



Digital Indigenous Democracy

Canada Media Fund Experimental Stream
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Digital Indigenous Democracy: Political Networking 3.0 Among Slow-speed Inuit Communities

How is it innovative?

Digital Indigenous Democracy (DID) is the innovative use of interactive digital media by 8 remote Baffin Island Inuit communities in the face of two immediate existential threats to their survival. First, global digital media will make their 4,000 year-old *oral language* extinct unless they begin to create digital media in Inuktitut by the next generation. Second, a rapid increase of multinational mining development threatens to overwhelm Inuit communities who lack the information and communication tools to protect themselves. Global warming has triggered a multinational ‘rush’ in the Baffin region for gold, uranium, diamonds and the world’s richest iron ore deposit ever discovered. Because this is Canada, not Congo, environmental assessment processes guarantee Inuit rights to participate in decision-making that affects their future. Unfortunately, interactive digital media tools that make such participation possible or effective – providing information, communication and political organization – *do not work* in low-bandwidth Baffin communities. To overcome this handicap, *DID* installs in each slow-speed community a low-cost, innovative package of community-based technology that allows users to jump the Digital Divide and use interactive media at high-speed. As the world’s first digital public space for Indigenous people to interact freely as equals in their own languages and exchange Indigenous know-how and millennial experience, *DID* helps humanity navigate what will be an unpredictable and dangerously challenging 21st Century.

- *Digital Indigenous Democracy innovates technology*, installing low-cost local server MediaPlayers, Open Mesh wireless networks and internet-enabled interactive local TV channels that allow slow-speed, low-bandwidth Inuit communities, currently 500 times behind Toronto in cost-per-KB, to use IsumaTV’s interactive multimedia tools – upload, download, mobile applications and networking – at high-speed.
- *Digital Indigenous Democracy innovates politically*, applying traditional Inuit values of collaboration, consensus decision-making, environmental stewardship and resourceful adaptation to modern new media; and building a unique communication partnership between Inuktitut-speaking communities and scientific researchers to insure Inuit benefit from information essential to their survival that was formerly inaccessible and unintelligible to them. *DID’s* Baffin Environmental Assessment Community Engagement Network (*BEACEN*) connects 8 Inuit communities with key academic partners from Carleton and Mount Allison Universities; and reaches out to other Indigenous communities in Canada and worldwide. This revolutionary combination of traditional Inuit values, modern scientific research and new media technologies creates a positive public model of informed cooperation for Canada and other governments and cultures to follow.
- *Digital Indigenous Democracy innovates creatively*, integrating tradition and technology to invent new forms of interactivity – in narrative storytelling; boundaries between fact and myth; the creative tension between action and patient attention; and media conversion, not translation, of literacy to orality – that bring Indigenous imagination into today’s state-of-the-art multimedia conversation for the first time. *DID* demonstrates this throughout Nunavut, across Canada and to a worldwide audience through *BEACEN InteractiveTV*, a series of 12 monthly interactive online broadcasts hosted in participating communities, that assemble through the year the collective practice of digital democracy to change the historical imbalance of power and information between local Indigenous communities and multinational mining companies moving into their lands.

What is the targeted market? How is the product different?

Digital Indigenous Democracy brings together Canada’s most talented Indigenous media artists – Dr. Zacharias Kunuk O.C. (*Atanarjuat The Fast Runner*), Neil Diamond (*Reel Injun*), Dr. Alanis Obomsawin O.C. (*Kanehsatake: 270 Years of Resistance*) among others – to imagine an evolution of internet not limited to technical breakthroughs for highest-speed urban users; but as innovations of purpose, enabling 3.0 *political* networking among Canada’s least privileged and most marginalized citizens. *DID* is unique: no media organization, university, government agency or NGO in Canada or any developed country currently targets the dangerous consequences of leaving internet service in its remote Indigenous communities hundreds of times behind advancing national standards.

How will we generate revenue and sustainability?

By CMF’s own definition, our result aims for nothing short of ‘revolution’: equal democratic new media empowerment of Inuit and Aboriginal citizens in their own languages and points of view, solving real problems at high-speed working together in a 3.0 political network. Sustainability of common costs will be generated from membership fees contributed by participating communities, and by outside Sponsor organizations that pay to join the network to be able to communicate with remote users using high-speed interactive multimedia.



3.1. *Project Team Bios*

Dr. Zacharias Kunuk O.C.

Executive Producer, Co-Creator, Creative Director

Kunuk (b. 1957, on the land at Kapuivik near Igloolik, Nunavut) is president and co-founder in 1990 of Igloolik Isuma Productions, Canada's first Inuit-owned independent production company. In 2001 Kunuk won the *Camera d'Or* at the 2001 Cannes Film Festival, and Canada's 2002 Genie Award for *Best Director*, for Isuma's first feature film, *Atanarjuat The Fast Runner*, recently named by CTV and MacLeans as Canada's Best Film of the Decade. Kunuk was already a well-known Inuit sculptor when, in 1981, he began his career as a filmmaker by selling three sculptures in Montreal and bringing the Arctic's first home video camera back to Igloolik. In 1983 Kunuk became a producer, then senior producer and finally Igloolik Station Manager for Inuit Broadcasting Corporation. After founding Isuma Productions in 1990 with co-founders Paul Apak, Pauloosie Qulitalik and Norman Cohn, Kunuk's directing credits include the short dramas *Qaggiq* (Gathering Place, 1989), *Nunaqpa* (Going Inland, 1991) and *Saputi* (Fish Traps, 1993) as well as Isuma's 13-part TV series *Nunavut* (Our Land, 1995); and a dozen documentaries from *Nipi* (Voice, 1999), *Nanugiurutiga* (My First Polar Bear, 2001), *Kunuk Family Reunion* (2004), *Angakkuiit* (Shaman Stories, 2005), *Kiviaq vs. Canada* (2006), *Exile* (2008) to most recently, *Inuit Knowledge and Climate Change* (2010). In 2006, Kunuk co-wrote and co-directed with Norman Cohn *The Journals of Knud Rasmussen*, the second instalment in Isuma's *The Fast Runner Trilogy*. Kunuk is the winner of the National Arts Award, National Aboriginal Achievement Award and was *The Globe and Mail* 2002 Man of the Year in the Arts. In 2005 Kunuk became an Officer of the Order of Canada and holds an Honorary Doctorate from Trent University. Kunuk and Norman Cohn are co-creators and co-executive producers of IsumaTV.

