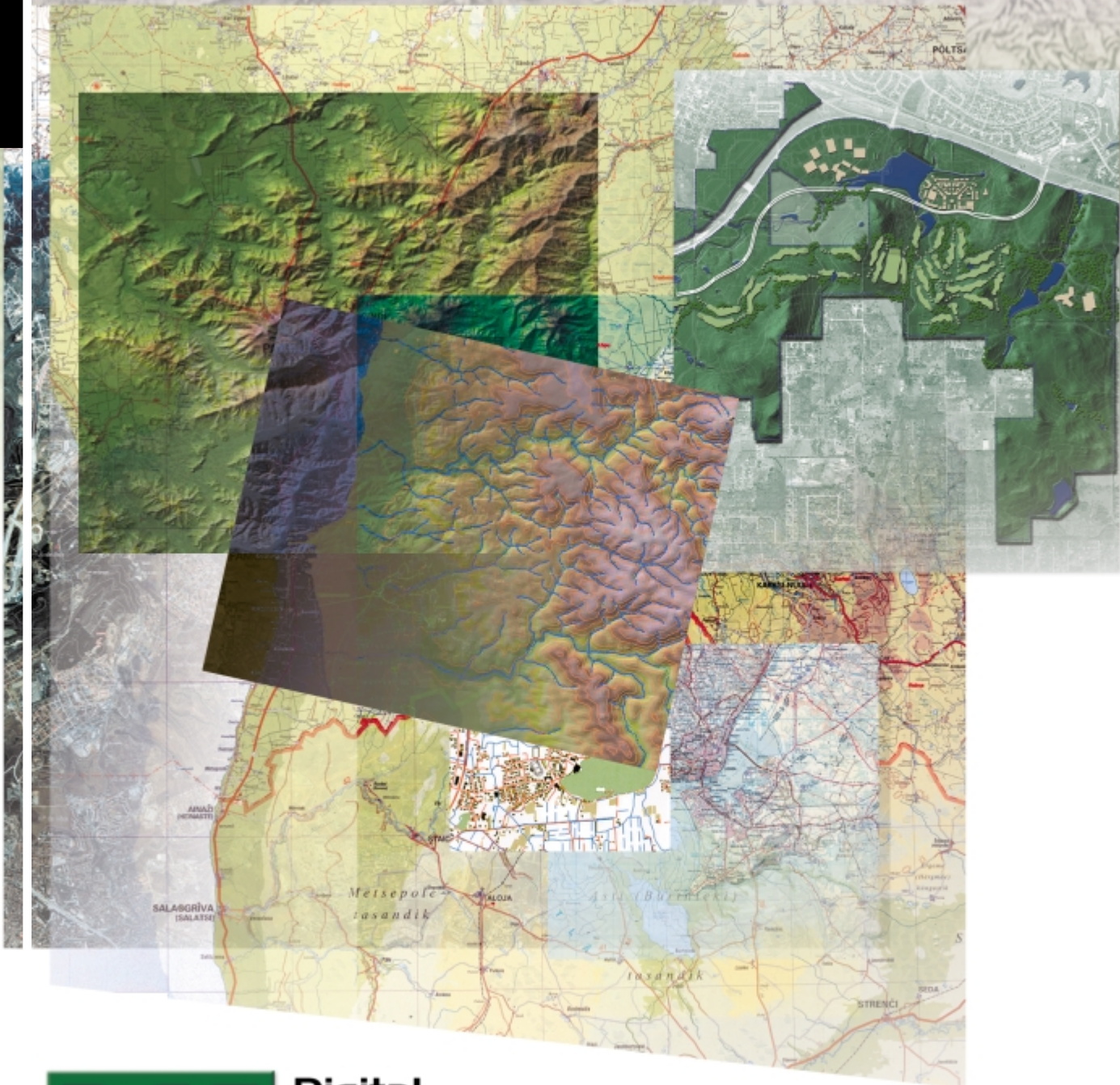


BRINGING IT TOGETHER.

