



**US Army Corps
of Engineers®**

Engineer Research and
Development Center

Product

Joint Mapping Tool Kit (JMTK)

Technology

The National Geospatial-Intelligence Agency (NGA) developed the Joint Mapping Toolkit (JMTK) to satisfy the DOD services' common Mapping, Charting, Geodesy, and Imagery (MCG&I) requirements. JMTK is a collection of Application Programmer Interfaces (APIs) that support the military services' MCG&I functionality. Specifically, these APIs enable mission applications to interface with the Common Operating Environment (COE) MCG&I component. The JMTK Visualization software (JMV), managed by the Defense Information Systems Agency (DISA), provides the capability to display map background products and to render foreground information.

Capabilities within JMTK are:

- The *Spatial Data Base Module (JMS)* provides capabilities to import, manage, query, retrieve, and export standard NGA data products and user or mission application created data sets.
- The *Analysis Module (JMA)* is a collection of terrain analysis algorithms that are applied to geospatial information retrieved from the Spatial Data Base Module.
- The *Visualization Module (JMV)* is designed to render NGA standard products and results obtained from the Analysis Module on standard workstation platforms.
- The *Utilities Module (JMU)* is a library of platform independent capabilities to perform fundamental geodetic computations such as unit of measure conversions, datum transformation, and coordinate conversions.

Problem

Geospatial information is a fundamental factor in DOD Command, Control, Communications, Computers and Intelligence (C⁴I). Numerous capabilities have been developed to exploit geospatial data to meet the military services MCG&I requirements. Previously, the military services developed and maintained their own MCG&I information processing software products. The common functionality found across many of these software packages resulted in duplication in software capabilities, and in maintenance and testing activities. This approach was both costly and technically inefficient. Unique implementations of common MCG&I capabilities can result in discrepancies in geographic location and positioning. There was a need for a single software product to support common MCG&I requirements.

Expected Cost To Implement

For legitimate government-sponsored programs, JMTK is free. Integration cost is system specific.

Benefits/Savings

The JMTK helps to eliminate the duplication in software, maintenance, and testing that would otherwise occur with the implementation of many separate software packages with common functionality. Use of the JMTK yields cost savings, and prevents discrepancies in geographic location and positioning that result from unique implementations of common MCG&I capabilities.



Status The Joint Mapping Toolkit (JMTK) is government off the shelf (GOTS) software that will be funded and maintained until the end of FY06 by NGA. After that time, no new development is planned or anticipated because JMTK is being replaced by the Commercial off the shelf (COTS) version called the Commercial Joint Mapping Toolkit (C/JMTK).

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Distribution Sources The JMTK software is available from the JMTK FPT site to registered users. New users may register through their MCG&I Engineering Support Group Service/Agency Representative, available through:

<http://www.jmtk.org/pages/reps.html>

Available Documentation Some documentation is available from the JMTK FTP site, and the JMTK Help Desk provides assistance to JMTK developers. See “Available Support” (below) for Help Desk contact information.

Available Training The JMTK Help Desk is designed to provide assistance to JMTK developers. The “Available Support” section (below) gives Help Desk contact information.

Available Support The JMTK Help Desk assists JMTK developers with problems related to the current versions of the JMA, JMS, and JMU domains within the JMTK environment:

phone: 1-888-549-JMTK (1-888-549-5685)

e-mail: jmtkhelp@jmtk.org

hours: Monday - Friday, 8 a.m. to 12 p.m. and 1 p.m. to 5 p.m. EST