OOTF2: The Final Report

prepared for

Gulf of Maine Information Exchange (GOMINFOEX)

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Acknowledgments

Organizers would like to thank all volunteers and sponsors of Out of the Fog 2, a Gulf of Maine Information Exchange (GOMINFOEX) workshop.The Gulf of Maine Council on the Marine Environment, *http://www.gulfofmaine.org,* provides major funding support to GOMINFOEX. ACAP Saint John staff and volunteers worked hard on the overall workshop coordination. The conference publications were supported by the Department of Fisheries and Oceans, Canada; CEF Consultants Ltd. donated a portion of the writing and editing time. NBTel generously provided dial-up connections and a high-speed Internet line for the main workshop room.

Thanks to all of you, sponsors, volunteers, and participants, who contributed to the success of OOTF 2.
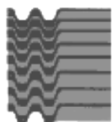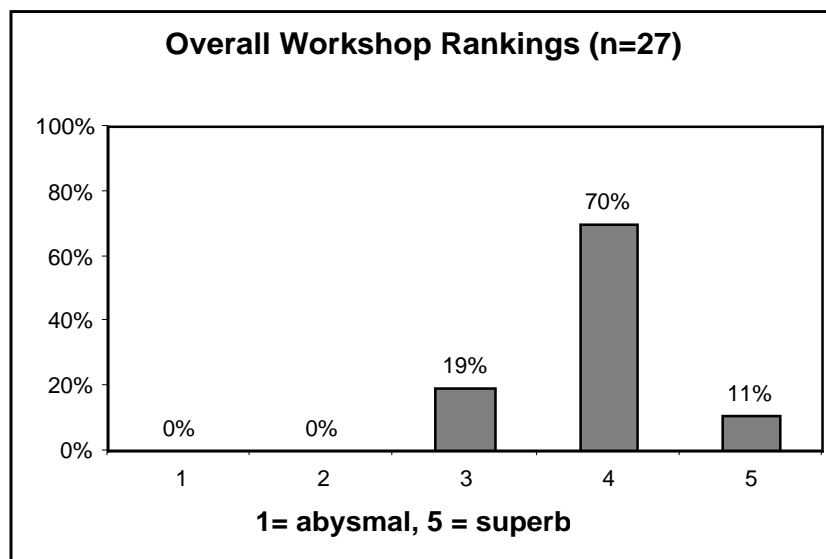
1.   Executive Summary

Out of the Fog 2: Plotting a course for Information Exchange in the Gulf of Maine was held in Saint John, New Brunswick, Canada from November 2 – 4, 2000. The aim was to develop a long- term plan to move ahead with effective environmental information exchange in the Gulf of Maine region (GOMINFOEX). Attended by over fifty people from a variety of backgrounds, the workshop attracted many new participants in the process, from a number of previously unrepresented sectors.

The main outcomes were:

- an agreement to continue the GOMINFOEX process;
- an agreement that clear direction and definition is needed;
- the appointment of Paul Boudreau, Department of Fisheries and Oceans Canada, as the primary champion, reminder, and catalyst to the process (Info-Nag);
- the strong recommendation to prepare an options and scoping document to clarify the issues and possible pathways to meeting participants' needs, and
- an agreement to meet again on December 14 and 15 in Portland, Maine, to examine ways of more formally organizing the GOMINFOEX initiative.

Participant evaluations ranked the workshop a success (Figure 1), expressing satisfaction with the Action Committee, GOMINFOEX, and the workshop facilitation. OOTF 2 was a welcome opportunity to meet new people, establish and continue useful contacts.

Figure 1

It was apparent from the discussion that no single, common vision of GOMINFOEX could be defined for all participants, as their individual needs determined their preferences. There was, however, a general consensus that the initiative would benefit from becoming more formally organized.