Norman Cohn

Executive Producer, Co-Creator, Project Manager

Cohn (b. 1946, New York) is secretary-treasurer and co-founder with Zacharias Kunuk in 1990 of Igloolik Isuma Productions. Recipient of a 1990 Guggenheim Foundation Fellowship, Cohn lived mostly in Igloolik from 1990-2005 where he developed with Kunuk, the late Elder Pauloosie Qulitalik and the late Paul Apak, Isuma's signature style of 're-lived' cultural drama, combining the authenticity of modern video with the ancient art of Inuit storytelling. Cohn is producer and director of photography for all Isuma Productions' drama since 1989 including *Nunavut* (Our Land) 13 x 30 TV series and *The Fast Runner Trilogy* of *Atanarjuat*, *The Journals of Knud Rasmussen* and *Before Tomorrow*; and documentaries including 2004's *Kunuk Family Reunion*. Cohn was co-writer of *Atanarjuat* with Apak and co-director/co-writer of *The Journals of Knud Rasmussen* with Kunuk. Before Igloolik, Cohn's solo video exhibition, *Norman Cohn: Portraits*, opened in 1983 at the Art Gallery of Ontario, Vancouver Art Gallery, National Gallery of Canada, Musee d'Art Contemporaine and 49th Parallel Gallery in New York; and his experimental non-fiction video feature, *Quartet for Deafblind* (1987), was selected for Documenta 7 in Kassel, Germany. Cohn was co-winner with Kunuk of the 1994 Bell Canada Award for Outstanding Achievement in Video Art. As president of Isuma Distribution International Inc., Cohn is co-creator and co-executive producer with Zacharias Kunuk of IsumaTV.

Paul Quassa

Producer, BEACEN Community Coordinator

Quassa was the Inuit Chief Negotiator of the Nunavut Land Claims Agreement finalized in 1994 and was elected the first president of Nunavut Tunngavik Inc. when the NLCA was ratified. In the 1980's he was Senior Producer for Inuit Broadcasting Corporation and reporter-announcer at CBC North. As one of Nunavut's most prominent residential school survivors, Quassa has been an outspoken leader in the reconciliation and compensation process leading to Canada's Truth and Reconciliation Commission. Quassa has been a Board Member on several key NLCA management agencies, currently serving on the Nunavut Planning Commission. Quassa recently was elected Mayor of Igloolik for the third time.

Stéphane Rituit

Producer

For the past decade as Igloolik Isuma Productions' in-house producer, Rituit produced Zacharias Kunuk's most recent documentaries including *Exile* (History TV), *Alianait!* (ARTV) *Inuit Knowledge and Climate Change* (imagineNATIVE, UN's COP16); the short, *Tungijuj* (Bravo!, Sundance, TIFF, FNC) and *Before Tomorrow*, the third feature film in Isuma's *The Fast Runner Trilogy* (TIFF Best Canadian First Feature, Sundance World Drama Competition, 9 Genie Nominations including Best Picture). Rituit also produces Isuma Distribution International's web projects including IsumaTV's development of Hi-speed MediaPlayers, Live-TV streaming and organizing cooperation among northern governing agencies and Nunavut communities to install DID's new technology network.

Dr. Frances Abele

Content Developer (Co-Manager, Research)

Dr. Frances Abele is Professor of Public Policy and Administration at Carleton University, Academic Director of the Carleton Centre for Community Innovation, Fellow of the Centre for Governance and Public Management, and Research Fellow at the Institute for Research on Public Policy. She is adjunct professor in the doctoral program in Native Studies at Trent University. She is a former director of the School of Public Policy and Administration at Carleton, and during 1992-96, she was director of research on the North at the Royal Commission on Aboriginal Peoples. A political scientist born in Alberta, Dr. Abele attended the University of Calgary, University of Toronto and York University. She has worked with Indigenous peoples all over Canada for over thirty years. She has worked with Indigenous communities in many parts of northern Canada. Abele's research has focused on northern economic and political development, Aboriginal self-government, policy and programs important to Aboriginal people living in cities, and more generally, citizen engagement and issues in public management. She received the Queen's Jubilee Medal for service in post-secondary education. In 2011, she received the Carleton University Research Achievement Award. Besides her academic publications, Dr. Abele has published substantial research reports with the National Centre on First Nations Governance, Canadian Policy Research Networks, the Walter and Duncan Gordon Foundation, the Canadian Centre for Policy Alternatives, and the Institute of Public Administration of Canada. She is currently a member of the editorial boards of three academic journals: *Arctic*, *Aboriginal Policy Studies*, and *Canadian Public Administration*.

Dr. Ian Mauro

Content Developer (Co-Manager, Research)

Dr. Ian J. Mauro is Associate Professor and Canada Research Chair in 'human dimensions of environmental change' at Mount Allison University. As both a community-based environmental scientist and filmmaker, he works at the interface of the social and ecological sciences, and is a pioneer of multi-media methodologies, scholarship and education. In 2011, Apple Corporation recognized Mauro for his work, and designated him an 'Apple Distinguished Educator.' Mauro's research focuses on how farmer, fisher and hunter knowledge contributes to global environmental sustainability, specifically in northern and rural regions. Mauro co-directed with Zacharias Kunuk Igloolik Isuma Productions' 2010 ground-breaking documentary, *Qapirangajuq: Inuit Knowledge and Climate Change*, the world's first Indigenous-language film on climate change. Mauro's other films on biotechnology and sustainable agriculture have been translated into Japanese, Spanish and French and are used extensively in libraries and university programs. Mauro continues to consult with governments about his research and speak at universities, museums and public events worldwide.

Gabriela Gamez

Interactive Director

Since 2006, Gamez has been responsible for overall design and concept creation of IsumaTV and, as International Coordinator, with building international Indigenous participation in the online platform, especially among Latin American Indigenous media organizations. In 2006-07, Gamez managed Isuma's Indigenous Film Network (IFN) for remote community film distribution of *The Journals of Knud Rasmussen*; and from 2008-10, IsumaTV's media preservation initiative, DIAMA: Digitizing the Inuit and Aboriginal Media Archive. Prior to working for Isuma, Gamez worked as a consultant in Mexico and New York for UNESCO and the International Labour Organization (ILO); for the Mexican Department of Education (SEP) in the research of Indigenous Peoples' Education; and for the Mexican Department for Social Development (SEDESOL) in evaluating the vulnerable populations programs attention. Gabriela Gámez has a bachelor's degree in Sociology by the Universidad Autónoma de México (UNAM), where she graduated with honors. She previously studied two years of Political Science at the Universidad Iberoamericana. Born in Mexico City she now lives and works in Montreal, Canada.

Dr. Alanis Obomsawin O.C.

Creative Director

Alanis Obomsawin, a member of the Abenaki First Nation, is one of Canada's most distinguished filmmakers. For over four decades, she has directed documentaries at the National Film Board of Canada that chronicle the lives and concerns of First Nations people and explore issues of importance to all. Her latest film, *When All the Leaves Are Gone*, had its world premiere in 2010 at the Montreal World Film Festival. Based on her own experiences as a child, this short film blends autobiography with fiction, exploring the power of dreams and the strength of the human spirit. Obomsawin began her career as a singer, writer and storyteller, but dove into filmmaking in 1967 with *Christmas at Moose Factory*, which she wrote and directed. Since then, Obomsawin has made over 30 uncompromising documentaries on issues affecting Aboriginal people in Canada. Her other films include: *Incident at Restigouche* (1984), a powerful depiction of the Quebec police raid of a Micmac reserve; *Richard Cardinal: Cry from a Diary of a Métis Child* (1986), the disturbing examination of an adolescent suicide, and *No Address* (1988), a look at Montreal's homeless. Her best known documentary is *Kanehsatake: 270 Years of Resistance* (1993), a feature-length film documenting the 1990 Mohawk uprising in Kanehsatake and Oka, which has won 18 international awards. Among numerous honors, Obomsawin is recipient of four Honorary Doctorates, the Governor General's Performing Arts Award for Lifetime Artistic Achievement, Governor General's Award in Visual and Media Arts, and is an Officer of the Order of Canada.