Digital
Cartographic Suite

OVERVIEW



DCS Digital
Cartographic
Suite

INTERGRAPH
Mapping and GIS Solutions

Digital Cartographic Suite of Products

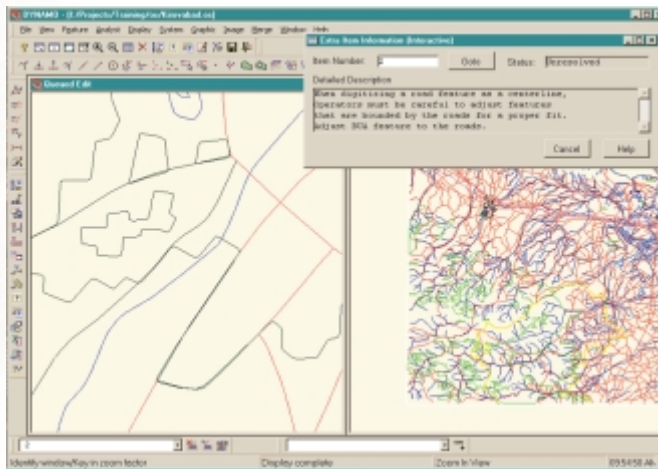
The only digital Mapping/GIS system to offer interactive, real-time, persistent topology

The Digital Cartographic Suite of products from Intergraph enables cartographers to design aesthetically pleasing, clear, and concise maps. And it makes creating great maps easier and faster than ever.

Dynamo, the core product, provides technology that enables you to interact directly with unified topology in real time. Other products leverage and extend Dynamo's core technology to give you a complete, cost-effective cartographic solution.

The Digital Cartographic Suite of products includes:

- **Dynamo™** — geospatial production and analysis
- **Digital Cartographic Studio** — map design and output
- **DynaGEN®** — map generalization
- **Dynamo Terrain Modeler** — terrain modeling
- **Vector Product Format Production System** — VPF™ data production and verification



Dynamo enables the analyst to interactively place items on a queue for correction. Operators can then move through the queue to resolve problems.

Dynamo

Digital mapping/GIS system with interactive, real-time, persistent topology

Use Dynamo to perform geospatial production and analysis in real time. You interact directly with topological structures as you add and edit features and attributes. Topology recomputes and verifies on-the-fly and displays changes to edges, nodes, faces, and attributes as you work.

You actually see topological structures in a map coordinate system, while a unified data model maintains geometry, topology, feature attributes, and spatial relationships in one location.

Precise conflation — With Dynamo, you can precisely match vertex-to-vertex and line-to-line. You can compare two disparate sets of geometries and edge-join or conflate for one or many features.

Dynamo can also test for attribute mismatches during the merge/conflation process — even taking one dataset's geometry and merging it with the attribution of another to form a third geospatial dataset.

On-the-fly error correction — Dynamo brings precision to editing sessions and analysis. For example, you can remove errors in data by automatically detecting and editing slivers.

Dynamo eliminates the flat file methodology. You can evaluate — in real time — the spatial and geometric integrity of a dataset across multiple thematic coverages.

Automatic alerts — Dynamo's dynamic topology creates intelligent data sets that can alert you to data conditions. You can set triggers that automatically detect changes in data attribution, geometry, spatial relationships, or any combination. And, when changes occur, Dynamo can automatically resymbolize the data to alert you to the changes.

Full-featured GIS analysis engine — Dynamo contains an extensive array of spatial query, Boolean, and metric operators accessed with a simple query-building interface — you don't need macro languages or knowledge of SQL. With Dynamo's real-time analysis environment, you can ask a what-if question, make your changes, and immediately see the results.