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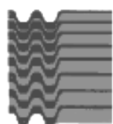
2.   Introduction: Setting the Scene

Out of the Fog 2: Plotting a course for Information Exchange in the Gulf of Maine was held in Saint John, New Brunswick, Canada from November 2 – 4, 2000. Fifty-one participants attended the formal workshop, with several more joining the evening public session. Ten were from the United States; the Canadian contingent was almost evenly split between Nova Scotia and New Brunswick. Participants came from a wide variety of backgrounds in many aspects of coastal zone planning. They included:

- federal provincial and state biologists, fisheries and aquaculture scientists and managers, and planners;
- an ecological artist;
- high school students;
- university librarians;
- a First Nations representative;
- representatives from fishermen's, multi-stakeholder community-based, and environmental NGOs;
- from academia: research institutes, continuing education organizations, and graduate students;
- private-sector consultants;
- GIS specialists, and
- a municipal planner.

Despite this success in increasing the diversity of GOMINFOEX, two groups remained under-represented – school teachers and First Nations. A number of invitations had been sent to representatives of both these sectors, but there was little response.

The original aim of the workshop was to develop a long- term plan to move ahead with effective environmental information exchange in the Gulf of Maine region. As facilitator Bill Crossman said in introducing the workshop, "We have an overall goal to develop a plan to move the idea of exchange forward … We shouldn't get too caught up in the issues of OOTF 1, we need to advance information exchange … Everything is open as long as we're moving forward. Do we want a lead entity? Can we find ways to identify willing people and partnerships?"

Theme-based breakout sessions were used to look at successes and failures in information exchange; they included:

- Salt marsh restoration data requirements;
- Traditional ecological knowledge (TEK), historic data capture, and community-based management requirements;
- Water quality monitoring;
- Aquaculture siting and development; and
- "Group X", which considered a miscellany of topics.
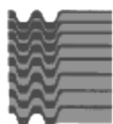
Participants were faced with a wide range of development options, from the *status quo* through to, at the other extreme, a large centrally-funded and controlled exchange, using as a model the Great Lakes Information Network (GLIN), *http://www.great-lakes.net/*. It was hoped that the plenaries following the breakout sessions would identify capabilities and ways of overcoming barriers, to lead to a plan to move on with GOMINFOEX.

3. Outcomes, Recommendations, and Where to Go from Here

Participants discussed a number of different conceptual issues, but the primary themes were those of the overall role and direction of GOMINFOEX, access to data, and the inter-related themes of sustainability of information, and standards and quality assurance.

GOMINFOEX: where to go from here?

The ensuing discussions established, above all, that the GOMINFOEX initiative should continue. However, there was no clear consensus among participants as to what shape or direction the initiative should take.

There was, however, agreement that GOMINFOEX needed an Info-Nag – a catalyst, an organizer, someone to remind participants to do things – and Paul Boudreau agreed to take on this role. It was also generally agreed that GOMINFOEX should position itself to be able to apply for regional, national and international funds; however, it was noted that before such funding could be accessed there had to be a clear project, and before that, a clear sense of where GOMINFOEX is actually heading.

Some of the key points included:
- The people of GOMINFOEX are the most important thing; data is secondary; GOMINFOEX should focus on bringing people who have information together with those who need it, and ensuring relevant parties are at the table. One of the great values in this initiative is the personal connection created between participants.
- In the next 6 months, a formal plan must be developed to create a clear identity for GOMINFOEX.
- GOMINFOEX must be self-regulated. The Action Committee consists of who shows up to its meetings, and is interested in moving the initiative forward.
- GOMINFOEX participants have to stop re-inventing the wheel. A baseline is needed that identifies where we are now, so that it will be clear where progress has occurred. A scoping/options paper should be prepared based on all that has occurred since OOTF 1, that clearly lays out what the situation is now, and what development options exist.
- Agency representatives should have homework; in other words, they go away and think in concrete detail about what they can – or cannot – contribute to the effort, and precisely what resources they bring to the table.
- GOMINFOEX Action Committee members have taken personal initiatives to come to its table because they were pursuing their own interests in information exchange issues, and were willing to work together on something they perceived was valuable.

