

# 10 Wula Na Lnuwe’kati: A Digital Multimedia Atlas

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## 10.1 Introduction

The Mi’kmaq Nation is one of North America’s aboriginal peoples. The group is part of the north east culture area and speaks an Algonkian language. Our traditional territory covers most of Canada’s Maritime Provinces as well as parts of Newfoundland and the Gaspé Peninsula. It is from our eastern geography that we are known as ‘Keepers of the Eastern Door’.

Wula Na Lnuwe’kati<sup>1</sup> is a multimedia atlas of the Mi’kmaq Nation. It was developed from 1994 to 1996 as a Master of Arts thesis in geography at Carleton University. The work was intended both as an academic work and an artistic endeavour. The atlas grew out of a personal interest to learn more about the culture and history of the Mi’kmaq people as part of a journey of personal discovery/recovery. Development of the atlas continues to take the project to a publishable form.

## 10.2 Target Audience

Wula Na Lnuwe’kati will be donated to Mi’kmaq Native Friendship Centres as it is intended to give the work back to the community from where it comes. The atlas will also be commercially available to the general public.

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<sup>1</sup> ‘Wula Na Lnuwe’kati’ can be translated as ‘This is Indian Land’. This is best understood as our relationship to the land as a trust given to us by Niskam (the Great Spirit/Creator). As the Mi’kmaq, our identity is distinctly linked to the land we call Mother Earth through our culture, traditions and language. Our culture grows from the land and within the concept of respect for the land, nature, humankind and all living things on earth.

The intended audience is all who are interested in Mi'kmaq geography and history with a focus on senior high school students and university undergraduates. The audience may be Mi'kmaq or of non-native heritage.

### 10.3 Selection of Chapters

- The 'Place Names' chapter represents a reappropriation of the land. The re-insertion of Mi'kmaq place names into the landscape asserts the fact that this is a territory of Mi'kmaq occupation ... past, present and future.
- Stories of how the land was formed is the theme of the 'Legends' chapter. This section was selected for reasons similar to 'Place Names'; it offers the reader the chance to know the Mi'kmaq people as part of the land from time immemorial.
- The 'Geopolitics' chapter was chosen for its potential to instruct the reader on issues concerning the structures of political organization. The chapter examines Mi'kmaq political life in the context of a sovereign nation and in an international context.
- The 'Trade' chapter was selected for reasons similar to 'Geopolitics'. This chapter describes trade with other nations for goods not produced domestically.
- Mi'kmaq population distributions, discussions of forces which shape these distributions, as well as explanations of pressures contributing to population decline are offered in the 'Population' chapter.
- The 'Canoe Routes' chapter was selected to provide an opportunity to use previously learned animation techniques.
- The 'Information' section was included to create a place to give the map reader instructions on the atlas's functions, give an artist's statement and biography, references, acknowledge the contributions of others and to let the reader close the atlas.

A number of possible themes for the chapters of the atlas were considered. Those that were considered, but not selected, were: the geography of resistance, loss of territory due to European expansion, and sacred sites. Noel Knockwood, Elder and Spiritual Leader of the Grand Council of the Mi'kmaq Nation provided significant advice in these decisions. While these themes were not portrayed in the first iteration of Wula Na Lnuwe'kati, they will be represented in future editions of the atlas. The themes that were selected are described above.

## 10.4 Software

A number of software packages were used in the production of Wula Na Lnuwe'kati. Maps were drawn using Aldus *Freehand* 3.11. Textured map fills, hill shading and special presentation effects were produced using Adobe *Photoshop* 2.5. Digital video clips were compiled with Adobe *Premiere* 3.0. Sounds used in the atlas were sampled and engineered using *SoundEdit Pro*. Type for maps was designed using Adobe *Illustrator* 5.5. Macromedia *Director* 4.0.3 was used to assemble the elements together and to create the interactivity.

## 10.5 Production of Base Maps

### 10.5.1 Scanning

The International Map of the World (1:1 000 000) published by Natural Resources Canada served as base maps for this work. These large sheets were scanned in sections on a flat bed scanner. Image integrity and clarity was maintained by balancing brightness and contrast. The distortions introduced through scanning were removed at the same time the sections were joined together with *Photoshop*.

### 10.5.2 Tracing

In drawing the map, an important consideration was: How well will the linear complexities of the design hold up when converted from a vector drawing to a raster drawing? A 1/2 point line worked well to preserve the integrity of the drawing. The *Photoshop* file was imported into *Freehand* to serve as the template for generalizing and tracing shorelines, water-courses and contours.

### 10.5.3 Textures

There was a definite need to create maps that are warm, inviting and with rich surface interest. With this accomplished, the information on the maps is more available to the reader because the reader is likely to linger and enjoy the image and therefore pay more attention to it. The maps are presented as both information and image.

Textured fills for the maps are based on the work of a number of Canadian First Nations artists selected by the author. The images, taken from exhibit catalogues, were digitized and imported into *Photoshop*. Sections of an image were isolated and used to build a conglomerate. These were built to serve as both water fill and land fill. Variations of colour were produced for some textures, which together constitute a palette that were applied to the maps as hypsometric tints.