Dynamo features:

- *Automatically creates and maintains clean topology*
- *Corrects geometric and topological errors on-the-fly*
- *Provides merge and conflation capability*
- *Offers dynamic attributes and triggers*
- *Supports a constantly growing list of numerous input/output data formats*
- *Provides graphical views of topological relationships*
- *Eliminates post-processing of GIS data for cartographic use*

Digital Cartographic Studio

Clear, concise map design

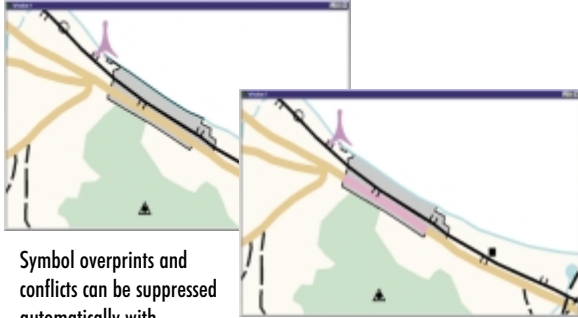
Use Digital Cartographic Studio (DCS) to quickly produce high-quality maps. Founded on rules-based vector symbology, DCS is a true digital cartographic environment that reduces production time, and preserves data integrity. And it helps you develop greater control over the placement of symbols and text.

Specific applications for specific tasks

Digital Cartographic Studio (DCS) includes five applications that address discrete administrative or editing tasks.

Because you can distribute these applications to the people in your organization who perform specific tasks, DCS is very cost-effective.

DCS Administrator — Create symbology and symbolization rules that produce symbols at the finest resolution, expressed in map paper units.



Symbol overprints and conflicts can be suppressed automatically with DCS Cartographer.

DCS Cartographer — Apply cartographic-quality symbols to map feature data using this interactive feature and symbology editing environment. DCS Cartographer also saves time and money by eliminating the need for repeated cycles of feature editing rasterization and color proofing.

DCS Typographer — Automatically place text labels and names for all delineations of point, line, and area features. DCS Typographer detects and resolves text conflicts. You can use feature attributes to formulate a text label, label features more than once, and format text automatically. The software supports leader lines, text boxes, and TrueType fonts.



Data courtesy of Amt Für Militärischer Geowesen (AMIGeo).

Text is automatically placed and conflicts are resolved using DCS Typographer.

DCS Geodesist — Generate grids in a primary or secondary projection, and designate grid and graticule lines as major or minor with varying symbology for each. You can also use crosses in place of a line mesh and vary tics based on

hemisphere. Geodesist also positions and constructs labels in accordance with map specifications.

DCS Marginalia — Automate population of margin and legend information. Retrieve and place textual and graphical information from a variety of sources. You can also automatically update information in the map such as map series or chart number.

DCS features:

- *Postscript and TIFF output — both color-separated and composite*
- *Selective masking*
- *Integration with raster for image maps and hill shading*
- *Overprint detection and resolution*
- *Plan and scale border generation*
- *Migrate MicroStation® cells to DCS symbols*

DynaGEN

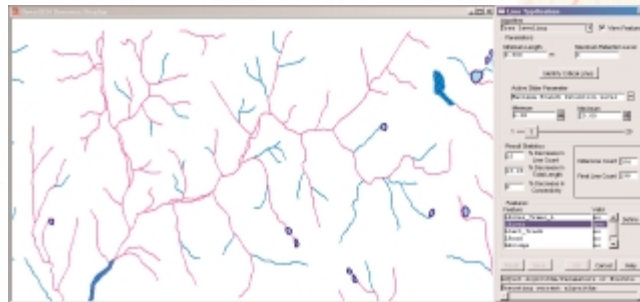
Powerful cartographic generalization tools

Cartographers use DynaGEN to generate map products at multiple scales from one common, high-resolution database. By eliminating the expense of maintaining separate databases for each map scale or product, DynaGEN helps organizations with large-scale cartographic databases reduce costs.

DynaGEN blends data reduction and simplification algorithms to give you a comprehensive set of generalization operations.

DynaGEN features:

- *Thinning and smoothing*
- *Aggregate points and areas*
- *Collapse area to line, area to point, and line to point*
- *Typify points and lines*
- *Square buildings*
- *Simplify area*
- *Extend geometry*



DynaGEN's Typification operator generalizes linear features removing the representative "typical" pattern.

Dynamo Terrain Modeler

Cartographic-quality terrain modeling in an open topological environment

Dynamo Terrain Modeler (DTM) produces cartographic-quality digital terrain models that help you create accurate elevation and relief maps, and perform terrain analyses.