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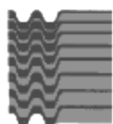
- GOMINFOEX is supported by the Gulf of Maine (GOM) Council, *http://www.gulfofmaine.org*. We need to be clear about how GOMINFOEX fits with other GOM initiatives. Problems have arisen with the perception of competition with initiatives like the Gulf of Maine Global Program of Action, GPAC. The GOM Data and Information Management Committee (DIMC), *http://www.gulfofmaine.org/council/dimc.htm*, has existed for a long time, and there is some concern that GOMINFOEX is developing something parallel to it. GOMINFOEX has to be careful not to grow in isolation, and both DIMC and GOMINFOEX have to avoid treading on each other's toes. The GOM Council will not fund two identical initiatives; the point is about working together, not about competition and exclusion.
- Can GOMINFOEX find an effective demonstration project that would kick-start the initiative and model some solutions?

At the end of the final plenary, the next Action Committee meeting was set for December 14 and 15, 2000 in Portland, Maine; Info-Nag, Paul Boudreau, assumed the responsibility for reminding people, and Courtney Coles agreed to help with the some of the local organization. The intent is to flesh out the ideas generated at OOTF 2, and assign responsibilities for document scoping and options.

Access to data

This overall issue embraced several different facets. A very basic question was *how to find information*, and what role GOMINFOEX should take. As one participant noted, "You cannot use what you cannot find!" The main points raised included:

- lists of contacts, keywords, and web pages, all electronically searchable, are **already** available on the Gulf of Maine People Finder (*http://www.gulfofmaine.org/cdb/index.html*)– as are on-the-fly listservers.
- there is **still** more information out there that should be more accessible.
- people cannot ask for information if they do not know that it exists!
- mechanisms for finding people as well as information are necessary — if you can find the right person, the faster you will be able to get the information that you want;
- the need to know **what** projects are going on, and **where**, in the Gulf of Maine region; GOMINFOEX needs some kind of common coordinates database, e.g., the OOTF 2 participant's map on e-Atlas: "We can't just identify data; we need to know who else is doing projects and where."
- the need for cross-border baseline mapping data with useful smaller scales, and
- the need for a Gulf of Maine virtual library.

Another major issue regarding access was how to make the right development decisions to ensure equity for those people who may not have easy access to high-technology solution, especially those living in rural and remote areas. It was strongly urged that GOMINFOEX take a more active role in effective outreach. Suggestions included:

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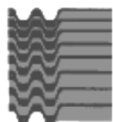
- the choice is not one of **either** paper or electronics; it is a question of how best to meet individual information needs in the most effective way.
- GOMINFOEX should capitalize on traditional effective means of information sharing, like the hard copy Gulf of Maine Times, and integrate them with Net-based methods.
- infrastructure design questions must start with: How do you get access? How is information distributed? How do you build so that higher levels can feed down? The infra-structure can be multifaceted; we have plenty of tools to get the information out there.
- existing library networks should be engaged in the GOMINFOEX process; they provide community access points, and useful expertise in areas like data cataloguing.

The third issue discussed with regard to data access was that of policy and ownership decisions that need to be made when an organization contemplates sharing its information. The necessity to prepare guidelines/codes of ethics to protect proprietary information was stressed by several participants.

### *Information sustainability, standards, and quality control*

Concerns raised included questions of permanency of information and how to deal with legacy data, quality control mechanisms, and trans-boundary issues. There was extensive discussion of data updating, and the issues centered on:

- How can users be sure that data is up-to-date?
- How do we keep data alive so that it doesn't become legacy data? How do you feed back information into the system to update it?
- Conversely, what about permanency of information and legacy data. Information needs to move forward, but we also need to look at the past. What do we do with older data?

Many participants felt that some kind of quality control mechanism was needed; at a bare minimum, users should know where information comes from so that they can make our own decisions about its credibility. A number of participants thought that data providers also need to know who is using the information that they are making available.

There are many volunteer and community-initiatives around the Gulf; their data and methodologies might be usefully shared with other similar projects, academic studies, and enforcement agencies. However, in many cases quality standards for volunteer-based initiatives need improvement, as well as initial study design and implementation. There was a suggestion that GOMINFOEX could play a role in disseminating standards and training information.