### **10.5.4 Compilation**

A number of steps were needed to take the base map image to its final form. The software used was *Photoshop*. The grey tints were blurred and embossed to reveal hillshading. This was blended with the land texture resulting in the final land fill. The water texture was faded around the coast lines and added to the land fill resulting in the final map image. Experimentation established a formula that would perform consistently to produce images that are similar in style, colour and feel.

## **10.6 Media Choices**

### **10.6.1 Maps**

The variety of maps grew out of the author's need to find different ways of presenting the information in the atlas. The base map, with its hillshading and subtle textures, delivers a sense of permanence, as if the land form was eked out a block of granite, unpolished and rough, inviting the hand to register its topography. Hydrography can be clearly seen but remains damped by the anti-aliasing inherent in the treatment of the land fill.

Water areas in the base map have a rhythmic quality. Colour variations in the water fill call on an abbreviated blue palette while reflecting some of the earth tones of the land. The water fill has been faded along the shorelines as a way to elevate the land mass and establish a figure/ground relationship.

The map in the 'Place Names' chapter serves as the interface for sourcing other information. In the 'Geopolitics' chapter it is the base on which textual and graphic information is layered. This chapter opens with the names of political districts displayed on the map. When the reader moves the cursor over the map, the result is areas of the political districts are shown. These boundaries are generous in their extent, easily flowing into neighbouring districts; the lines fade toward the inside edge of the extent.

This is intended to convey the understanding that the limits of these districts are not sharply demarcated: they are more understood than measured.

The Wabenaki Confederacy map is interesting in the way it is presented. The map is built through a short but effective animation sequence which first shows the cartographic base, then the international boundaries and finally, the names of each member nation. This logical sequence reinforces the message of the map.

The map uses the same texture for its land fill but has been drawn without hillshading. The territory outside the membership of the confederacy is given a less colourful textured fill. While the water has a flat colour, it has been vignettted along the shorelines to contribute to the figure/ground relationship.

The success of this map is due to how it, at once, compliments and contrasts with the base map. The simplicity of its surface moves against the richness of the base: this deflects attention to the new information that is offered within. The similarity in palette and texture reinforces that the two map are part of the same chapter.

'Legends' and 'Canoe Routes' have maps which describe yet another cartographic approach. These maps are energetic with lively colours and smooth textures. The impression is one of fertility, abundant resources and a landscape flooded with sunshine and promise. The hypsometric tints were critical in the discussions of landform creation but also served as an interesting point of departure in the 'Canoe Routes' chapter as well.

The 'Trade' chapter uses as its base a small, unassuming map done in soft shades of yellow and green. The textures are flatter than seen elsewhere. In combination with the restrained palette, the size of the map, and how it is cropped, seems to make the map whisper. This soft quality acts as a foil for the livelier line work with more saturated colours. When examined in terms of tone and feel, the map in the 'Trade' chapter is most closely related to the Wabenaki Confederacy map.

All the maps described above, have been designed specifically for the computer screen. This means working with the screen as a new medium and accepting its limitations. It is impossible to achieve the crisp, sharply delineated line work in a map that is to be displayed on a computer screen that we can in a map on paper. Instead, work with the limitations of the medium by camouflaging stepped line work and jagged looking shorelines with textures and colourisations that suggest the feature's characteristics rather than declaring them. This approach serves to extend the vocabulary of cartographic production.

## 10.6.2 Typography

When designing type for the maps, the approach was similar to that which would be taken if working on a paper map. Rules of proximity, extent and balance were important in the process. This insured that the composition was readable and attractive. The shape of paths for curved type was carefully drawn and colours used were given special attention.

Palatino 14 point with 10.5 point leading is the most readable typographic configuration for text blocks in Wula Na Lnuwe’kati. Palatino was the best choice to create text that is both attractive and readable. The serifs create fluidity and the clarity of letter forms ensures readability in a raster environment. Inset caps are Lithos Black 36 point and are decorated with strikes of colour that represent the four sacred directions. Chapter titles are Lithos Black in various sizes. Political district names are Lithos Bold, water feature and land feature names are Gill Sans Bold. Some type was designed in colours other than black and blue. Here, attention was paid to compatibility and contrast of type with the map image.

## 10.6.3 Imagery

Throughout the atlas various images are offered to the user. These images are rooted in Mi’kmaq traditional decorative practices or borrowed from contemporary Mi’kmaq art. The background for type blocks is birch bark selected by the author’s father from his wood pile. Birch bark also has been used for many start and end screens for digital video clips in Wula Na Lnuwe’kati. Birch bark is an important material in Mi’kmaq culture. Using the image of birch bark in Wula Na Lnuwe’kati is a link to the more traditional artistic practice of the Mi’kmaq people. Chapter icons are details from a painting by Luke Simon a Mi’kmaq artist. While some icons are borrowed directly, others are created in the same style as Simon’s work.

