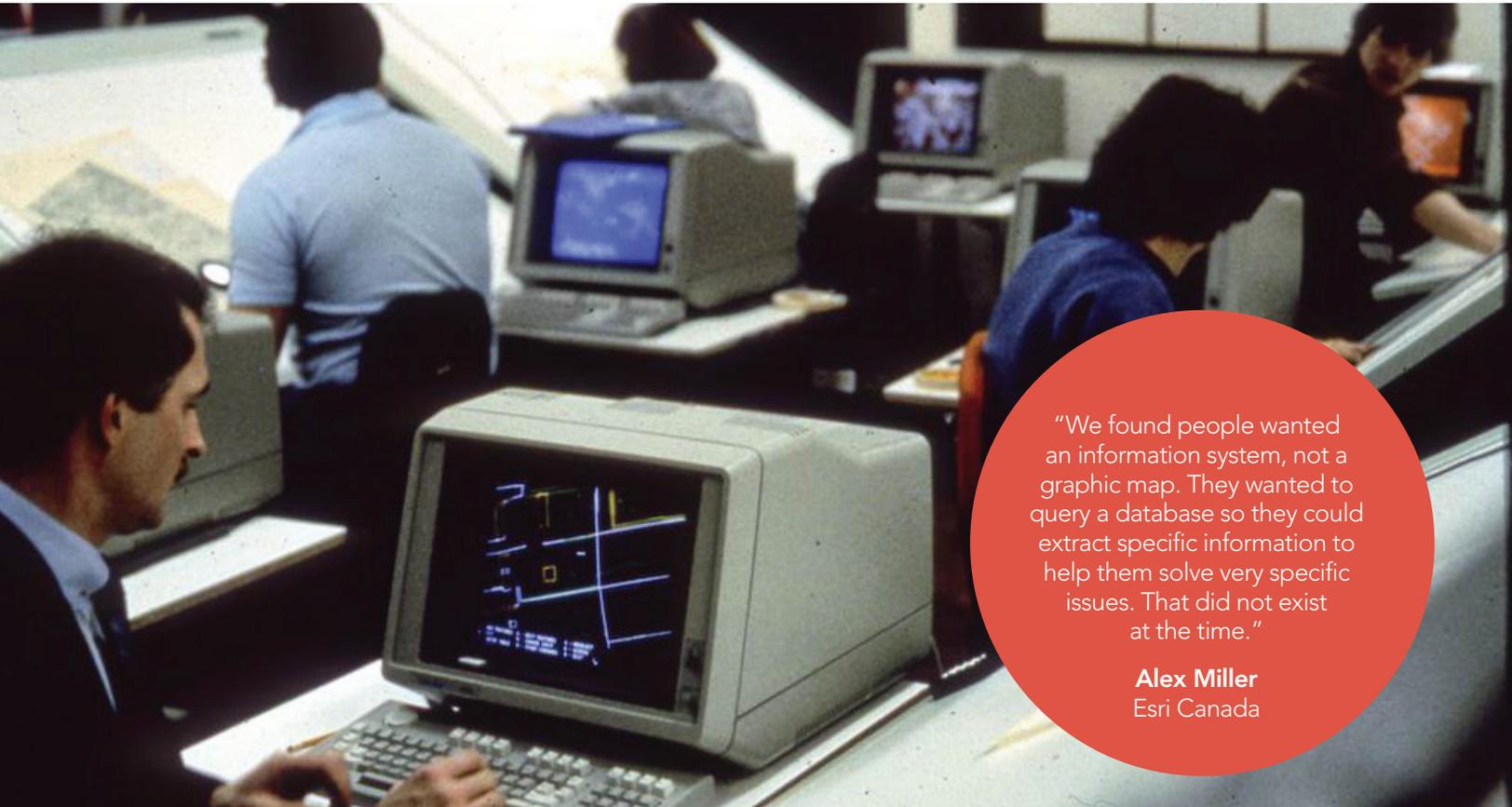


Making Maps That Answer Questions: The History of Esri Canada



"We found people wanted an information system, not a graphic map. They wanted to query a database so they could extract specific information to help them solve very specific issues. That did not exist at the time."

Alex Miller
Esri Canada

Alex Miller (far left) in the trenches with GIS analysts working on Esri Canada's first project in 1984.

