

## **Spatial and Temporal Media for Aboriginal Social Justice**

The First Story Toronto mobile application project addresses issues of the urban aboriginal community, through the creation of asset maps populated by participatory and activist media utilizing historical, cultural, and modern data. The asset maps enfranchise the aboriginal communities of Canada through the creation and publication of web and mobile content authored from the perspective of the aboriginal community. Asset mapping, in this context, allows for the preservation of historical and cultural information and fosters the publication in the public domain of current views and perspectives by Canada's aboriginal communities. This approach brings to light alternative interpretations of Canadian history that challenge the traditional colonial view of Canada. The First Story Toronto application content is developed and managed by Toronto's aboriginal communities. First Story Toronto uses community and alternative media to provide a voice for a disenfranchised population and a means for social justice, inclusion, and oppositional views.

First Story Toronto began as the Toronto Native Community History Project (TNCHP). The TNCHP is in its 18th year. Its mandate is to serve as a steward of oral, documentary and material record of aboriginal people in the Greater Toronto Area from time immemorial to the present for the continued enjoyment and education of the community. A paucity of organized public information existed in and around Toronto relating to aboriginal historical sites and traditional stories. TNCHP volunteers began by collecting and researching archival holdings in local and provincial libraries, and then told their stories through organized bus tours. The bus tours were led by members of the aboriginal community and were not scripted. As a result, different versions of the same stories were told depending on the background of the speaker, creating a question of how to record, organize, and make public these variations, as well as how to reach a larger audience and engage the broader aboriginal community.<sup>1</sup>

The Centre for Community Mapping developed an approach to cultural asset mapping projects that involved aboriginal land use and resource management using web and mobile geomatics tools. After meeting to discuss these concepts and implementations with the TNCHP, a partnership was born that created the First Story Toronto Council and web and mobile application described in this paper.

First Story Toronto generates online and wireless content from within the community. This helps to build ties between aboriginal communities and allows for a social space of interaction and activism. First Story Toronto is an historical, cultural and modern media database used to inform Canadians and the aboriginal community of events, news, and places of significance. This supports all three areas of the aboriginal community in that it highlights places, shared interests, and shared communion.

## **The Colonial Myth**

The Colonial myth is the basis of Canadian history. It distorts the place of Indigenous peoples in the history of Canada. The myth is based on the concept that the Dominant culture was more advanced and had a fiduciary duty to care for and advance the aboriginal culture so that it could integrate itself into the dominant culture's way of life. Therefore history, as written, does not accept the ideas and ways of aboriginal communities. Rather than mainstream culture and its institutions being seen as an oppressor of aboriginal ways and thought, it is portrayed as a saviour of the First Nations peoples. This history

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<sup>1</sup> In 2006, Aboriginal agencies estimated that there were approximately 70,000 Aboriginal people living in the City of Toronto.

created a cultural myth that pervades the consciousness of the dominant culture that states that Indigenous peoples are inferior in every way to other Canadians (Green, 1995 and Regan, 2005). This actually means that the historical record of Canada is generally biased and overlooks a significant component of the history of its peoples.

Aboriginal communities are excluded from the historical record as their ideas and methods of historical record do not match the paradigm of the dominant culture (Tobias, Chief Kerry's Moose, 2000). It is expected that native history will conform to the mainstream historical record by adding stories that support the general ideology that creates the history (Green, 1995). However, there are differing views on the history that make it impossible for this to occur. The mainstream culture views its efforts towards aboriginal peoples and history as "a good intentioned inter-cultural dialogue" whereas aboriginal peoples see it as "a manifestation of deeply ingrained colonialism" (Regan, 2005) Furthermore, the oral traditions of the aboriginal communities are not respected as a method of historical record or, until recently, as a legal argument.

