Tackle two of national mapping agencies’ most challenging problems—map currency and cost of production—with Cartographic Web Services (CWS).

CWS is a proven solution for the rapid production of cartographic products that leverages over 30 years of Hexagon US Federal research and development into the automation of the cartographic production process. CWS is currently producing series-based maps at the national mapping agency level for both military and humanitarian missions.

Solving the Problem
Product currency requirements and time-to-market for cartographic products to meet these missions continue to shrink. Accurate and complete information is required to ensure mission success and minimize collateral impacts on civilian populations during military operations. Agencies often face demands that exceed their limited resources as well as logistical bottlenecks in providing current content to the warfighter in a timely manner. National mapping agencies need a tool that will meet these challenging requirements to fulfill the mapping and charting needs of their stakeholders. CWS solves each of these problems, helping agencies succeed and increase mission success.

Creating Maps Rapidly
The simple cartographic production process starts with the user selecting the product or products that are to be generated. CWS allows for single, batch, or automatic production of products. CWS produces single-sheets through its graphical map-based user interface. In CWS, batch processes also act as an administrative function where a list of sheets is entered for processing. When seeking automatic production, CWS automatic processing listens to database triggers that cause a new map to be generated when changes occur in the source database.

CWS consumes your data from OGC® Compliant services or data stores. User defined configuration files instruct CWS in the generation of the cartographic product from these sources. Users can select from a variety outputs to choose from including Geospatial PDF, DCS files (if the map is to be finished to the specification), GeoTIFF, CADRG, and other formats. The end of the automatic process outputs a Provisional Map. A Provisional Map is a fit-for-use cartographic product in less than 20 minutes on average. 90% of all sheets take eight hours or less to finish to meet specifications.
product that meets nearly 80 percent of the selected standard requirements. Processing the automated output to meet specifications is accomplished through a desktop client, the CWS editor.

**Solution Architecture**

The automated production component of CWS is a web-based system. It can operate behind a firewall or in a cloud environment to produce products. CWS meets your mission requirements through the use of a load balancer that performs thread management as well as managing jobs across multiple physical machines. This load balancer allows the user to scale the system to address agency needs whether the organization is in normal operations or crisis mode. Cartographic finishing is accomplished through the use of the CWS desktop cartographic editing software.

**PRIMARY PERFORMANCE METRICS**

- A 15 minute × 15 minute 1:50,000 scale map can be produced in an average time of 11 minutes from source compiled at 1:50,000.
- A 30 minute × 30 minute 1:100,000 scale map can be produced in an average time of 16 minutes from source compiled at 1:50,000.
- Ninety percent of all maps require about eight hours of finishing to meet the specification.
- Maximum density urban maps take no more than 40 hours of manual finishing.

**Contact Us**

Email: info@hexagonusfederal.com
Tel: +1 800 747 2232
hexagonusfederal.com

**About Hexagon US Federal**

Hexagon US Federal is an independent subsidiary for Hexagon’s U.S. federal business. Hexagon US Federal provides mission-critical and business-critical solutions to governments and service providers. A global leader, proven innovator, and trusted partner, our software and industry expertise help improve the lives of millions of people through safer communities, better public services, and more reliable infrastructure. Visit hexagonusfederal.com.

Hexagon US Federal is part of Hexagon (Nasdaq Stockholm: HEXAB; hexagon.com), a leading global provider of information technologies that drive productivity and quality across geospatial and industrial enterprise applications.

©2016 Hexagon US Federal. Hexagon US Federal is part of Hexagon. All rights reserved. Hexagon US Federal and the Hexagon US Federal logo are trademarks or registered trademarks of Hexagon or its subsidiaries in the United States and in other countries.