Trans-boundary issues were touched upon a number of times. There was a sense that the personal connections forged through GOMINFOEX could help alleviate regulatory problems arising from the plethora of jurisdictions. However, in terms of funding and project design, there are very different bureaucratic and philanthropic structures in place.

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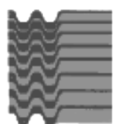
4.   Vignettes from Out of the Fog 2

As with any conference, a bare review of the OOTF 2 results cannot possibly reflect the tone and flavour of the meetings. Following are a few anecdotes, comments, and observations which may provoke, amuse, and stimulate the imagination.

Benjamin Boudreau and Danny MacIntosh attended from a high school in Fall River, Nova Scotia, and demonstrated ICQ and MS Instant Messenger chat capabilities. While they were struggling to get the technology to work over a recalcitrant Internet connection, Benjamin logged onto a chat site. In less than a minute, he was typing a message to one of his friends in Nova Scotia: "I can't talk now, I am giving a presentation to a group of people in New Brunswick." GOMINFOEX participants have talked so much about the value of finding people and communicating with others; this moment shows some of the potential that current technology gives us – if we could only harness it.

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Organizers did three media interviews, two for radio and one for television, despite the somewhat arcane topic.

———————————————

Technology is wonderful, but nothing replaces face-to-face discussions, especially in a pleasant environment with congenial and interesting colleagues. This may explain why, of all sessions, the Watering Hole was ranked first in the participant evaluations.

———————————————

Gender balance was a concern. Close to half of the participants were women, but only one woman presented, and only one facilitated. Questions of systemic sexism in the process arose, possibly reflecting overall attitudes in the world of technology and business, and the perception that this was a "boys with toys" exercise.

———————————————

One evening, Paul Boudreau was reviewing the day's notes in the office/cloak room. A hotel guest, not connected with our work, asked: "What is Out of the Fog?" He told her that it was a workshop dealing with "the fog of too much information on the Internet." Her quick response: "Indeed there is!"

The point is that the name 'Out of the Fog' attracted this layperson's attention in a way that would not have happened with a typical title phrased in government or academic jargon. And she immediately ventured an opinion – rather than backing away politely while her eyes glazed over.

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Best Technologies: a simple on-line registration process worked very well, though could use a few improvements. A high-speed Internet line in the meeting room allowed participants to use the Net while making presentations or showing others their sites. Proceedings and the background discussion paper were available on the Web at the same time they were received by participants, allowing people who could not attend to review and comment on what was happening.

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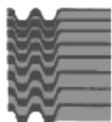
5.   Around the Gulf: notes on some Initiatives

Several new (or newish) intriguing projects in varying stages of development were described during the OOTF sessions. Full descriptions can be found in the daily proceedings (see Appendix A); the following are but brief summaries.

e-Atlas (Chris Brehme)

e-Atlas (*http://atlas.islandinstitute.org*) is a public interface to environmental data, with development led by the Island Institute as a result of their involvement in GOMINFOEX. The purpose of e-Atlas is to provide a window through which visitors can wholly examine the Gulf of Maine, to inspire people with meaningful, interesting stories that describe a unique natural region, to bring together samples of data, to provide resources for smaller institutions, and to provide a map-based directory of institutions and projects. It touches on themes such as fisheries, watersheds, estuaries, marine mammals, landforms, oceanography, find a project, and find a map. One can zoom into a map to get further information until the area at the bottom of the page becomes a table of raw data.

Internet Circuit Rider (Courtney Coles)

Internet Circuit Rider Courtney Coles works in the field, travelling from Cape Sable to Cape Cod for the virtual Gulf of Maine Aquarium (*http://octopus.gma.org/circuit_rider/index.html*). She works with teachers, students, and non- profit organizations on using communications and Internet technologies. Her work is very much as an information exchanger, not a one-way trainer. As a result of her circuit rider activities, she has a broad overview of activities on the shores of the Gulf of Maine, and is the 'switchboard operator' in an evolving network of aquatic resource-sharing in the Gulf of Maine watershed.