Neil Diamond

Creative Director

Neil Diamond hails from the Cree community of Waskaganish, on the coast of James Bay. His recent credits include: *Reel Injun, On the Trail of the Hollywood Indian* (2010), winner of Best Documentary at the 2010 Canadian Gemini Awards; *The Last Explorer* (2009), a feature-length docudrama for APTN retracing the steps of Diamond's own great uncle, Aboriginal guide George Elson, on an ill-fated voyage into the heart of uncharted Labrador; *One More River* (2004) and *Heavy Metal: A Mining Disaster in Northern Quebec* (2004). Director of three seasons of *DAB IYIYUU*, the six-part series for APTN about Cree elders, Neil is also an award-winning photographer whose work was used in the James Bay Cree's international campaign to stop the construction of more Hydro Quebec dams on their land. In 1993, Diamond co-founded *The Nation*, the first news magazine to serve the Cree of northern Quebec and Ontario. His columns "Rez Notes" and "The Last Line" offer edgy, irreverent perspectives on the Cree issues of the day. On April 6 it was announced that *Reel Injun* was one of only 39 recipients of a 2011 Peabody Award which will be accepted May 23 in New York.

David Poisey

Creative Director

Inuit videographer, David Poisey, operates out of Pangnirtuq, Nunavut. Fluent in Inuktitut and English, David has 30 years experience on 20 films and documentaries in Nunavut's film and television industry. His company provides production and coordination services and camera package rentals to visiting film companies. David was Director of Photography for two episodes of ICSL's Nunavut Elders Series and most recently Director of Photography on Zacharias Kunuk's two latest documentaries, *Exile* and *Inuit Knowledge and Climate Change*. He received awards for *As the River Flows* in 1991 at the Minneapolis Two Rivers Festival and in 1992 at New York's Lincoln Centre Film Festival.

John Hodgins

Technical Director

John Hodgins has been Technical Director and technology project manager for IsumaTV www.isuma.tv since its launch in 2008. He managed growth of the site from a simple video blog to a 2.0 interactive social networking platform offering video-on-demand VOD distribution up to full 1080p HD. Recently, he has travelled extensively in the Canadian Arctic managing installation of IsumaTV MediaPlayers in Igloolik, Pangnirtuq and Iqaluit. Prior to moving to IsumaTV, Hodgins was a partner in 3sCoDesign, a Montreal-based web development and graphic design company that specialized in the non-profit and NGO field, with clients such as Regroupement des Arts Interdisciplinaire du Québec (raiq.ca), Global Forum on NGO Governance (www.ngoboards.org) and Naomi Klein's website www.nologo.org. Hodgins is heavily involved in the open-source Drupal web development project.

“What’s increasingly clear is we were not ready for Nunavut.”
Madeline Redfern, Mayor of Iqaluit, *The Globe and Mail*, April 2, 2011

“*Ikajurtaujumalirtugut! ... SOS! Is there anyone out there
in Canada, willing to come forward and help us?*”
Peter Irniq, Letter to the Editor, *The Nunatsiaq News*, April 8, 2011

4.1(a). Originality of the content and the form and quality of the user experience

Digital Indigenous Democracy (DID) is the innovative use of interactive digital media by 8 remote Baffin Island Inuit communities to combat two immediate existential threats to survival. The first threat comes from the increased global power of new media itself; despite the obstacle of severely limited bandwidth, four millennia of Canada’s Indigenous cultures now realize if they do not use new media to strengthen their sustainable place in the bio-diversity of human life they will be wiped out by it. Baffin Inuit, like Aboriginal communities across the North and worldwide, recognize they must begin to create digital media in their own languages – *oral languages* – or digital media will make those languages extinct by the next generation.

The second danger comes from the rapid increase of multinational mining that threatens to overwhelm Inuit communities lacking the information and communication tools to protect themselves. Global warming has triggered a multinational ‘rush’ of regional mineral developments in gold, uranium, diamonds and one of the world’s richest iron ore deposits ever discovered. From Africa to Latin America, the history of mining in Indigenous lands reveals the risk of catastrophic consequences to nearby local communities. Because this is Canada, not Congo, environmental assessment procedures guarantee Inuit the right to participate in decision-making that affects their future. Unfortunately, today’s interactive digital media tools that could provide the information, communication and political organization to make this participation effective, *do not work* in low-bandwidth slow-speed Baffin communities; with internet service 500 times behind southern standards in cost-per-kilobyte, media files that permit Inuktitut-language *audio-visual* communication (i.e. oral, not literary) are too large to download or share. To overcome this handicap, *DID* installs in each slow-speed community a low-cost, innovative package of community-based technology that allows local users to jump the Digital Divide and use interactive media at high-speed. As the world’s first digital public space for Indigenous people to interact freely as equals in their oral languages and exchange Indigenous know-how and millennial experience, *DID* helps humanity navigate what will be an unpredictable and dangerously challenging 21st Century.

Digital Indigenous Democracy (DID) is innovative *technologically, politically and creatively*. By opening *access* to digital multimedia where it is otherwise impossible to use, *DID* enables a new and distinct group of users to contribute to the collective evolution of the medium: to invent artistically new forms of production and uses of interactivity that draw from distinct traditional Inuit values and concerns. Finally, *DID* is unique: no other product, social network or web-based application in Canada or any developed country addresses the problem of Indigenous internet exclusion, i.e. the long-term impossibility for remote Indigenous communities, socio-political organizations, media artists, children and youth to participate in a multimedia interactive future requiring upload and download speeds greater than 1.5Mb/s.

This project will be carried out and tested in a committed network of 8 Baffin Island communities that volunteered and lobbied aggressively to participate, based on recognized needs initiated by their own Hamlet Councils. The strength of our approach – and its greatest likelihood to succeed – is based on its unique integration of Inuit municipal governance, the scientific research community active in the region and state-of-the-art media practice by some of Canada’s most effective Inuit and Aboriginal media artists. Once underway in its core Baffin Island network, *Digital Indigenous Democracy* will expand to include a wider range of participant communities: more Inuit communities in Nunavut and Nunavik, a network of First Nations communities in partnership with Wakiponi Mobile, Rencontres Internationales du Documentaire de Montreal (RIDM) and imagineNATIVE Film + Media Arts Festival; a network of Indigenous Latin American communities in partnership with CLACPI and other Indigenous media collectives in Mexico, Ecuador, Bolivia, Uruguay and Chile; and interested communities from Vancouver Island to Alice Springs, Australia, from Northern Saskatchewan Cree to the Sami reindeer herders of Norway and Sweden.