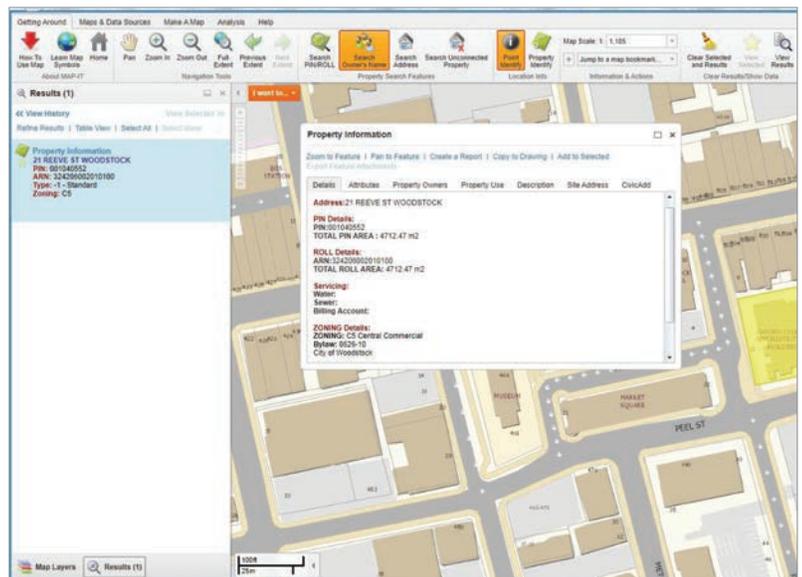
The year Esri Canada was born, the term 'GIS' was not widely known. That was 1984. The year Apple launched the Macintosh, Motorola put out the first handheld cellphone and Facebook co-creator Mark Zuckerberg was born. Maps were slowly migrating from paper to computers and the basic concept of a geographic information system—the ability to store and manage information using a location-based interface—was in its first evolutionary phase. Metaphorically speaking, GIS had just crawled out of the ocean and was still wobbling on its feet. Today, it has wings and its use is soaring.

No longer a complex, desktop-based system that requires a computer science degree—and a whole lot of patience—to use, GIS has evolved to become a user-friendly, Web-based platform solution available to anyone keen to manage and analyze information more efficiently. For 30 years, Esri Canada has helped to lead this transformation, enjoying steady growth and success by understanding and adapting to the needs of its remarkably loyal and passionate user base.

The Genesis of Esri Canada

In 1982, the Ontario provincial government issued a RFP for a landmark GIS user needs study that sought to better understand the GIS requirements of Ontario municipalities. The \$6M project caught the attention of several GIS consultants, including future Esri Canada President, Alex Miller, who was running the mapping and CADD department at engineering firm, Marshall Macklin Monaghan (now MMM Group), as well as Jack Dangermond, President of Esri Inc. Mr. Miller and Mr. Dangermond independently bid on the project, each planning to send juniors in the field to do the interviewing legwork. They both won the contract, along with four others. But there was a small catch: the Province was adamant that Mr. Miller and Mr. Dangermond personally work on the project. Fate, it seemed, had thrown them together.

The user needs study would have a profound effect on both men. After spending three months interviewing the provincial government



Oxford County's internal GIS system then (left) and now (right). The County ranks among the earliest adopters of GIS technology in Canada.

and three municipalities—the City of Mississauga, the City of Cambridge and the County of Oxford—they developed a deep understanding of the issues municipalities were facing and how they believed they could help. In the process, they also developed a deep personal friendship that the two men still share today.

“Jack and I both attribute that project to the success of Esri,” said Mr. Miller. “We developed techniques for documenting user needs that we still employ today, such as a matrix of applications of data, or determining what data is required for specific applications. It seems simple today, but back then it was a big breakthrough.”

In the summer of 1983, Mr. Miller and his wife, Mary-Charlotte Miller, accepted Mr. Dangermond's invitation to visit Esri's headquarters in Redlands, California. Quickly becoming what Mr. Miller calls a “small family,” Mr. and Mrs. Miller spent a month with Mr. Dangermond and his small team of software engineers—led by Scott Morehouse—becoming familiar with Esri's first commercially available GIS software, ARC/INFO.

“Jack and Scott recognized the key requirement people wanted, which I also discovered during the Ontario user needs study,” explained Mr. Miller. “We found people wanted an information system, not a graphic map. They wanted to query a database so that they could extract specific information to help them solve very specific issues. That did not exist at the time.”

A year later, Mr. Miller left his job at the engineering firm after securing exclusive distribution rights to sell Esri software in Canada; becoming the third international distributor after Germany and Australia. In 1987, Mr. Miller sold his share in an aerial surveying company he was co-managing, turning his focus exclusively on running Esri Canada and nurturing his talent as a passionate, persuasive GIS evangelist. He and his modest six-person staff put in long, grueling hours wearing whatever hat was necessary to get the company off the ground.

“I was yo-yoing back and forth from managing the company and meeting with clients all day to diving right down and programming at 2 a.m.,” said Mr. Miller.

Office Administrator, Heather Milnes, who is still down the hall from Mr. Miller today, recalls that the company's fast growth kept Esri Canada's small team busy and always ready to adapt quickly.