DTM also defines a path to move easily from 2D to 3D geographic information system (GIS) models.

DTM features:

- Supports conversion methods for most public domain gridded data sets
- Integrates feature data with grid and irregular point data in DTM's 3D GIS environment
- Validates and edits terrain models using a wide range of operators
- Validates features, model data, and derived feature production using cartographic algorithms

Vector Product Format Production System

Produces and verifies the format, quality, and content of VPF data

The Vector Product Format Production System (VPFPS) automatically creates and maintains the Level 3 topology required for VPF products and categories.

VPFPS includes new VPF Validator software, a powerful schema mapping process for converting legacy data, and a user-friendly, graphical interface for creating and maintaining metadata.

The only vector format production system that produces and verifies the format, quality, and content of VPF data, VPFPS leverages the power of Intergraph's interactive topological environment for cartographers and GIS analysts.

VPFPS features:

- Supports VPF-specific data collection systems
- Controls logical feature remapping
- Foreign language feature schema
- Non-FACC data code
- Feature class and structure amalgamation, condensing, and reassignment
- Priority and dependency mapping use by specifying feature attribution
- Attribute value assignment by specifying feature names or properties

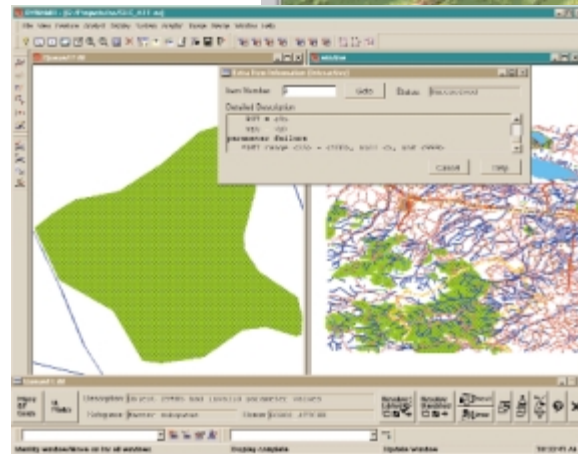
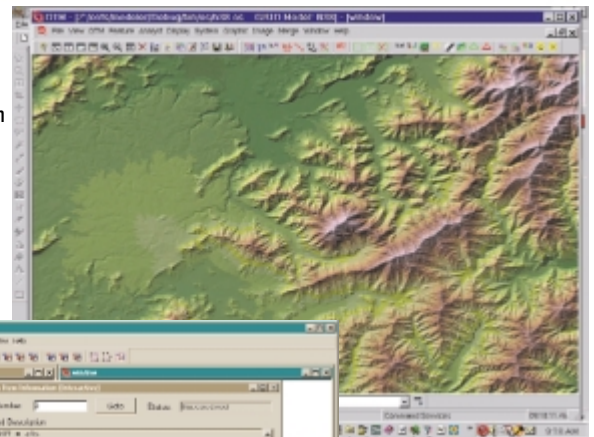
BRINGING
IT TOGETHER.

Dynamo, the core product in Intergraph's Digital Cartographic Suite of products, enables you to interact directly with unified topology in real time to create concise, attractive maps. Other products in the suite are Digital Cartographic Studio for map design and output, DynaGEN for map generalization, Dynamo Terrain Modeler for terrain modeling, and Vector Product Format Production System for VPF data production and verification.

All the products in the suite share these features:

- Real-time, interactive unified topological environment
- Object-oriented implementation and data model
- Full integration with Intergraph's MGE and GeoMedia®
- Easy-to-use, WYSIWYG user interface
- Merge and conflation of datasets
- Based on Microsoft Windows NT®

DTM's elevation tint displays can be used for quick landform and elevation distribution analysis, or for hardcopy output.



VPFPS verifies the accuracy of your feature and attribute data, and automatically alerts users to instances of invalid or missing attribute values.



For more information, visit our Web site at www.intergraph.com/gis.

United States	1-800-791-3357
Canada	1-800-661-8134
Europe	31-23-5666333
Other areas	1-256-730-7191

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Mapping and GIS Solutions

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