

Czech Cadastre Makes Terabytes of Data Rapidly Available to the Public



The Czech Republic's national mapping agency, the Czech Office for Surveying, Mapping and Cadastre (COSMC), has implemented a web-based solution from Intergraph for the distribution and publishing of national geospatial data. The solution includes high-performance image compression and delivery for handling big data on a large scale.

COSMC's original system, based on Intergraph's GeoMedia, was recently upgraded to an integrated web-based portal, leveraging multiple Intergraph technologies. COSMC also integrated image exploitation and analysis, featuring ERDAS IMAGINE, into existing workflows.

The Czechs needed the right solution to allow us to improve and streamline the management and distribution of key geospatial data, Petr Dvořáček, head of Administration and Use of Geoinformatics Section, COSMC, explained. By working with Intergraph, they were able to digitise massive amounts of geospatial data in ways that made it much easier to share publicly.

Since 2005, the Land Survey Office of COSMC had used a web-based portal to serve national geospatial data to the government, designers, network administrators, schools and entrepreneurs. The portal supports thousands of users and serves up to 4 million requests per day. As the demand for open web mapping services (like OGC-ISO WMS, WMTS and WFS) increased, the organisation investigated solutions that would allow this data to be shared easily and directly in digital format.

Prior to upgrading, COSMC provided the data in file formats. Now, through the combined capabilities of the Intergraph upgrade, COSMC is able to offer the public enhanced viewing, discovery, transformation and download services, ensuring excellent throughput. In addition, the organisation is able to provide WMTS services for three fundamental user communities: national, INSPIRE and GoogleMaps.

In order to digitise the data and make it publicly available, COSMC also needed a solution for compressing 4TB of existing raster data held in thousands of separate TIFF files. By using the Enhanced Compression Wavelet (ECW) technology, the organisation was able to reduce the archive's size to just 750 GB. Intergraph's ECW technology allows organisations to compresses terabyte-sized imagery files to five percent of its original size, while still retaining the images' full visual quality and lightning-fast display performance. Specifically designed for geospatial data, ECW is supported by the industry's most popular GIS, CAD, and remote sensing solutions for the desktop, web or mobile environments.

To further extend the reach of COSMC's geospatial data, Intergraph also developed third-party applications that allow the organisation's restricted ortophoto imagery to be accessed by the public, which includes online newspaper articles that are GoogleMaps compatible. Intergraph also developed COSMC-branded mobile applications.