almost ten years ago, the Open GIS Consortium's WMS (Web Map Server) specification continues to be one of the most successful of the OGC standards, with hundreds of different implementations in use across the Internet. The protocol allows clients to request maps in many different styles, sizes, projections and image formats. However this flexibility comes at the price of performance and scalability. Each map requested must be rendered by the server at considerable cost in processing power and time.

A faster, more scaleable Web Map Service

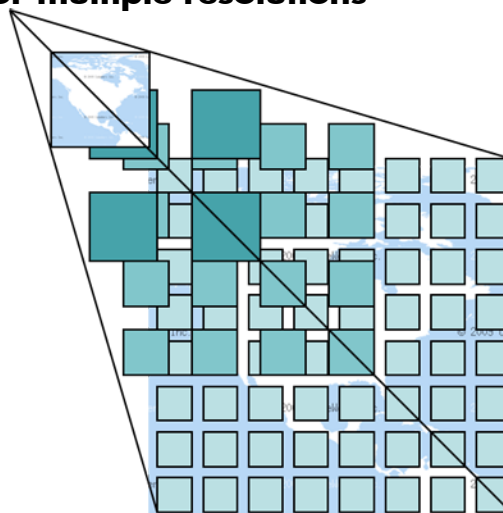
To address this issue, CubeWerx offers a Web Map Tile Service (WMTS). This service, soon to be an OGC standard, works by subdividing the map space into a set of pre-generated image files (tiles), which can then be rapidly returned to a client application, instead of creating a new map for each request. Google Maps is the most well-known example of such a service, however the CubeWerx solution achieves the same performance characteristics using a non-proprietary protocol. The service supports both a traditional web service interface as well as a REST option, allowing it to be easily integrated into a wide array of Web 2.0 applications. An intelligent tile generation and caching mechanism minimizes storage requirements by creating tiles on-demand, and caching them for subsequent requests, so only those tiles which users actually ask for exist on physical storage.

The tile creation process is backed by CubeWerx' comprehensive image processing and symbology engines, allowing tiles to be created using OGC Styled Layer Descriptor (SLD) documents. Multiple tile sets may be created from the same data, to respond to different symbology or map projection requirements.

Pre-built tiles for multiple resolutions

Coarse resolution
Highest scale
denominator

Fine resolution
Lowest scale
denominator



Key Benefits

- Improved scalability by reducing server load
- Increased performance through pre-generation of tiles
- More accessible to applications through REST and KVP APIs
- Easier to deploy, no database required on the server

Key Features

- Full REST and KVP interfaces for flexible and rapid client integration
- Intelligent on-demand creation and caching of tiles to minimize disk storage requirements
- Supports the creation of multiple styled tile sets for the same base data
- Tiles may be created in hundreds of spatial reference systems profiled under EPSG projections and datums and allows users to define custom projections
- Tiles can be generated at any set of scales required, and new scales can easily be added later

Software Specifications - CubeSERV® Web Map Tile Server

Operating system requirements:

SUN Solaris, Linux (Red Hat ES or Fedora Core or SUSE)

Supported publishing formats:
JPEG, GIF, PNG and TIFF

Other software requirements:

CubeSERV® Web Map Tile Server requires a Web server such as Apache or IIS



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