Navigation devices have been carefully designed to be integrated decorative elements in Wula Na Lnuwe’kati and to contribute to the experience of a reader’s visit. Paging is done with arrowheads and other navigation buttons are drawn to resemble chips of flint. A smoky field embraces the media elements, suggesting continuity from one form to another.

## 10.6.4 Audio

Sound in Wula Na Lnuwe’kati is a very important media element. It is used as an interface feedback device, to establish cultural context, to deliver information and to serve as a sound track for video clips.

Every choice made by the reader is met with an auditory response. These audio clues are distinct for each type of interface navigation device helping to distinguish one from another. The response to clicking on section buttons is a guitar lick from a recording by Don Ross, a musician of Mi'kmaq decent. Other audio selections are from The Eagle Call Singers, traditional Mi'kmaq singers. Their version of "Mi'kmaq Honour Song" is part of the animation sequence which opens the atlas, establishing the cultural context of the piece. The beating of a drum has been merged with sounds of the ocean, and songs of whales. This union of sounds assumes physical characteristics of the territory which offers deeper understanding of the nature of the land to a wider audience. It also helps to reinforce the atmosphere established in the opening sequences of the atlas.

The 'Place Names' chapter features pronunciations of Mi'kmaq place names spoken by the author's sister. Here, audio is used to its most powerful effect. The inclusion of these pronunciations has a transformative effect on this map. The cartography moves away from the graphic and embraces an alternate media in a way that extends the traditional cartographic vocabulary. The author's mother also contributes her voice to the atlas with a welcome message at the opening, and at the closing sequence with a final statement.

### **10.6.5 Video**

Digital video easily lends itself to cartographic communication. Motion video can be used cartographically by selecting clips that offer a look at the topography of the land, as in the case of the video of Eskasoni. Video can also continue the discussion of an event at a specific location as in the case of the Grand Entrance of the Feast of St. Ann. The videos have been edited to focus attention on important locations shown on the map or to offer an alternative perspective on the information. In this regard, video has been applied in Wula Na Lnuwe'kati in much the same way that still photography is used in a printed atlas.

Adobe *Premiere* was used to compile and edit the raw digital video footage. All video clips included in Wula Na Lnuwe'kati are set to run at 30 frames per second and are sized to 160 pixels x 120 pixels. They have been saved in Apple *QuickTime* format as this can be played in *Macintosh*, *Windows* and Unix environments.

### **10.6.6 Atlas Interactivity**

The interface for Wula Na Lnuwe'kati is based on an appliance metaphor. Basing the operation of the interface on something familiar has a very im-

portant benefit: it helps the user recall actions and reactions that are familiar and comfortable rather than having to re-learn the basics of operation.

Each type of button in the atlas has an 'on' condition signaled by distinct graphic and audio cues. This is important to help the reader learn how each of the different buttons and navigation devices may be used to explore Wula Na Lnuwe'kati.

The chapters are not explicitly named in the interface. The reader is not encumbered by type in the basic interface structure. Instead, chapter titles are available through rollovers of the chapter icons. This is a way to encourage non-linear exploration. Direct naming of the chapters or listing titles would encourage a reader to fall back to a linear approach.

The six chapter buttons operate even while video is playing or several items of information are on the screen; there is no need to close everything down before choosing another section. A reader may move to a different section at any time. Such freedom of movement allows the reader to satisfy curiosities by collecting information of particular interests.

The atlas has been constructed to offer the responsibility of choice to the reader. Explorations in creating Wula Na Lnuwe'kati, are oriented toward action in expanding the roles and responsibilities of reader and map. Wula Na Lnuwe'kati breaks down any formerly established narrative and invites the reader to construct a new, self-directed narrative.

Wula Na Lnuwe'kati has a structural foundation whose role is to serve as the interface's skeletal form. It is to this skeletal structure that information sources are secured. The basis of this structural foundation is several carefully constructed subroutines of code that describe the action/reaction of user interactivity.

## 10.7 Conclusions

Wula Na Lnuwe'kati is a cartographic product which reintroduces a different type of art into the practice of cartography: maps are more than information sources, they are offered to as images that invite one to linger and enjoy.

In a digital multimedia environment, the atlas redistributes the responsibilities of map maker and map user. Through interactivity, the map user is a participant in the writing of the cartographic narrative. This user engagement is facilitated by an interface that offers many avenues for self-directed exploration through a complex of possibilities.

Media elements compliment each other and are presented as partners in information delivery. Interface devices assume the dual roles of both functional and decorative components. Sound and image are vehicles for in-



formation delivery as well as acting to ground the work within its cultural foundation.

What has been achieved in Wula Na Lnuwe'kati is, in part, a result of embracing the possibilities of new technologies while allowing traditional techniques to influence the evolution of the cartographic practice.

While this chapter has let the author dissect his work (not an easy undertaking, but a very valuable exercise), the best way to experience Wula Na Lnuwe'kati is to explore it. If a reader interprets the piece in a way that was not foreseen, the work has not been created as an encapsulated moment: it has achieved a life of its own.