Cobscook Bay Resource Center and the Bay of Fundy Marine Resource Centre (Will Hopkins, CBCRP; Bill Crossman, BFMRC)

The Cobscook Bay Resource Center in Eastport, Maine (*http://www.cobscook.org*) came about because people started asking questions, such as "What happened to the clam industry, and what is the water quality?" On finding how interconnected the issues involved were, the community began the Cobscook Bay Clam Industry Restoration project whose objectives are:

- To improve the health of the Bay.
- To increase productivity of the flats.
- To create a regional approach to clam management.
- To increase access to education and training in resource conservation

This project led to the formation of the Resource Center, which encourages a wide variety of community-based approaches to resource management and sustainable economic development, including volunteer water quality monitoring programs. They have
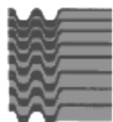
discovered that working with information exchange is actively two-way, not passive; the organization both creates data and needs to access that of others.

In Maritime Canada, public protests from inshore fishermen led to policy and regulatory changes in the 1990s; area fishermen realized that they had some power if they worked together as a community. The community-based Bay of Fundy Marine Resource Centre, *http://www.bfmrc.ns.ca/*, developed as a result. One area in which the Centre excels is at GIS, as well as community-based research and the use of TEK. The Centre is looking at different ways for fishermen to collect data; out of that may come distribution of fishing areas and efforts that are potentially more useful than those from BIO.

Maine Department of Marine Resources (Seth Barker)

Seth Barker presented on information sharing and GIS, using Internet examples in order to give attendees a flavour of different mapping themes. Seth noted that geographic industries have learned a great deal in order to give people what they need – and to make money. New and better interactive mapping is continually being developed. He reviewed a plethora of Net sites, from simple maps, to topographic maps, maps which include GPS information, maps with aerial photos, maps with nautical charts that you can plug their GPS into and see where your boat is. He stressed how vital good presentation is to convey the meaning you want.

GeoData Alliance (Wil Hopkins)

Wil Hopkins, with an introduction by Paul Schroeder, outlined the American GeoData Alliance initiative. Paul described the Federal Geographic Data Committee (FGDC), *http://www.fgdc.gov/index.html*, an American interagency committee, organized in 1990 to promote coordinated use, sharing, and dissemination of geospatial data on a national basis. The FGDC, made up of representatives from seventeen Cabinet level and independent federal agencies. has coordinated the development of the National Spatial Data Infrastructure (NSDI) since 1994. Particular concerns have included deviations among standards; access mechanisms; and developing frameworks for data production, including the creation of base maps.

The concept of the GeoData Alliance (GDA), *http://www.geoall.net*, arose when the FGDC acknowledged it had reached a stage of info-gridlock, and a significantly different and innovative approach was needed. Wil described the GDA as *a decentralized network of individuals, communities, and organizations fostering access and creation of geographic information.*

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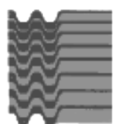
The six phases of organizing GDA are:
- **Purpose (working statement developed)**
- **Principles**
- **Participants**
- **Organizational concept**
- **Constitution**
- **Practices**

"We have talked about many of these over the last few days." Wil noted. "We should try inserting GOMINFOEX in place of GeoAlliance, taking what it has developed as guidelines for behavior and activities." The idea is to have the minimal structure necessary to achieve the purpose of principles, he emphasized.

GeoConnections: Canada's geographic information on the Internet (James Boxall)

James is a member of the Management Board of GeoConnections, *http://cgdi.gc.ca*, is an initiative to develop the Canadian Geospatial Data Infrastructure (CGDI). Its primary mission is coordinate Canada's numerous databases of geographic information and make them accessible through a common window on the Internet; and enable partnerships between federal, provincial and territorial governments, the private sector and the academic community.

GeoConnections is a complicated initiative involving many participants, and offering many opportunities. It needs to deliver tangible results, and is being implemented through advisory networks, called *nodes,* which aim to secure partnerships and cross-sectoral participation, develop and implement projects, and finding common interests and expertise levels. These nodes are where work gets done, and he urged that GOMINFOEX take advantage of support available from the Sustainable Communities node, which needs more community-based activities.