Like most Indigenous peoples, Inuit are recognized for their knowledge of sustainable living and resourceful adaptation to a changing environment, skills even more important now to human survival. This information is based orally, transmitted inter-generationally and is ideal for collection using digital media and exchange by internet. *DID* merges video, mapping software and enhanced internet access in remote communities with historically-developed skills of Indigenous storytelling and oral knowledge sharing. *DID* innovates a new form of *digital orality* across geographical and language boundaries. It removes literacy as a barrier to internet participation by post-literate children and youth with rich oral histories yet no literacy tradition in their own language beyond missionary translations of the Bible. In a century already defined by loss of biological and language diversity, *DID* uses innovative technology to reverse these trends using a multi-lingual audio-visual new media *political network* built on freedom, cooperation and equality among oral peoples.

DID proposes a version of 3.0 internet evolution beyond technological innovations that benefit or entertain the web's highest speed urban users. Instead, this project proposes an innovation of purpose, an enlargement of constituency and access, from today's 2.0 *social* networking to a new 3.0 *political* networking led by the internet's least privileged users, i.e. the poor, disadvantaged and excluded, whose health, social and economic conditions – and whose access to modern broadband – are among the worst in the developed world. This evolution in purpose already is evident in an upsurge of use of Facebook, Twitter and other social networking tools to drive recent political actions by youth and oppositions in autocratic developing countries. *Digital Indigenous Democracy* takes this movement into Canada's Indigenous communities and worldwide, as a tool for positive democratic problem-solving, innovating through Canadian leadership.

According to a recent April 2, 2011 cover story in *The Globe and Mail*, “The rate of violent crime [in Nunavut] is nine times what it is in the rest of Canada. The homicide rate is around 1,000 per cent of the Canadian average.... If it were an independent country, Nunavut's crime statistics would place it in the realm of South Africa or Mexico.” Other numbers are equally astonishing: 40 times the national rate of teenage suicide for Inuit males; 10 times the national average of child abuse; 7 in 10 preschoolers grow up in houses without adequate food; rates of tuberculosis, diabetes, infant mortality, unemployment and substance abuse far outstrip any other Canadian jurisdiction; and Inuit life expectancy is *ten years* below the national average. With the highest birth rate in Canada and over 50% of its population under 25, 75% of Nunavut students drop out of school with no prospects for any kind of job. The impacts of global warming and climate change are most accelerated in the arctic, where they have triggered a modern multinational ‘gold rush’ of mining developments that threaten to overwhelm Inuit communities starved for information or tools for defense. At the same time, 99.9% of cable TV programming in Nunavut arrives in a foreign language – English or French. And while digital access to information and scholarly research could give Inuit powerful communication tools to address many of these overwhelming problems, *internet service in Nunavut is 500 times behind southern Canada in cost-per-Kb*. The fastest internet now available in Baffin communities is 768Kb/s download at \$400 per month: more than 100 times slower than high-speed in Toronto or Montreal at five times the cost. [see <http://www.qiniq.com/services-rates>] Recent Industry Canada initiatives to boost Nunavut's Qiniq service to 1.5Mb/s maximum download speeds *after* infusion of \$21 million in local bandwidth subsidies remain hopelessly inadequate to enable minimum 2.0 multimedia interactivity.

The cumulative effects in Canada of two centuries of autocratic, infantilizing ‘administration,’ forced settlement and relocation, compulsory residential schooling and its accompanying linguistic, familial, cultural, physical and sexual abuses, have left today's Inuit and Aboriginals suffering from continuing trauma or, at best, untreated Post Traumatic Stress Disorder. This traumatic state of interior slavery, in people who were among the freest on earth before they were ‘tamed,’ expresses itself in extraordinary elevated levels of self-destruction: oblivion-directed substance abuse, astronomical levels of suicide, domestic violence and child abuse, and a self-hating lack of initiative or political will manifest in contempt for the entire political process – the lowest rate of voter turn-out in Canada even in elections for Inuit leaders – and in passive indifference to the most blatant corruption and exploitation. If Indigenous communities now are excluded from access to the most powerful information tool of our time, and Inuit and Aboriginal youth denied a fair chance to use it to communicate among themselves and with their counterparts in the first global media generation, the traumas of the past may well be perpetuated and reinforced in the future.



Inuit bring skills and values to the national conversation uniquely suited to modern digital tools. Traditional Inuit Knowledge, recently codified by the Government of Nunavut as six principles of *Inuit Qaujimagatuqangit* or 'IQ' [<http://www.gov.nu.ca/hr/site/beliefsystem.htm>], read like a job description for new media innovators: strong communication skills, working together for a common purpose, making respectful decisions by consensus for the common good, environmental stewardship and adapting resourcefully with imagination and tireless effort to the mysteries of an ever-changing world. Inuit are famously resourceful practical people. When Inuit hunters break down on the land at -40 degrees they can repair broken engine parts with chewing gum or restart frozen carburetors by urinating on them. While this kind of jerry-rigged solution may seem amusing to an outsider, in fact it would save your life. *Digital Indigenous Democracy* proposes the same application of Indigenous resourcefulness and adaptability – and traditional values of working together and consensus decision-making – to 'unfreeze' the internet in remote communities to save lives before it's too late.

Starting September 1, 2011 *Digital Indigenous Democracy* launches a network connecting 8 remote communities for interactive media creation and exchange. In each community *DID* installs an integrated package of technology that enables high-speed media interactivity locally despite the handicap of limited bandwidth and slow speeds. IsumaTV Hi-speed MediaPlayers (MP) are local servers with 2650 media files in 50 Indigenous languages (April 8, 2011) already loaded in 2TB hard drives. First launched in January 2008, IsumaTV contains 385 channels of video, audio and other multimedia by Inuit and Aboriginal filmmakers and media organizations worldwide. MediaPlayers wired into each community's school LAN, and connected to a community-wide Open Mesh wireless network, provide free wired or wireless high-speed access to computers and wireless mobile devices for all IsumaTV media with no cap on bandwidth use. Connecting a MediaPlayer to each community's cable TV system delivers a 24/7 local access community channel of IsumaTV programming to home TVs, mixing local playlists from IsumaTV's Indigenous-language media archive; new media uploaded daily from each local community; and live-TV programming produced in any of the 8 Baffin Island communities. The model for internet-enabled interactive local TV is the vibrant 'user-generated' model of community radio in most Inuit communities today, where local disc jockeys mix recorded music, call-ins, Elder storytelling, announcements, hunting tips, invitations to come eat fresh seal meat, and admonitions for children to get home for dinner all generated by almost universal community participation. *Digital Indigenous Democracy* revolutionizes the history of local access TV by drawing on the vast reserves of today's global internet while enabling widespread access to local de-centralized new media creation. Video jockeys can mix playlists of IsumaTV content from other communities worldwide with local new media uploaded at any time, while live-TV broadcasts of local cultural events, public meetings on mining, youth performances or call-in consensus-building on political strategy for sustainability all circulate throughout the community to home TV or by wireless computers and mobile devices.