Another reason that the cultural and historical dialogue continues to eschew the aboriginal viewpoint is that Canadian judicial and political institutions generally defend the colonial mythology through their practices (Green, 1995). As a result of these practices aboriginal peoples face lower employment rates, average incomes, educational standards, life-expectancies, and access to social assistance and adequate housing; as well as higher rates of incarceration, substance abuse, and deaths related to violence and suicide. For example, aboriginal unemployment rates are at 14.8% compared with 6.6% nationally; aboriginal Canadians earned on average \$23,888 per annum in 2006 compared with \$35,872 for non-aboriginal Canadians; on-reserve aboriginal children receive, on average, 33% less in terms of social assistance than non-aboriginal children; aboriginal peoples are four times as likely to live in crowded dwellings (more than one person per room) as non-aboriginal Canadians; aboriginal children are eight times as likely to be taken into care than their non-aboriginal counterparts; and, collectively, aboriginal Canadians are twice as likely to live in poverty than non-aboriginal Canadians (Statistics Canada, 2009).

It can be argued that multiple, interacting factors have led to the marginalization of aboriginal peoples in Canada, which have prevented First Nations communities from making strides towards self-governance/sovereignty and maintaining their culture, language, traditional and spiritual practices. Interacting factors that led to this marginalization include: historic oppression and marginalization through colonization, imposition of western religions, treaty-making, and residential schools. Current marginalization occurs through policy and resource management processes such as environmental assessments, the Mining Act, the Indian Act land management policy, land use and planning decisions, as well as through differential funding for social services and education, food insecurity resulting in related health issues, toxic contamination of traditional territories, depression and mental health issues, and the loss of connection to their traditional practices as a result of these factors.

### **First Story Toronto Intent**

The goal of the First Story Toronto system is to capture all available data, from cultural and spiritual information, to traditional ecological knowledge, to archaeological, tangible and intangible cultural heritage, including art and artefacts, to traditional land tenure, to political decision making in order to create as full of a historical, cultural, and media record as is possible. This information will then demonstrate extensive and intensive mapping to show both the general information and the levels of significance that various landscapes hold to the GTA aboriginal communities. This information will inform cultural research and community development.

The First Story Toronto system has been designed to focus on community-based interactive mapping services, with related databases, to empower the aboriginal community to capture and save community information. The system uses *narratives*, enhanced by multimedia, to connect the values of the aboriginal people with related geographic features and to link with digitized and interpreted source materials. Thus, the First Story Toronto system supports landscape related oral tradition.

Users can record and replay the narratives that the elders tell, thereby avoiding the limitations of the written record. These stories are geolocated and can contain videos that provide a visual interpretation of present and historical landscapes that surrounding these descriptions. The stories provide a way to teach community traditions and appeal to the younger members of the community who are attracted to the digital lifestyle of the dominant cultures.

First Story Toronto addresses the issues surrounding decolonization in several ways, though it cannot solve all aboriginal issues. The primary advantage of the system is that it allows aboriginal communities a place to write, share and discover their own histories that, consequently, are added to their collective history, even when they are at variance with the dominant culture narrative. This is due to native ownership of the data and control of the enabling web and mobile system, which allows First Story Toronto community groups to tell their story outside of the dominant history. The system also provides aboriginal peoples with the ability to tell their stories in a way that is compatible with the mainstream culture while respecting aboriginal ways. First Story Toronto accepts many forms of media from written documents to videos to voice recordings to images. This creates a place for traditional oral history to be recorded, creating an environment where oral histories from the native communities are accepted while providing supporting documentation (where available) from the dominant culture presented together on the same map. The historical and cultural information is significant as it provides a challenge to the historical record that will compel the dominant culture to reconsider its roots by adding a new voice to our collective memories.

### **Archival Sources**

Archival sources regarding aboriginal peoples are essential for identity, memory, genealogy, and community regeneration. However these sources are scattered through a variety of private and government archives and are ruled by a number of custodial agreements (Resta et al 2002, Faulkhead et al 2005, Gibson 2009). The documents are mainly created by the colonizers and do document “the history and process of colonisation but often contain cultural and personal information, as well as Indigenous knowledge lost to oral tradition” (Faulkhead et al 2005).

The records held in many archives were produced by colonisers and reflect their perspective, having been created at a time when Indigenous people did not have the opportunity for redress. Many contain information that is sensitive. Others contain information that may be false or racist. Archives grant access to these records according to their existing policies and procedures and this can be distressing to many in the communities the records relate to (Faulkhead et al 2005). However the situation is not entirely negative because “although they may induce ambivalent feelings among indigenous peoples as they remind them of oppressive systems that tore families apart, at the same time they provide comfort to those seeking historical answers and redress from the state” (Christen 2011, 208). With respect to the Australian situation, Faulkhead et al. comment “colonisers, or invaders, have been the dominant culture within this country and their voice has taken control of the cultural memory” (2005, 9). (Dennison, 2012).

