GTX Case Study

GIS Sector

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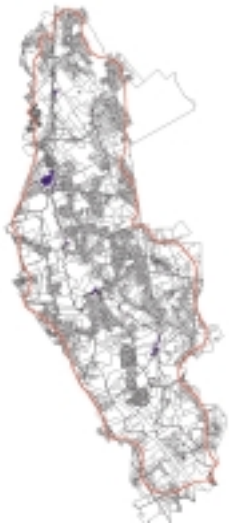
UNIVERSITY OF MASSACHUSETTS -- DARTMOUTH LEVERAGING THE POWER OF GTXRASTER CAD



Canoe River Project Parcel Map

The University of Massachusetts Dartmouth (UMASS - Dartmouth) is known for its commitment to higher education and comprehensive programs. The university encourages undergraduate students to engage in research and contribute to the future development and well being of the surrounding communities.

The students of UMASS - Dartmouth typically take on projects for one year or more, projects which are usually funded by state or town grants. An example of services performed for the nearby community, is that of work subcontracted to the Hydrology and Water Resources Group of the University of Massachusetts, Department of Civil and Environmental Engineering. The group, led by Dr. Neil M. Fennessey, worked on a project for the Canoe River Aquifer Advisory Committee (CRAAC).

According to Dr. Fennessey, the CRAAC is a water resources management group comprised of representatives from the towns of Easton, Foxborough, Mansfield, Norton, and Sharon, located in the southeastern area of Massachusetts. The towns' common water resource is the Canoe River and the underlying Canoe River Aquifer. This provides both private and public water supplies in each town.

A portion of the work plan called for electronically digitizing parcels of land using member town tax assessor maps and electronic database information to develop a computer based Geographic Information System (GIS) database. The initial goal for developing this tool was to help evaluate potential land purchases to protect the Canoe River aquifer and help establish a conservation corridor. All parcels within 500 feet of either side of the Canoe River were to be digitized.

Recognizing that the process of digitizing several thousand existing maps can be a very tedious task and that mistakes were probable, Dr. Fennessey was determined to approach the project that would instead benefit both the intellect of his students and the CRAAC. The team purchased the necessary hardware and software required to accomplish the tasks of scanning a blueprint or a black line drawing tax assessor's map and converting the graphical image to a form in which it could be edited and then imported into ESRI ArcView® and ESRI ArcCAD®.

In order for the team to create a high quality map image that could be processed by ArcCAD, it was recommended that the Hydrology and Water Resources Group purchase GTXRaster CAD® PLUS software. Open Archive Systems, the largest North American distributor for GTX Corporation, provided the necessary assistance to help UMASS - Dartmouth obtain and learn the software. The GTXRaster CAD PLUS converted the scanned "raster" image into vector geometry, which then allowed the students to continue with editing and modifying the electronic files. The group was able to effectively process dozens of tax assessor paper maps, of widely varying quality. Dr. Fennessey stated, "The GTXRaster CAD PLUS software was the key to obtaining the end results."

"Thanks to the power of

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GTXRaster CAD PLUS, the group made a key decision," stated Dr. Fennessey. He continued, "We decided it would be in the best interest of the CRAAC and the participating towns that we digitize all of the parcels with the Canoe River watershed as opposed to simply digitizing those which lay along the 500-foot corridor on either side of the river as was originally agreed to in the contract with CRAAC. Needless to say, CRAAC and the Massachusetts Department of Environmental Protection were delighted by our decision."

The power of the GTXRaster CAD PLUS software consists of the ability to modify and enhance scanned raster archives with speed and flexibility of both raster and vector editing techniques. Whether the user requires raster cleanup, hybrid editing, or full automatic raster to vector conversion, the software provides a total solution that is easy to use.

Once the group completed the entire project, which included identifying, indexing, and accurately joining information from the tax assessors' database and the tax assessors' maps, the CRAAC Project was written to several CD-ROMs so that the committee had total access to the five towns' parcels both within and outside of the 500-foot buffer.

The Canoe River Aquifer Advisory Committee honored the University of Massachusetts Hydrology and Water Resources Group by presenting them with a Certificate of Appreciation. They valued the fact that the group had provided more than what was originally asked for, assisted with the ongoing effort to protect land along the Canoe River, and the development of a GIS for three of the five Canoe River watershed towns was set in motion because of the effort.

In addition, because in part of the success of the CRAAC project, the group was awarded a grant by the Town of Lakeville, located in southeastern Massachusetts, to develop a GIS database based on the tax assessor maps of Lakeville. Once again, the Hydrology and Water Resources Group from UMASS-Dartmouth put the power of GTXRaster CAD PLUS in motion and proved the excellence and commitment of the Civil and Environmental Engineering Department that the university so proudly boasts.

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Find out more about the University of Massachusetts by visiting **www.umb.edu.**

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Find out more about the solutions offered by Open Archive Systems by visiting **www.openarchive.com.**

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Find out more information about the GTXRaster CAD Series by visiting **www.gtx.com**

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GTX Corporation Company Profile:

GTX Corporation is the leading supplier of scan-conversion and editing products that provide complete integration and interfacing between scanned drawing archives and Computer Aided Design/Drafting CAD systems.

GTX was founded in 1984 by Dr. Marvin T. Ling, to bridge the gap between paper engineering drawings and electronic format (CAD) and to solve the time-consuming problems of storing, retrieving and editing paper drawings.

GTX is a privately held corporation headquartered in Phoenix, Arizona with offices in Basingstoke, England and Taipei, Taiwan. GTX sells its products through a network of authorized distributors and resellers throughout the Americas, Europe, Asia, the Pacific Rim, the Middle East and Africa. The Company also licenses its technology to third-party CAD vendors for integration and sale under their own private label.

GTX technology brings intelligence to manually created drawings and allows companies to gain productivity and lower costs to effectively maintain, revise and store their engineering documents.

The solutions are designed and developed for use in Mechanical CAD (MCAD), Automated Mapping and Facilities Management (AM/FM), Architectural, Engineering and Construction (AEC), Geographical Information Systems (GIS) and Service Bureau (SB) markets.

Major users of GTX products include public utilities, aerospace/defence, telecommunications, automotive and heavy manufacturing industries.

The GTXRaster CAD® Series utilizes the GTX Software Toolbox libraries for raster editing and raster to vector conversion within the AutoCAD® environment.The range comprises of a series of modular software programs, ranging from simple trace-over, to highly intelligent conversion. Raster manipulation and editing makes use of GTX's proprietary Intelligent Object Picking™ (IOP) which provides drafting modifications with the ease of raster and the power of CAD. Automatic conversion provides true AutoCAD® geometric entities such as lines, arcs, circles and text. The text recognition module is based upon hybrid-neural net technology. This allows users to train the software to automatically recognize text characters associated with individual drawing types and standards

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GTX Corporation - A 15333 North Pima Road, Suite 105, Scottsdale, Arizona 85260 P 1.800.879.8284 480.889.8600 F 480.889.8610 E info@gtx.com W www.gtx.com
GTX Europe Ltd. - A The Estate Office, Chineham Park, Crockford Lane, Basingstoke, Hampshire, United Kingdom RG24 8QZ P +44 (0)1256.708.706 F +44 (0)1256.708.304 E info@gtx.co.uk