

CARTOGRAPHIC WEB SERVICES

Proven Rapid Cartographic Production

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

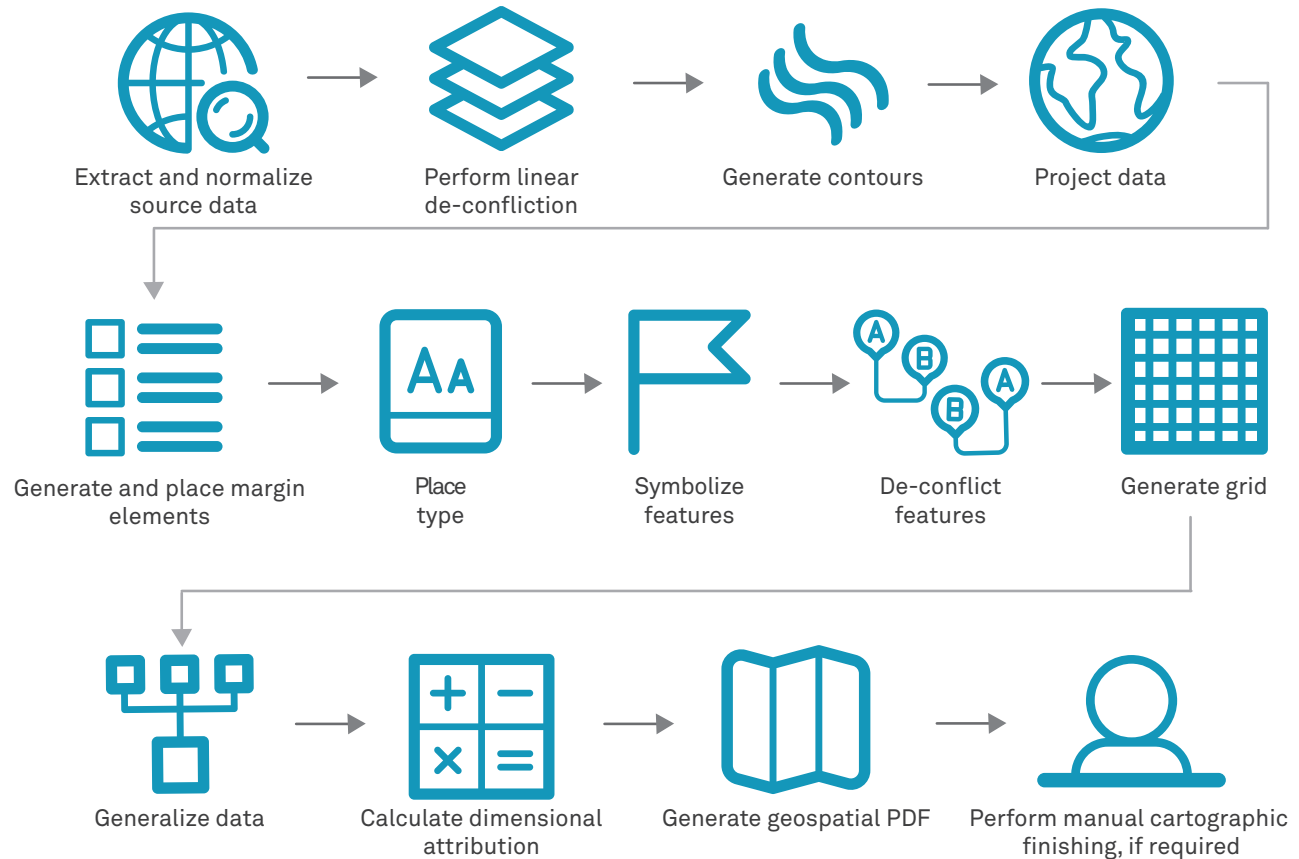
The simple cartographic production process starts with the user selecting the product or products that are to be generated. CWS allows for single, batch, or automatic production of products. CWS produces single-sheets through its graphical map-based user interface. In CWS, batch processes also act as 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 of 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

TOP 10 KEY FEATURES

- 1 Shrinks production time from weeks to days or even hours
- 2 Addresses customer requirements in a timely manner
- 3 Scales to meet mission requirements when and where necessary in a Web-based environment
- 4 Produces a useful cartographic product in less than 20 minutes on average
- 5 90% of all sheets take eight hours or less to finish to meet specifications
- 6 Force multiplier for your cartographic workforce
- 7 Produces series-based maps without software customization through CWS configuration files
- 8 Operates on agency or cloud infrastructure
- 9 Produces compact Geospatial PDFs for easy dissemination in low-bandwidth environments
- 10 Configuration files can be easily edited by users

Cartographic Web Services Automated Workflow



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.

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