First Story Toronto collects this archival information and makes it public and accessible to all aboriginal groups. This allows the aboriginal community not just access to the official records, but an opportunity to annotate the record with their perspectives and views on the events that occurred over time.

### **Qualitative Information**

First Story Toronto will encompass information on the history of the Wendats, the Haudenosaunee Confederacy, and the Mississauga's of the New Credit First Nation (MNCFN). Wendat narratives will include the recording of official representatives or elders speaking about the history and their long and continuing struggle to preserve their archeological and heritage sites and will include to their ancestors' material culture. Creative works of Wendat visual artists, for example, that address their history and heritage of the Wendat people, will be published through First Story Toronto . The Wendat information would then be linked to a site on the map, such as Skandatut, the largest Wendat village known and as of yet an unexcavated site on the Humber River, which was once home to between 2,000-2,500 people. Similarly, the Haudenosaunee Confederacy will create a piece on Taiaiagon or Gyetsakwyagon, two late seventeenth century Seneca villages on the Humber and Rouge Rivers and the MNCFN can include information on life on the river ways and the history of their traditional occupation of Toronto that was acquired by colonizers under the 'Toronto Purchase'.

The historical, cultural, and archaeological information included in First Story Toronto can be used to educate both Indigenous and non-Indigenous peoples as well as to encourage tourism to Indigenous sites. First Story Toronto will provide tourists and interested members of the community access to information about the sites they visit via their mobile app, presenting tours of the sites and access to information that is in many ways contrary to the dominant culture's view.

### **Modern Urban Aboriginal and Community-based Media**

Does anyone in Canada actually know that there is a large urban aboriginal presence in Toronto? Most likely the answer is no, unless they are aboriginal themselves. The prevailing belief among the dominant culture is that aboriginal peoples live on reservations. While there are aboriginal centres, like the Native Canadian Centre of Toronto where First Story Toronto is housed, there is little to connect the aboriginal communities and peoples. There are many historical and cultural sites as well as aboriginal art and events throughout the GTA but there has been no available medium that provides a shared channel for learning about aboriginal roots and for discovering current activities of the aboriginal community in the GTA.

Beyond documenting the historical and cultural record of aboriginal peoples in Toronto, First Story Toronto also provides a method for reporting on current events and news from the community, authored by the community. This is important as aboriginal news and events are not generally covered by the mainstream media, unless it is a violent or sensational event such as the Dudley George shooting or the Oka protests. The system can link to articles that mainstream media do write about the community, while focusing on the aboriginal community journalism.

An example of this occurred in fall 2012 with the Imaginative Festival in Toronto. The First Story Toronto application (App) was deployed in Android technology and introduced at this event. The asset map was populated with every event and film being shown at the festival with links to the festival website. At the same time several aboriginal lecturers were speaking at the University of Toronto and the aboriginal bus

tours were running. These events were published on the App. Consequently, all the events pertaining to aboriginal community could be discovered in one place. First Story Toronto allows for news reporting on the events by those who attended and keeps a record of the events that occurred. The App is a potent means to encourage the aboriginal community to come together to share the stories of their current issues and struggles, as well as their triumphs and festivals.

This approach encourages debate and discussion within the aboriginal community as well as with Canadians as a whole. The App provides insight into aboriginal issues based on their perspectives - a voice largely missing in the Canadian dialogue. Due to roll-based access and distributed authority services (see section on governance of the system), broad community engagement and participation is feasible, helping to strengthen and draw the community together.

### **Other Functionalities of First Story Toronto**

The rich cultural heritage information presented in First Story Toronto can interest, inform and entertain both aboriginal and non-aboriginal users by revealing the geography of the GTA from the perspective of the urban Indigenous community. The First Story Toronto App is intended to become the central organ for the GTA aboriginal community, offering a community context for announcing and discovering community events and a forum for current news as well as heritage information.