To facilitate production of these 8 community channels, *Digital Indigenous Democracy* Technical Trainers will teach people in each community to operate and maintain their new technology; and *DID* Creative Content Trainers will deliver workshops to Hamlets, schools, local community organizations and groups of children and youth on how to create, edit and upload new media. Experienced Canadian Inuit and Aboriginal filmmakers like Dr. Zacharias Kunuk O.C. (*Atanarjuat The Fast Runner*, 2001 Cannes *Camera d'or*, Officer of the Order of Canada), Neil Diamond (*Reel Injun*, 2011 Peabody Award), Dr. Alanis Obomsawin O.C. (*Kanehsatake: 270 Years of Resistance*, Governor General's Performing Arts Award for Lifetime Artistic Achievement, four Honorary Doctorates and Officer of the Order of Canada), and their counterparts from other participating countries, will provide online instruction and personal interaction by Skype to new media creators. *Digital Indigenous Democracy* Guest Moderators will lead online interactive conferences on issues of collective concern – Climate Change, Mining on Aboriginal Lands, Economic Sustainability, Strategies for Language Preservation – where participating communities contribute new media production on local conditions and then meet interactively to identify common solutions. Low-cost Live-TV applications like Wirecast will be adapted and enhanced to work in low bandwidth communities, using temporary boosted-bandwidth modems that enable real-time interactivity. Finally, the core backbone of *Digital Indigenous Democracy* in 2011-12 will be a series of 12 monthly interactive TV broadcasts, each one hosted by a different participating community, designed to change the fundamental relationship between Baffin Island Inuit and the multiplex of multinational mining companies moving onto Inuit lands. We call this *BEACEN InteractiveTV*.

BEACEN: Baffin Environmental Assessment Community Engagement Network x 8 Communities

Creating *original* uses of interactive media remains the focus of our project. However, in political networking the first level of innovation is to expand the universe of potential users, giving more people access to use new tools in new ways. Beyond simple fairness, Canada's national justification for increasing access to digital technologies to Indigenous communities is to enlarge the Darwinian chances of originality and improvement. The true expression of any medium becomes visible only when entirely new forms of content, specific to and possible only in that medium, begin to emerge. To achieve, seriously, such a bold objective as CMF's call for 'innovation' and 'revolution,' there needs to be above all a new *necessity* for new media, a driving urgency that requires new classes of practitioners to engage the tools of creation in a new way.

The core necessity driving the pilot experimental year of *Digital Indigenous Democracy* is a collaboration its partners have named *BEACEN*, or *Baffin Environmental Assessment Community Engagement Network*, among 8 low-bandwidth Nunavut communities facing the temptation of benefits from, or the prospect of annihilation by, huge mining developments being built in their back yards. *BEACEN* combines digital technology – operating as fast and interactively as *DID* can make it – with community-based training by Canada's most committed Indigenous media artists, to build a network for knowledge co-creation, dissemination and discussion among communities in the Qikiqtani (Baffin Island) region and the researchers who are active in these areas, to augment Inuit capacity to make informed choices about the key policy issues facing them. Climate change, environmental contaminants, the rapidly growing population of young community residents, and the prospect of major resource development create complex challenges for social and economic development and planning. A digital media network gives communities a means to address these challenges. Starting with Arctic Bay, Cape Dorset, Clyde River, Hall Beach, Igloolik, Kimmirut, and Pond Inlet, and adding Nunavut's capital, Iqaluit, the territory's only 'urban' community with a population of 7500, *DID* and *BEACEN* provide an unprecedented opportunity to use interactive new media and internet to analyze the strengths and weaknesses of current institutions for public participation in Nunavut, to increase community-based analysis of social, economic and ecological change, and to develop and assess innovative approaches to collaborative creation of knowledge by Inuit and scientists in the communities of Arctic Canada.

Given the increasing importance of the arctic regions globally, we believe *DID/BEACEN* will be of interest throughout Canada and the circumpolar North, as well as to other Indigenous wilderness regions with similar ecological and political dangers, as an initiative in democratic community development that responds to contemporary challenges and opportunities. While IsumaTV is the digital backbone of the network, boosting the capacity of communities to receive, create and share information by internet, successful content creation requires appropriate institutional and social development in the member communities. Community members are the 'user-generating' actors in this network; with support by *DID* team members they will ensure local awareness of the network and work with Hamlets, community groups, researchers and youth to make use of it. Since the tool of the project is digital interactive mass media, it will be completely self-documenting, carried out in full view of the entire world, and inviting interaction, evaluation and careful assessment by a wider community of interest.

The main strength of this project is that it is community-initiated, a communications network brought forward first by Igloolik's Hamlet Council and its unique integration of Inuit municipal governance and state-of-the-art media practice. Igloolik is surrounded by impending mining developments: two large diamond deposits discovered west of the town, with uranium and other base metals scattered throughout the Melville Peninsula, while to the east lies the Baffinland Iron Ore Company mega-development, the world's richest extraction of iron ore, requiring a railroad built across Baffin Island and super-tankers carrying iron ore daily to global markets past Igloolik's traditional hunting ground. At the same time, Igloolik also is the headquarters of Igloolik Isuma Productions, Canada's first Inuit-owned independent production company, creators of *The Fast Runner Trilogy* of award-winning feature films and the northern base of IsumaTV. Isuma co-founder and prominent filmmaker, Dr. Zacharias Kunuk O.C., is Igloolik's Deputy Mayor. Paul Quassa, the first president of Nunavut Tungavik Inc. and chief negotiator of the Nunavut Land Claims Agreement, is Igloolik's Mayor. Both Quassa and Kunuk began their careers working for Inuit Broadcasting Corporation; they combine four decades of community-based media experience, with long histories of community leadership. As *BEACEN*'s Project Co-managers, Quassa and Kunuk - Igloolik's Mayor and Deputy Mayor - insure local commitment.

A second project strength is Igloolik's place as a geographical and cultural centre at the intersection of the three regions of Nunavut, a factor that supports communication and cooperation. In the Baffin region the original culture and language of Inuit remain strong: 77% of residents speak Inuktitut as their mother tongue and 65% report speaking it most often at home (StatsCan 2006). From this strong foundation, Baffin residents have created innovative and successful local institutions including, in addition to Isuma Productions, Arnait (Women's) Video Productions, ArtCirq Youth Circus, Igloolik Oral History Project, Nunavut Independent TV (NITV) and the Clyde River Cultural School. The communities of this region also have a long history of collaboration, despite the obstacles of distance. While Indigenous self-expression and empowerment through media creation is the primary focus of *DID*, the core network of Baffin communities brings to it a practical sense of urgency. Inuit recognize the need to become informed of scholarly and scientific research that could aid communities in the upcoming environmental assessment process, to respond to accelerated mineral development and environmental change in the region, The Baffin region has been the locus of a great deal of research, but most of it remains inaccessible to Inuit community-based planning and preparation for resource development decisions, due to geographical, technological, language and cultural barriers. The Nunavut Research Institute lists 38 social science research projects and 25 natural science projects of potential direct relevance to Baffin communities' current concerns conducted during 2004-08 (latest available information). While many researchers work hard to communicate their results to communities, it is still difficult for Inuit to find, understand, interpret and apply the results of studies that might be relevant to their needs. One of the most innovative achievements of *Digital Indigenous Democracy* will be inventing for the first time new interactive media tools to convert or re-mediate (that is, not simply translate or transliterate) unintelligible scholarly and scientific language and written results into *oral and audio-visual* Inuktitut-language forms widely accessible to the people who need it most through IsumaTV.