“I remember I had to send out a bill for our first big order and we hadn't had a chance to make proper invoices yet, so I dropped some Esri Canada letterhead in a typewriter and drew one up,” said Ms. Milnes.

Early Clients – GIS Innovators

Many of Esri Canada's first clients were natural resource departments and municipalities. In fact, the first Esri global client was the New Brunswick Department of Natural Resources, who worked with the Canadian Forest Service to use ARC/INFO to develop a spatial database to manage its forests.

“Natural resource departments were early adopters of GIS so they could share accurate, up-to-date information on a common platform with forestry companies,” said Esri Canada's Eric Melanson, Director, Atlantic Region.

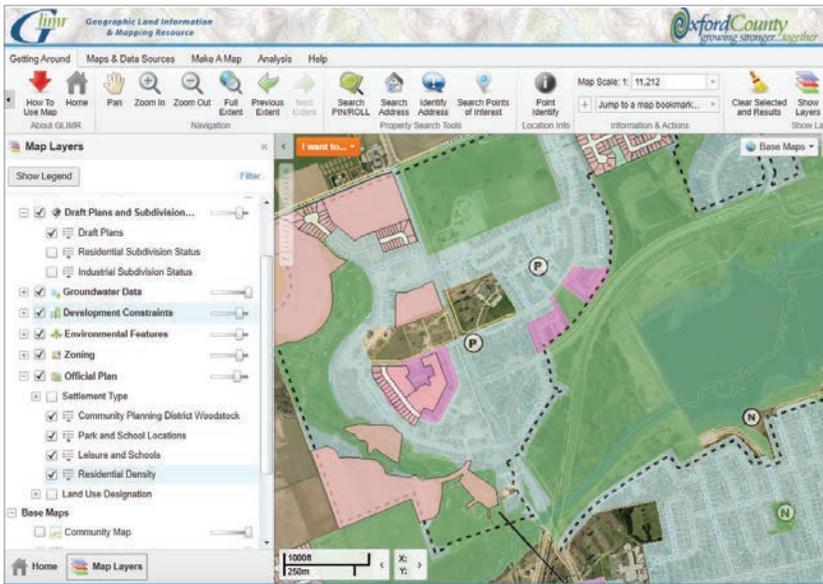
In 1985, the Newfoundland and Labrador Department of Natural Resources selected ARC/INFO as its platform to develop its Forestry Branch Enterprise Geodatabase. Mr. Melanson worked onsite with the Department for six months assisting with the implementation and development of the system. According to Scott Payne, Supervisor of GIS and Mapping for the Department, the purpose of the system was to manage forest inventory and other land cover data in support of forest activities, such as timber supply analysis, long-term planning, operational planning and monitoring.

“It provided the means to convert forest inventory and other land cover data from paper maps and non-spatial database files to spatial databases,” said Mr. Payne, who worked as a Computer Programmer on the project. “As a result, we were able to quickly create planning and operational maps and reports for forest activities such as harvest, resource road construction and silviculture treatments.”

With spatial databases that could combine data and extract information more efficiently, the forestry industry now had a way to answer the questions it had wanted to know for years. In effect, GIS had unlocked the secrets of forest management and forest ecology.

In Ontario, municipalities had also identified GIS as a better way to organize data and get the answers they needed. One of Esri Canada's earliest clients, the southern Ontario municipality Oxford County, worked directly with Mr. Miller to create a ground-breaking municipal GIS system. Building on the relationships and knowledge he'd amassed during the Ontario GIS user needs study, Mr. Miller helped the County develop the Land Related Information System (LRIS).

Using ARC/INFO, the LRIS integrated information such as property and infrastructure data from various government systems. The system



Oxford County's current Web-based application GLIMR (Geographic Land Information & Mapping Resource) that allows residents to quickly search and find publicly available information.

allowed the County to link its property ownership data with its assessment data, which greatly reduced information transfer lag time. For the County, this expedited information flow with the Province, which ultimately meant quicker access to property tax revenue – the revenue lifeline for municipalities.

“We selected Esri’s software based on its ability to do searches and overlay things,” recalled Elizabeth Ottaway, retired Deputy Planning Commissioner, Oxford County. “Other GIS products at the time were more graphically-based, whereas Esri’s software just put everything together.”

Of course, Mr. Miller knew what the County was looking for in a system because he’d interviewed Ms. Ottaway and her colleagues years earlier. He’d taken the time to sit down with the County, thoroughly understand their needs and then address them. Flash forward 30 years and this simple process remains the same, in spite of the advancements with the ArcGIS platform and Esri Canada’s growth as a company, which now totals 330 staff in 16 locations. It might just be one aspect of the company that never evolves.

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