



*Intelligent Paper to CAD Solutions®*

## **GEOGRAPHIC INFORMATION SYSTEMS & MAPPING**

*Many industries today are using Automated Mapping, Facilities Management systems (AM/FM) and Geographic Information Systems (GIS) to improve efficiency and reduce costs. While these systems represent a major investment, the larger issue is how to convert from manual methods to these new systems. Studies show that the cost of conversion can average eight to 12 times the initial investment in systems hardware and software.*

*The GTXRaster® CAD and GTXImage™ CAD product series economical alternative for minimizing the costs of conversion. Scanning, drawing management and CAD conversion provide the most cost-effective way to link manual archives with your AM/FM or GIS system.*

**A** simple scan of a map or drawing into electronic format not only stops deterioration, it immediately improves the quality of the original drawing.

Today's market offers the widest variety of document scanners to suit your technical requirements. An adaptive threshold can capture even faint images or drawings of virtually any size, media type or quality.

### **Enhance Documents to “Better than Original” Condition**

Most original drawings bear the marks of continual use - speckles, smudges, crooked lines and broken or skewed images. GTX's image enhancement capability eliminates wear and tear caused by continual erasure.

Using GTX's image enhancement capability, you can remove speckles and smudges or deskew crooked images. If the image is scanned improperly, use a mirror command to reverse it or a rotate command to automatically correct its orientation. In just a few minutes, you can create an electronic document that's better than the original.

### **Database Controls Image Management**

Scanning is just the start. One technical consultant in the public utilities industry recently stated that the one most important ingredient needed for project success is the ability to manage the configuration of the raster image. GTX's products integrate easily into existing Electronic Drawing Management (EDM) systems through the use of standard file formats and an open software architecture. You won't lose scanned images. Scanned or raster images are available in seconds for viewing, plotting and distribution.

### **Restore Old Maps and Edit Quickly**

In many cases, maps have been stored in archives for years, fading and deteriorating. You can use the GTX advanced raster editing techniques to restore those faded or missing images.



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To speed up the editing process, GTX's raster editing techniques include an Intelligent Object Picking™ (IOP) feature. This technique allows you to select raster objects and manipulate them as if they were CAD elements. This capability provides more control over the editing process, lowering the cost of revisions.

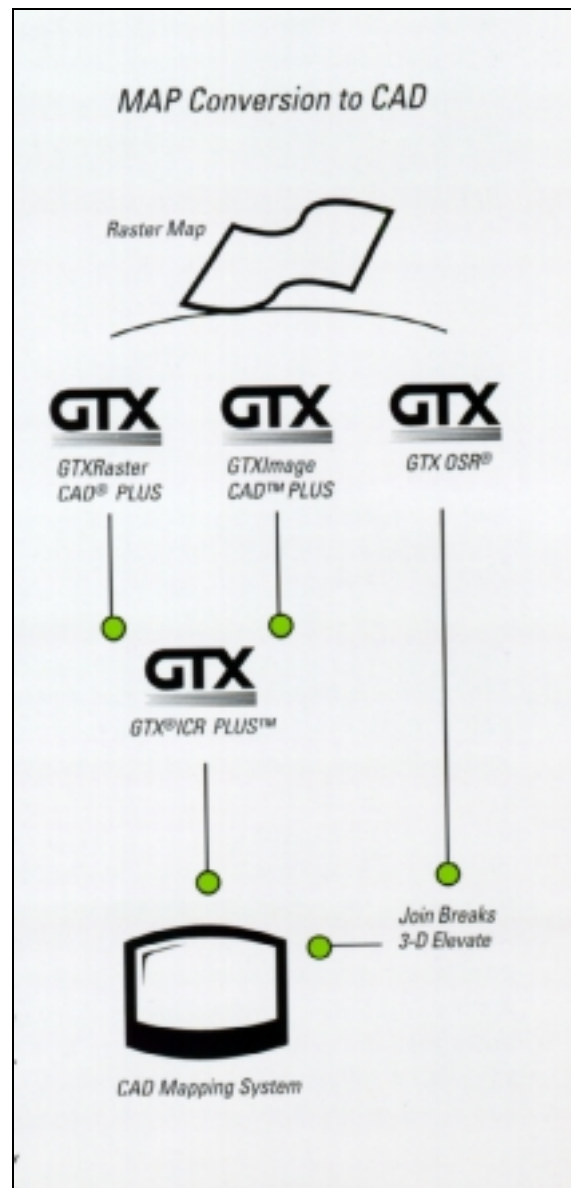
### **Automatically Convert Maps to Your AM/FM or GIS System**

GTX CAD conversion software provides the most cost-effective way to link archived manual drawings with your AM/FM or GIS systems. Using advanced artificial intelligence, GTX technology converts scanned images to highly accurate maps. Once converted, images are ready to load into your AM/FM or GIS system. The conversion is automatic, eliminating the need for an operator to help the system through the process. Once in CAD format, extract and access important information - information - information that's more difficult and time-consuming to extract from manually drafted maps.

### **CAD Conversion Designed for Maps**

The techniques normally used to convert mechanical drawings are not as efficient for contour map conversion. That's why GTX designed special programs to convert topographical maps with dense contour lines. The program looks for long, continuous lines and automatically decides which way to continue the line at an intersection. This results in the most accurate contour line CAD conversion available today requiring minimal editing time.

Because GTX uses a highly accurate proprietary format for the raster data, the CAD file contains the accuracy and precision you expect. For example, one public utility selected GTX as the only company that could deliver high quality and automatic conversion of all of its urban electric utility maps.





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### **Service Firms Benefit**

Service organizations can provide valuable scanning and conversion services to a variety of public and private organizations. As an example, one county assessor's office, faced with extensive property development and rapid population growth, wanted to convert more than 16,000 parcel maps. By contracting with a service bureau using GTX technology, the assessor's office completed the project at 20 percent less than the original estimate. The office saved \$1.4 million and improved staff morale, increased employee productivity and significantly improved drawing management.

### **Some of GTX's AM/FM & GIS Customers:**

#### **Oil & Gas**

BP Oil  
British Petroleum  
Caltex (South Africa)  
Conoco  
FINA (Italy)  
Marathon Oil  
Pakistan Refinery  
Petrogal  
Phillips Petroleum  
Shell  
Texaco

#### **Transportation**

Australian National Rail  
Bethlehem Steel  
British Rail  
Czech Rail  
Hong Kong Subway  
Long Island Railroad  
New Jersey Turnpike Authority  
Norwegian Railways  
SNCF

#### **Engineering**

Bureau of Land Management  
Carnaud Metal Box  
CEGELEC  
Debai Aluminum  
Foster Wheeler  
John Brown Engineering  
Mine Safety and Appliance  
Siemens  
Stone & Webster  
U. S. Corp. of Engineers  
United States Geological Society  
Yarrow Shipbuilders

#### **Defense**

Australian Department of Defense  
French Army  
GEC Marconi  
Italian Navy  
Norwegian Defense  
Office of Naval Intelligence  
Portuguese Air Force  
Royal Air Force  
Swedish Defense  
TASC  
U.S. Navy (NAVFAC CAD2)  
UK Royal Navy