Core project partners, Dr. Frances Abele (Carleton University) and Dr. Ian J. Mauro (Mount Allison University), with additional advice and support from Dr. Nancy Wachowich (University of Aberdeen) and Dr. Faye Ginsburg (Head of New York University's Centre for Culture and Media) (see Letters of Support attached), make *DID/BEACEN* a unique collaboration among media artists, remote communities and some of the world's leading academics to transform the accessibility of research in three priority areas: 1) social and economic community development; 2) community governance and multi-scale institutional relationships; and 3) public participation and scientific and traditional knowledge. *DID* will host new collaborative research and enhance community-researcher interaction through IsumaTV with a strong emphasis on Inuktitut and plain language English. Advancement of political and socio-ecological development in northern communities is impossible without improvements in research practices and effective communication that expand the capacity of northern communities to make informed decisions about key policy issues they are facing now, and in the future. *DID* provides practical, innovative tools for members of remote communities to communicate with one another, and with researchers operating in their area, working collaboratively, respecting traditional values of working together for a common purpose, for stronger and sustainable northern communities.

BEACEN InteractiveTV x 12 Monthly Broadcasts

Digital Indigenous Democracy expects a wide range of ingenious, original internet content, worth adding to the global media conversation, to result from putting high-speed interactive media tools in the hands of intelligent, resourceful Inuit of all ages in 8 Baffin communities, and giving them the chance to act artistically to protect themselves politically in negotiations with the world's largest multinational mining companies. The central organizing activity of this effort will be *BEACEN InteractiveTV*: a series of twelve all-day interactive internet broadcasts hosted once monthly by a rotating schedule of the 8 Baffin communities. *BEACEN InteractiveTV* assigns one community per month to prepare, direct and host a live internet broadcast of a local public meeting focused on one or another aspect of the mining-related issues facing the region – e.g. the promises and challenges of increased employment opportunities, impacts on social and domestic violence and mental health, dangers of persistent pollution, consequences of increased wealth and resulting class divisions between 'haves' and 'have-not' families, and a regional discussion of what specific benefits should be demanded from the mining companies. Working closely with *DID* project managers, Hamlet Councils of the 8 communities will decide on and assign the themes for each community's hosted broadcast.

These twelve public meetings give local citizens in each community the chance to discuss each subject in their own language and their own way, and share this discussion through video, telephone and Skype interactive participation by viewers watching throughout the region. Each host show will mix a variety of creative elements: multimedia presentations of scholarly research dealing with the month's subject, converted to plain language Inuktitut so people can understand them; in-person attendance by scientific researchers to respond to questions or comments from listeners in the physical audience or virtually online; and video shorts, interviews, music videos, oral histories or other multimedia related to the subject that have been produced and uploaded to www.isuma.tv/did during the previous month by Hamlet staff, religious or community groups, school children, youth, local artists or filmmakers from any of the 8 communities. Each public meeting will be chaired by the host community's Mayor or other designated leaders; other guests or specialists will be invited to fly in and attend, including people from communities with prior experience dealing with mining companies and representatives from the mining companies themselves. The primary language of the meetings and monthly broadcasts will be Inuktitut with translations available, when necessary, for non-Inuktitut speaking attendees.

As an interactive internet 'TV series,' each installment in *BEACEN InteractiveTV* will be hosted by a prominent Inuit media personality, like Canadian rock star Lucie Idlout, or Best Actor Genie Award-winner Natar Ungalaaq. The complete broadcast combining the public meeting, interactive online participation from viewers, local and regionally-uploaded multimedia, audio-visual presentations of scientific research results and any other media interventions contributed throughout the day will be streamed live on www.isuma.tv/did and archived for future viewing at any time. Using innovative online translation software, *DID* will invite other Indigenous language-speakers and English-French-Spanish simultaneous translators to provide multi-language access to the broadcast to online viewers from other Aboriginal communities in Canada or worldwide, and to a global non-Indigenous audience. Facebook, Twitter and IsumaTV chat and video commenting will permit any viewer to participate interactively at whatever level he or she chooses.

Digital Indigenous Democracy and *BEACEN InteractiveTV* reverse the historical imbalance and inherent bias between mining companies and Inuit communities in the past, based on the impossibility of meaningful Inuit participation in the environmental assessment process in their own language. The common practice has been for mining companies to call and manage a public meeting once in a community, presenting data and intentions almost entirely in English with Power Point and corporate documents few Inuit can understand. The ineffectiveness of this approach was expressed in an April 8, 2011 Letter to the Editor of *The Nunatsiq News* by *Nunavummiut Makitagunarningit*, an Inuit community organization responding to a pro-uranium mining editorial the week before by *The Nunatsiq News* Editor-in-chief Jim Bell. The *Makitagunarningit* writer describes the frustration of unilingual hunters and Elders in Baker Lake, watching the recent Nunavut Impact Review Board (NIRB) workshop in the community hall.

"Twenty-five of the 26 people at the table were unilingual non-Inuit, the discussion was in English (with excellent interpreters), and the document being discussed was available only in English. The Board of the Baker Lake Hunters and Trappers Organization had requested that NIRB's review process be suspended until uranium-related terminology was developed and the key document was translated, but NIRB had decided that this would be too much of an inconvenience to the company wanting to build the mine.

"NIRB has failed us,' HTO Board members told the workshop. (All quotes are translations.) 'You have failed hunters and Elders who only speak, read and write Inuktitut.'

"The HTO noted that uranium mining was first proposed for the Kivalliq region in the late 1980s. 'Uranium-related words should have been translated a long time ago... The environmental review process is now moving forward quite quickly, while many hunters and Elders do not understand the process of reviewing the proposal. There are many companies that want to build mines on our land. We can't fully grasp the concepts that the mining companies and the NIRB use if they are not translated into Inuktitut.'

"Such a clear violation of the hunters and Elders' rights to participate made it seem as though we are still living in the Northwest Territories in the 1970s, and that we haven't reached Nunavut yet."

(Letter to the Editor, *The Nunatsiq News*, April 8, 2011)



In stark contrast to this mining-centered information model, *BEACEN* has been gathering momentum among Baffin member communities and across Nunavut. During Iqaluit's recent Nunavut Mining Symposium, *DID* Project Co-manager and Igloolik Mayor, Paul Quassa, presented the *BEACEN* concept to an audience of Inuit leaders, government staff and mining executives in a session held April 5 on community engagement. Quassa told how Igloolik and others in the Baffin region want to assume more power over research that can influence whether a development project moves ahead and, if so, how.

“‘We’ve been researched to death,’ Quassa said. ‘Now we want to have control of the research so it benefits us.’ Quassa said many Baffin communities feel left out of the environmental assessment process or don’t have the resources to fully participate.

“‘The proposed Baffin Environmental Assessment Community Engagement Network, dubbed *BEACEN*, will change that,’ he said. ...