Mike Butler also described the Marine Geospatial Data Infrastructure (MGDI) initiative, *http://www.geoconnections.org/english/geospatial/MGDI/mgdi_draft_concept.html*.

It was launched by the Canadian Centre for Marine Communications (CCMC) to ensure that CGDI will include the functionality required to facilitate access to coastal and marine environmental, transportation and resource data and information for use by a broad range of users in the marine community. He strongly suggested that GOMINFOEX get behind this process to avoid stalling out.
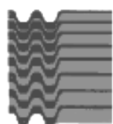
Appendix A: Detailed Reports

Daily, detailed reports of each day's proceedings were prepared as the conference progressed. They are in PDF format, and available for download on the Web, at

http://www.gulfofmaine.org/gominfoex/out_of_the_fog_ii.htm

PDF files provide accurate images of fonts, lay-out and graphics, no matter what operating system you are using. To read them, you need Adobe Acrobat Reader, free software which comes bundled with many operating systems and software packages. If you do not yet have it, you can download it at no charge from:

*http://www.adobe.com/products/acrobat/readstep2.html*

To save space and paper, the proceedings are not reproduced here. Should you be without easy Net access, and require paper copies, please contact

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The papers available are:

OOTF 2: The Background Issues Paper
OOTF 2: Thursday Report
OOTF 2: Friday Report
OOTF 2: Saturday Report

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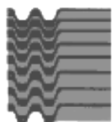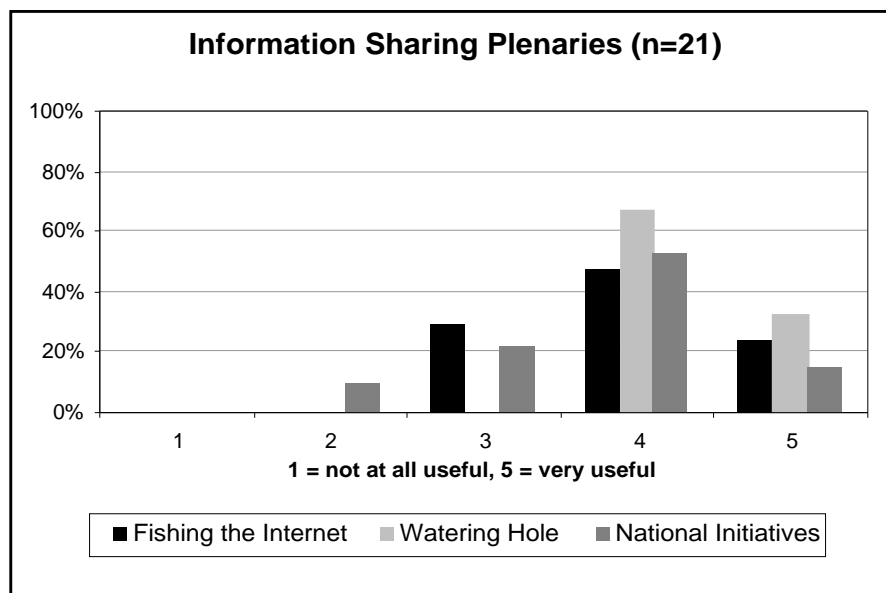
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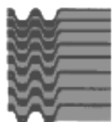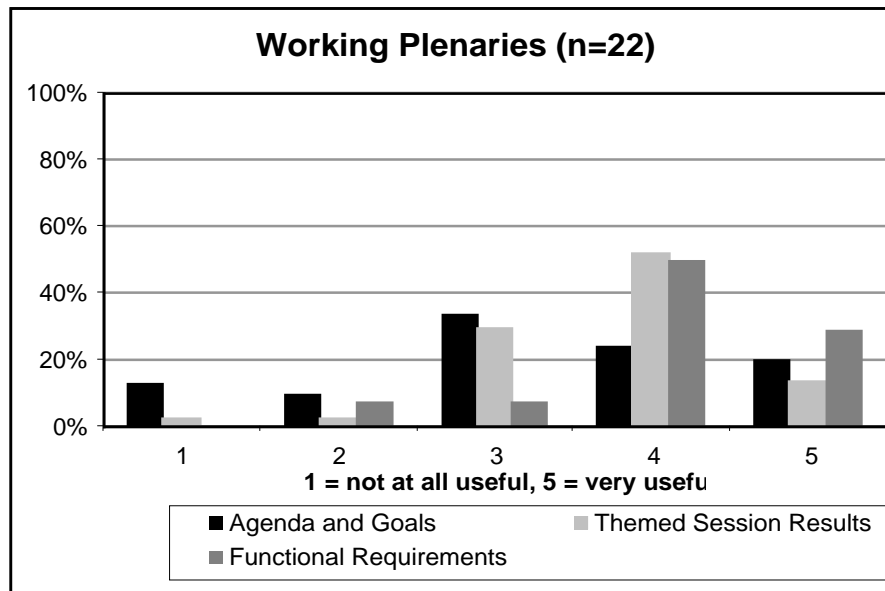
Appendix B: Workshop Evaluations