However, the First Story Toronto App is also a tourism resource providing opportunities to explore and experience aboriginal histories and cultures of the GTA. First Story Toronto will be promoted, and hopefully featured at the PAN AM Toronto Games and as such will help promote First Nations culture as a defining feature of the Games.

First Story Toronto participates in an initiative led by the Mississaugas of New Credit First Nation (MNCFN), host First Nation to the Pan Am Games. The MNCFN will negotiate and determine the nature, location, characterization, infrastructure and resources for First Nations participation in the summer 2015 PAN AM Toronto Games. First Nations will participate in the formal ceremonies, activities, arts, entertainment and economy of the Games. The joint initiative seeks funding by government and corporate sponsorship.

First Story Toronto is also capable of creating information thematic layers within the system. The MNCFN are developing a long-term initiative to better inform the Canadian public of the history and presence of First Nations in Ontario called the 'Moccasin Trail'<sup>2</sup>. The Moccasin Trail project will site monuments at locations of significance and history to Ontario's First Nations. The monuments will feature a rendition of community specific moccasin designs and a means for the user that discovers the monument to link to a mobile web page with a multi-media description (using GPS proximity, Near Field Communication chip or 2 dimensional bar code (Qr). The MNCFN are currently negotiating with the Credit Valley Conservation Authority for Credit River trail locations and plan to feature MNCFN and

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<sup>2</sup> To read about a comparable initiative see: Signs of Lekwungen at: [http://www.bcpcc.com/celebrating\\_diversity\\_signs.php](http://www.bcpcc.com/celebrating_diversity_signs.php)

Huron sites at the outset. The MNFCN are also negotiating to acquire access to municipal and museum archeological spatial and report data for use in Duty to Consult negotiations and in negotiations for Moccasin Trail sites.

The iPhone and iPad version of First Story Toronto will enable the federation of spatial databases as themes or layers in the App. Consequently the Moccasin Trail will be a distinct layer.

Having a community forum and publication medium can help strengthen social cohesion and support for activist planning. Sharing the knowledge and difficulties faced by aboriginal peoples in a public forum can add pressure to the federal government to act and enlighten the Canadian people with regard the aboriginal perspective.

### **Governance of the First Story Toronto App**

The governing body of First Story Toronto is the First Story Toronto Council. However, the system is participatory in that, through distributed authority, many other organizations and community agencies can have the ability to post information. Aboriginal organizations can be granted authority to publish and are responsible for the accuracy of the information being posted under their auspices to the application and for the maintenance of access rights for individuals who publish on behalf of their organizations.

While there is no editorial system as found in mainstream media, a social network component provides mediated group forums for shared editing. Participating accredited individuals can review draft narratives and stories and add to or question the information being offered.

The goal of the First Story Toronto governance services is to ensure democratic distribution of publishing rights. This means being inclusive to all aboriginal groups who wish to add information to First Story Toronto. However, not all aboriginal groups have the same stories regarding specific sites. As mentioned, different speakers on the bus tours that have different aboriginal backgrounds had differences in how they told the stories of the land. By enabling all groups to publish their stories the system allows for oppositional and complementary views of the same events, lands, and artifacts. This approach is intended to democratize the system enabling diversity in perspective and values.

### **Mediated Social Network**

To facilitate distributed authority publication, First Story Toronto offers a mediated social network for securely and collaboratively accessing, contributing, and sharing content. The organization of any social network can be highly granular. The social network is a tree structure with a master group at the root and subgroups under it. For example, an aboriginal community could form a master group, with each family in the community forming a subgroup. As referenced above, forums provide the structure around which any subgroup discusses topics of interest. For example, subgroups could create forums around topics related to locations for food, medicine, or sacred places.

Currently forums can be restricted to the group (private) or open (public). Anyone from outside a group can be invited to join a private group or can ask to join if he or she knows that the group exists. Similarly, a group can share its resources - such as documents it creates - with other groups.

The First Story Toronto Council establishes a social network group on behalf of each organization that wishes to contribute their content. The participating organization then assigns a moderator for its group. The moderator can then admit members to that group. Both the custodian and moderator have tools for their respective duties. Members also have access to application tools and to tools for creating forums. There is also a “contract” among the participants with respect to their individual responsibilities.