“‘The plan sees them linked up virtually by the Igloolik-based Isuma TV so that they can work together on projects like social and economic baseline studies and research other areas like climate change or shipping.’”
(*NunatsiaqOnline* April 6, 2011)

Quassa previously talked about *BEACEN* to CBC:

“‘Many hamlets simply don't have the staff or expertise to go through large documents full of technical information,’ Quassa said.

“‘We want to ensure that the communities have access to information, have access to research, have a good system in participating and fully understanding how they can get more involved in all these activities that are happening up north,’ he said.”
(*CBC.ca*, February 15, 2011)

Meanwhile, during the past six months, IsumaTV's MediaPlayer development launched its 3rd generation with a more user-friendly ‘plug and play’ interface for remote users; and IsumaTV began a partnership with ATG, an Iqaluit-based company developing community-based Open Mesh wireless network systems. Starting November 2010, with 2010-11 pilot funding from Nunavut's Department of Culture, Language, Elders and Youth (CLEY) and Economic Development & Transportation (ED&T), IsumaTV and NITV (Nunavut Independent Television) installed core MP and mesh technology in three Baffin Island communities. Nine MediaPlayers currently are working in Igloolik, Pangnirtuq and Iqaluit to test and promote interest by local Hamlets and citizen-users, in preparation for launching *DID* in 2011-12:

- 4 MPs wired into LAN computers in Igloolik, Pangnirtuq, Iqaluit and Apex high schools;
- 1 MP delivering IsumaTV 24/7 to Coop community cable Channel 51 in Igloolik;
- 1 MP delivering IsumaTV 24/7 to Coop community cable Channel 14 in Pangnirtuq;
- 1 MP connected to an Open Mesh network covering 40% of Iqaluit with wireless access to IsumaTV;
- 1 MP operating wired and wireless to computers in Iqaluit Public Library;
- 1 MP operating wireless from Igloolik Isuma Building antenna covering 80% of the east side of town.

Digital Indigenous Democracy gives Inuit a real practical alternative to decades of enforced, language-based ignorance of scientific research and exclusion from negotiating their own future in their own language. *Digital Indigenous Democracy* marks its 12-month project years by 12 monthly interactive online all-day broadcasts of *BEACEN InteractiveTV*, addressing 12 themes related to the impacts and benefits of mining and Inuit participation in the environmental assessment process. Each broadcast will be produced and managed by one Inuit community, for the collective benefit of its *BEACEN* partner network, but available to a national and global interactive audience, with multi-lingual dubbing and simultaneous translations in European and Indigenous languages. These 12 monthly broadcasts will stimulate and focus continuous multimedia creation throughout the region by groups and individuals, activists, artists and youth. Combining the growing power of new interactive media with the resourceful collective intelligence of Inuit values, there will be more information, understanding, discussion and engagement by Inuit in the future development of their communities in the next 12 months than in the last twenty years of ‘consultation’ combined. And in the 500 year history of mining in Indigenous lands, for the first time empowered local communities will speak up for themselves in their own languages in front of a worldwide audience.

How DID works: Community Channels + Network Channels + BEACEN InteractiveTV

In practice, the activities of *DID* are simple and straightforward.

1. A core package of internet-enabling technology will be installed in each community: IsumaTV Hi-speed MediaPlayers (MP) will be connected to each school's Local Area Network, bringing IsumaTV high-speed media to all computers wired to the schools' LANs. Other MPs installed in the community's Library, Youth Centre, Elder Centre or Hamlet may be wired or wireless; an Open Mesh wireless network will deliver IsumaTV to all residences and organizations throughout the community. One dedicated MP will be connected to the local cable TV system head-end, usually hosted by the Coop store, where an open community channel will deliver continual playlists of IsumaTV programming 24/7 to home TVs. A local access production 'studio' – varying from a basic webcam or single camera set-up to more elaborate multi-camera installations depending on the local community resources invested – will augment the community channel with local videos and live production. Whenever possible, IsumaTV MPs will be connected to existing internet services but *DID* estimates adding an average of two new internet connections in each community: one for the MP dedicated to serving the Open Mesh network and one for the cable TV community channel. The technology package is estimated at up to five MediaPlayers plus the Open Mesh wireless intranet and mini-studio, with an average cost of \$50,000 per community including installation.
2. During installation, *DID* technical trainers will train local people in basic maintenance and operation of the new technology. MediaPlayers are connected to the internet; even though over 2600 media files already are stored in their internal hard drives, IsumaTV and *DID* site-navigation still takes place online, and new media content continually uploads and downloads gradually between each MP and the main IsumaTV website. This means MPs also can be managed and serviced online; IsumaTV network staff will be able to program, control or even repair individual MPs digitally from the Montreal Hub, reducing local maintenance to basic physical, mechanical operation. Local groups will be expected to provide their own (in-kind) staff to maintain MPs where they are located. *DID* budget provides for one paid technical coordinator in each community.
3. Following installation, *DID* creative trainers will visit each community to train local groups in basic new media production: Hamlet employees, community organizations, local artists or filmmakers, youth groups and interested teachers or other community workers. Trainers will set-up the operation of the local production studio enabling operation of the community TV channel as a mix of IsumaTV downloaded programming and locally-uploaded videos or live production. Every MP in each community will have the capacity to upload local content to channels on IsumaTV. *DID* training staff, working closely with the local Hamlets and selected teachers, will introduce a special initiative, *Indigenous Children and Youth Broadcasters (ICYB)*, aimed at children in each community, since the future of innovative multimedia will be determined by today's children being exposed to these tools in original and artistic ways.
4. www.isuma.tv/did will operate as the network home for all 8 channels of simultaneous programming coming from each member's 24/7 community channel, as well as other 'independent' channels created by any group or individual in any community. IsumaTV/*DID* network staff in the Montreal Hub will advise and assist communities to experiment with their own interactive uses of the new system and to add new media uploads to each community's online channel. In addition to these 8 community channels, updating continuously and playing simultaneously, IsumaTV/*DID* will produce a *Digital Indigenous Democracy* Network Channel selecting featured content from the community channels, mixed with network-wide productions, live-TV events or interesting contributions from global interactive participation. *DID* Network Channel content also may include themed 'festivals' of media from network participants or wider internet, or Guest-Moderated discussions, debates or conferences.
5. *DID* Research Co-managers, Dr. Frances Aberle and Dr. Ian Mauro, will work closely with *DID*'s Igloolik Co-managers, Kunuk and Quassa, and the 8 Hamlet Councils through personal visits and online interaction to identify relevant scientific research, and to test techniques for re-mediated conversion from scholarly vocabulary to plain English and oral, audio-visual Inuktitut, employing teams of Inuit and scholarly assistants to develop experimental templates for conversion of research into intelligible media.



Pilot examples of this ‘new-mediatized science’ will be tested in participating communities enabling Inuktitut audio-visual comments, questions and response. This interactive experiment will continue for the duration of the project year.