Overall, participants felt the workshop to be a success. The following graphs present the results from participant evaluation sheets. Note that these were collected during the final session on Saturday morning, resulting in a bias toward responses by more committed participants. Slightly over half of the participants completed evaluations.
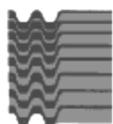
Overall Workshop Rankings (n=27)

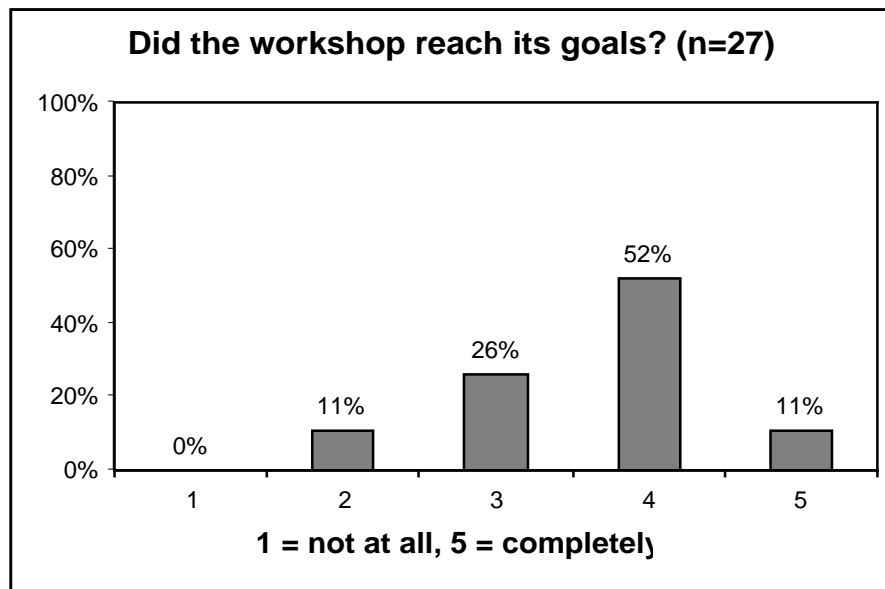| Rank	Percentage
1	0%
2	0%
3	19%
4	70%
5	11%