People can apply or be invited to join on the basis of their expertise or interest. Then they receive a user ID and password. Thus, access control mechanisms are in place.

### **Sustainability**

The First Story Toronto System creates social and political advantages for aboriginal communities, but also economic opportunities as well. Advertising and sponsorship revenues can have positive economic impacts for participating aboriginal community businesses and fund the sustainability of the system. In addition to aboriginal layers there can be many layers within the mobile App mapping that lend a voice to many other groups within the GTA such as women’s groups, ethnic communities such as the Jewish or Somali communities, disabled peoples, veterans, the elderly, immigrant groups, and the LGTB community. These thematic layers can provide many kinds of useful information such as where to gain medical help, events in their community, news about their community, and promote discussions and activism within these communities.

As layers are added to the system and it becomes the central organ of these communities traffic and use will increase with a corresponding increase in advertising and sponsorship revenues.

### **WIDE Approach**

Many land use management systems in British Columbia use open source software (First Nations Natural and Cultural Information Management Systems, 2011) that can be ‘fragile’ and are labour intensive in construction and maintenance or are based on proprietary software systems that can be expensive to acquire, deploy and maintain. Unlike proprietary systems, open source systems are community supported but do not have professional support. The Computer Systems Group of the University of Waterloo and its not-for-profit research partner the Centre for Community Mapping (COMAP) have developed and support the WIDE toolkit through WIDE Software Systems Corp. WIDE combines proprietary and open source systems by ensuring that all licencees share their innovations.

The WIDE toolkit has been developed to lower the barrier to using and developing complex integrative applications. Traditional approaches have barriers resulting from the role that gatekeepers, such as programmers and GIS technicians play, in controlling the publication of spatial information. This allows greater control, by communities and their citizens, of the collection, processing, presentation and management of their data, information and knowledge using geomatics.

In the WIDE context, “programing” has effectively been replaced with a declarative methodology making it possible to use a wizard or forms-based approach to building web-based systems. This approach allows the technical team to develop web-based information systems faster than more traditional methods. The WIDE application engine provides the opportunity to use an iterative and collaborative approach to create complex web-based systems where the users are engaged during the entire specification, design, and implementation cycle. Once users operate a version of the system, they

may quickly refine the specifications and the corresponding design and implementation. An iterative approach is particularly valuable where an application is developed for a shared service for collaborating organizations, such as a community of practice. This method contrasts with the conventional waterfall model of software design where specifications are gathered and then realized without much subsequent input from the user or client. The WIDE declarative approach to software development allows the technical team to create systems about 10 times faster than more traditional methods. Current research at Computer Systems Group and COMAP intends to create a stand-alone WIDE toolkit to allow communities of practice to create their own applications.

The current WIDE toolkit allows for the following: supports the capture, manipulation and presentation of geo-spatial data; is unique in supporting secure collaboration within mediated social networks for communities of practice; allowing applications to be constructed quickly and maintained with minimal expertise; works with standard web-browsers; but requires no installation as it is provided as a software service over the Internet; and supports existing and evolving geomatics and mobile standards. The WIDE toolkit and collaborative geomatics system is a proven technology having been used in governmental, environmental, health, non-government, socio-economic, and cultural heritage applications.

## **Conclusion**

First Story is an application with tremendous potential for strengthening aboriginal communities and annotating the historical record to reflect the aboriginal perspective. It is a means to gather important historical and cultural data in one place and ensure the information is open and accessible to both members of the aboriginal community and the greater public. In addition to presenting historical data, First Story acts a media and event reporting system that keeps members of the aboriginal community up-to-date with the news of their peoples.

These important functions help develop community awareness and ties by creating a place of discussion, giving voice to a disenfranchised group resulting in a view into modern aboriginal concerns, lifestyles, and goals. Additionally, as the information is public, it can be used to pressure the government and allow for activism. Finally, First Story presents tourists with the aboriginal perspective.

Through an arrangement of distributed authority, this democratic system allows for a variety of viewpoints to be shared from within the aboriginal community, resulting in an inclusive presentation that encourages all aboriginal groups and peoples to participate by using and adding information to First Story.

The system will be sustainable through advertising and sponsorship revenues. It is also capable of creating many layers to lend voice in a similar fashion to other communities throughout the GTA.

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