Vancouver, BC – May 16, 2008 - The City of Toronto Archives has developed a unique blend of Industry Standard processes while leveraging leading edge technology in a digitizing program that is second to none. It helps to fulfill the mandate of the City of Toronto Archives, which is to "*preserve and provide access to records of enduring value*."

The White Paper below provides terrific insight into how Toronto Archives manage their Digitization Lab and have it generate revenue form their Reference Services department. Eloquent Systems Inc would like to thank Toronto Archives staff for the permission to publish the following white paper written by them.

City of Toronto Archives Digitization Program

Methodology:

What to Digitize?
A wide variety of factors determine which collection of photographs, maps, or textual records become digitized. For one, records that are frequently requested by users of the Archives are given priority. As the physical condition of a map, drawing or any archival object will deteriorate through repeated handling, scanning will serve as a means of preservation: archival records can be safely stored away and protected while access is primarily provided to the user in a digital environment. There is also a mandate to protect and preserve vital records of the City of Toronto: scanning council minutes and by-laws, for example, will ensure that a backup, digital copy exists if ever the physical document is lost or disaster strikes. Furthermore, there are unique photographic collections at the Archives that are very popular. Efforts are made to make these collections accessible to a wider public by digitizing them and making them available through the Archives' online database, WebGENCAT from Eloquent Systems. In essence, the digitization program fulfills the City of Toronto Archives' collection mandate: to preserve and provide access to records of enduring value.

Ensure Archival Standard Compliance!
After the Archives management decides which photographic collections are to be scanned, the first step is to ensure that RAD-compliant file or item-level archival descriptions exist in the Eloquent Archives database. Often, the archival descriptions have already been entered into the database but if they haven't, Archives' staff will create the archival descriptions so that the scanned images can be accommodated and linked to the database appropriately. Image file names are then based on the archival citation in the description. Bear in mind: the archival description describes the physical archival record; the scanned image enhances the description.

Technology:

Lab
All scanning activities occur in the Archives' Digitization Lab, a secured room that includes two full-time staff members with a background education and expertise in digital photography. On occasion, contract workers are brought in to help complete large-scale digitization projects.

For photographic negatives and prints that are 11X17" or smaller, a Kodak Creo iQSmart3 flatbed scanner with a resolution of 5,500 dpi is used. It is a professional-level scanner that is able to meet ISO, Library and Archives Canada (LAC) and National Archives and Records Administration (NARA) standards for creating master archival digital files. Each photograph 11X17" or smaller is scanned to an institutional standard of 8X10" 600 dpi (4,800 X 6,000 pixels) unless otherwise requested (to a maximum of 5,500 dpi).

Over-sized documents such as maps or panoramic photographs that are 11X17" or larger (to a maximum of 40X60") are scanned at a reprographics copy stand that is bundled with a Linhof M679 View Camera, a Hasselblad 528C digital back, a vacuum table and a built-in studio lighting system. Scanned images are processed to either a Macintosh G5 desktop computer or a Mac Pro 3.2 GHz CPU Dual-Core Intel Xeon system with 8GB of RAM.

Textual documents are scanned either with a Fujitsu document scanner or photographed with a Canon EOS 5D digital camera that is attached to an ATIZ Book Drive DIY book cradle system. Digital photographs are processed in batches using i2S Book Restorer software, which automatically cleans up, crops, and adjusts the brightness and contrast of the digital image. Using LuraTech PDF compressor software, images are converted to bi-tonal PDF/A files with machine-readable, searchable text.

The colour management of all scanners, printers, monitors and digital cameras are maintained by creating custom International Color Consortium (ICC) profiles for each device. The use of these profiles ensures consistent, predictable colour irrespective of the device created by different manufacturers.

Data Storage

All scanned digital files are saved as 8-bit TIFF files and stored on a Sun 5320 NAS server that has a raw capacity of 12 terabytes. Currently, the City of Toronto Archives has stored approximately 3 terabytes of master TIFF files, including over 40,000 scanned photographs. Approximately 37,000 of the scanned images are linked to the WebGENCAT online database, but only after they have been copied and compressed into lower resolution JPEG files. The institutional standard for JPEG images is 1,050 pixels (long-side) with a standard resolution to fit a 17" monitor.

Digital reproductions are sold to the public upon request. There are set fees to obtain a copy of a TIFF file on a CD-ROM or to receive a high-quality printout on either 8X10" or 11X14" archival matte paper. The Digitization Lab uses Epson R1800 and SP2200 Inkjet printers to print photographs.

Monetizing the Investment:

Now that we have seen the methodology, description of the equipment used in the Lab and the data storage let's look at how revenue can be produced using the organizations Web Site and the powerful tools that have been put in place.

http://www.toronto.ca/archives/orderingphotosanddigital.htm

http://www.toronto.ca/archives/copy_fees.htm