1= abysmal, 5 = superb
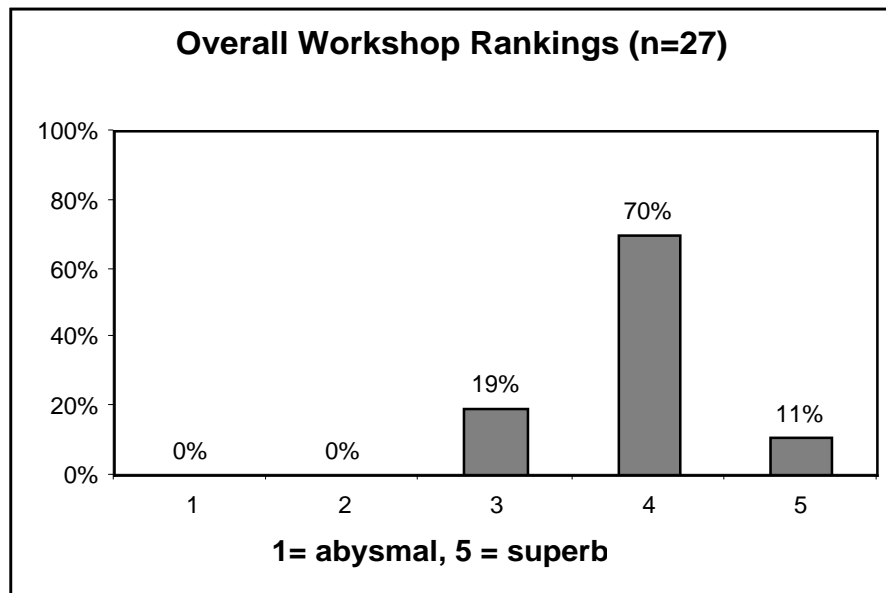
The information sharing plenaries were higher ranked, in general, than the working session. The Watering Hole was rated the highest of all.

Information Sharing Plenaries (n=21)

1 = not at all useful, 5 = very useful

Legend: ■ Fishing the Internet   ▨ Watering Hole   ▨ National Initiatives

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Interestingly, of the working sessions, the agenda and goals portion was the lowest rated. This had been designed to ensure participants had the opportunity for input into the form and structure of the workshop.

Working Plenaries (n=22)

1 = not at all useful, 5 = very useful

- Agenda and Goals
- Themed Session Results
- Functional Requirements

A majority of participants felt that the workshop had achieved its goals.

Did the workshop reach its goals? (n=27)

1 = not at all, 5 = completely

0% | 11% | 26% | 52% | 11%

Written comments included:

- Thanks for the opportunity to come. It was very interesting & informative.

- As a student here, I wasn't completely sure of a lot of things that were being discussed but I hope to understand more the next time. Make registration on the website easier to find please!

- There was an uphill struggle w/the boys w/toys & some sexism.

- Sara [ACAP Saint John] deserves full marks - very competent, helpful.

- Well organized. Great job on the daily reports! Excellent job considering many different points of view. Feel like we still need to come up with some concrete action items. Wonderful venue for meeting people with information or skills relevant to my work.

- I know I'm not a scientist... I'm a high school student. But still, I'm not sure what exactly GOMINFOEX is supposed to be! What IS the goal? Maybe the exchange of info. But maybe just stating what it is GOMINFOEX means, then maybe more thought could be generated.

- A good start...

- Would like to have other First Nation representation and tribal groups.

- Excellent job.

- Did not like [facilitation] because seemed seduced by the boys w/toys & seemed insensitive to the contributions of others.

- The immediate preparation of updates was a great idea. Unfortunately, I didn't take time to read them.

- Sessions needed more structure - many of the good ideas that came out of them seem to have fallen by the wayside. A lot of going in circles before something good came out - maybe if participants prepared some thoughts before attending.

- I liked the dynamic nature of the conference. Unlike other conferences where people talk at you, we were able to talk together about current issues/problems.

- I think most who spoke made it clear of what they wanted to get through to everyone. Smashing good job. I think more interaction time should be available.

- Worthy goals with formidable hurdles.

- Overall - totally met my expectations - think we have the basis to launch something great.

- Thursday was too slow - could easily have started with evening session. Painful, necessary, ongoing process, probably wouldn't attend another meeting.

- More discussion on purpose & goals of the initiative is needed. Information about specific technologies are important but should not detract from this.
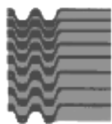
Appendix C: Getting in Touch: The Attendance List

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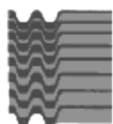
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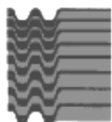
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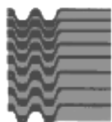
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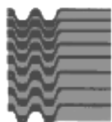
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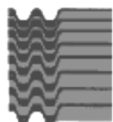
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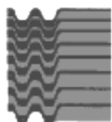
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