6. *DID* Consulting Filmmakers – including Kunuk, David Poisey (Inuit), Neil Diamond (Cree), Alanis Obomsawin (Algonquin), Victor Masayesva (Hopi), Chris Eyre (Lakota) and other Indigenous filmmakers in Canada or worldwide – will provide online interactive training and assistance to local community creators. Other *DID* Consultants provide similar online training, assistance or presentations to promote and provoke interactive content on the network. These include political consultants, like Mary Simon, president of Inuit Tapiriit Kanatami, Mathew Coon Come, former National Chief of the Assembly of First Nations or Aqqaluq Lynge, former head of the Greenland Home Rule government; issue consultants like Sheila Watt-Cloutier on Climate Change or Marie Wilson on the Truth and Reconciliation Commission; media policy consultants from Canada, Latin America, Australia, New Zealand, Scandinavia, Greenland and the USA; and others who offer the network interesting food for thought. All consulting participation delivered live – and its interactive Q&A or Skype participation - will be recorded and stored at IsumaTV/*DID*, similar to an Indigenous interactive TED. The installation of new media high-speed infrastructure, and capacity-building training and assistance in its creative community-based use, all culminate in the 12 monthly broadcasts of *BEACEN InteractiveTV*.

No media organization, university, NGO or government agency in Canada or any developed country has targeted the dangerous consequences of internet service hundreds of times behind national standards in its remote Indigenous communities. Industry Canada initiatives subsidizing northern bandwidth are hopelessly inadequate for basic multimedia use today, and will be even more inadequate as new multiples of bandwidth are offered nationally through expanded fibre-optics not available in the remote north. Inuit and Aboriginal northerners today effectively are excluded from participating in the most important media technology of our time. The fatal consequences of this exclusion strike particularly at children and youth, and survival of languages and cultures, but also limit access to increasingly digital health, education and economic opportunities and cut northern communities off from the world’s information media supply.

What is the User Experience?

The core of the user experience will be live-video based. The 12 monthly broadcasts of *BEACEN InteractiveTV* focus attention on a live-TV monthly ‘event’ that presents the best and most varied information and creative content produced in the region that month. However, the local community channels from each member community will be streaming daily, 24/7, with whatever VJ mix that community chooses of playlists of pre-recorded selections from IsumaTV’s archive, locally produced new media or live TV local productions. At any moment users in any *BEACEN* community may choose to view, interact with and contribute to any of the community channels operating simultaneously on www.isuma.tv/did as well as participating in the *DID* Network Channel featuring selections from the wider collectivity.

At the same time, *DID* provides an integration of web-based rich content. Users never are locked into one single mode of information consumption. Users constantly are guided with the tools available to find what they are interested in, and to participate and interact with others who share their interests. While watching any video stream users will see links to other content related to what they are watching, whether it's another live stream or already recorded video, text, an ongoing video or chat-based discussion, etc. If, for example, a user is watching a segment on the main Network channel, they will be able to move easily to the source of the segment – that is, the channel that produced it - if they want more information. Users can move easily between the more structured main channel and unfiltered, unedited feeds coming in from local communities.

Video commenting and text chat capabilities will be built into the page, allowing users to respond immediately to what they are watching, and engage with the online participants. Rather than a static, hierarchical architecture, the navigation system will allow the user to move smoothly through the content to find what interests them. Since the experience is live it is immediate and changing, as are the interests of the multiplicity of broadcasters and viewers.

4.1(b). Development of New Technologies

Digital Indigenous Democracy creates and adapts a variety of technologies to fulfill the vision of this project:

Local Internet TV Hubs

Minimum technology for each local streaming source, or community channel, to ‘broadcast’ 24/7 is an internet-connected IsumaTV MediaPlayer and a laptop with a webcam. Depending on community resources and commitment, a more elaborate multi-camera setup running the Wirecast program allows a more polished video stream to be produced live, with multiple cameras, transitions and effects, etc. although this may not be necessary. A continuous live stream – ‘VJ-ed’ by a host mixing IsumaTV playlists and live interactive segments – can be sent out continuously to its own community through an empty local cable TV channel to home TVs, or through the wireless Open Mesh network to wireless computers and mobile devices; or ‘pushed’ streaming to the internet through its MP connection. To push the live video stream to the internet, the local hub requires a minimum upload capacity of 500Kb/s at a sustained rate for the duration of the broadcast to allow a low-quality SD video stream with enough buffer room to compensate for satellite latency, etc. An upload capacity of a sustained 1000Kb/s would produce an ideal, high quality SD broadcast, and an upload capacity of 2000-4000Kb/s would allow lower to higher quality HD live broadcasts. In order to receive a high quality SD live stream of another Community Channel, or the main Network Channel, the local hub also requires a download capacity of 1000Kb/s at a sustained rate; for full HD, 4000Kb/s. A very low quality live stream also will be available at 100Kb/s but this may provide only short-term satisfactory viewing. Any stream received by the local hub would be reflected by the MediaPlayer out to local area wired or wireless networks, allowing it to be seen by the entire community.

In remote Baffin communities and most global Indigenous locations there is no ‘standard’ high speed internet service available. Providers offer low-speed connections with only burst-rate (not sustained-rate) guarantees, and total bandwidth usage caps too low for any live broadcast lasting several hours. When required bandwidth rates exceed what is generally available – for example, during once-monthly *BEACEN InteractiveTV* broadcasts – *DID* will negotiate directly with ISPs and telecommunication satellite companies to boost bandwidth to local community hubs for temporary periods. The bandwidth needs for this project are relatively small and *DID* offers providers positive publicity for occasional discounted or even free bandwidth boosts, especially when connected to specific high-profile broadcast events that may attract national or even international attention. IsumaTV has considerable experience already negotiating ‘boosted’ temporary bandwidth from SSI Micro, the chief Nunavut provider, for Live-TV events we have hosted in the past: Live Streaming of the 2009 Alianait Arts Festival from Iqaluit; Live Streaming of the 2009 LaFontaine-Baldwin Lecture by Inuit Nobel-Prize nominee, Sheila Watt-Cloutier, also from Iqaluit sponsored by the Institute for Canadian Citizenship; Live Streaming of co-directors Kunuk and Mauro presenting video clips from *Inuit Knowledge and Climate Change* during the Copenhagen Climate Change Conference in December 2009; and Live Streaming of several 2010 and 2011 screenings of *Inuit Knowledge and Climate Change* (imagineNATIVE Film Festival Toronto, Smithsonian Native American Film Festival, NY) that also streamed live Q&As following the film taking questions by Skype or Twitter from remote viewers online. The cost of temporary, periodic bandwidth purchases is included in the *DID* budget.

Media Players (MP)

IsumaTV Hi-speed Media Players contain the full accumulated multimedia library of IsumaTV when their 2TB hard drives are loaded and installed in geographically remote communities. Users browsing IsumaTV through wired or wireless networks connected to MediaPlayers receive media files at ‘high-speed’ directly from the MP hard drive – URLs are automatically rewritten to the local content. This allows users in remote communities to access content in full quality including HD not otherwise possible through low bandwidth connections. Users also upload new content through local MediaPlayers, with fast access to locally-uploaded content throughout that community. MPs can be managed centrally or in communities. MPs synchronize and update gradually with new content through online connection to the main IsumaTV repository, which requires additional upload and download bandwidth up to 1 or 2 gigabytes per month. However, this information can be exchanged in off-peak times, when no video is being broadcast or received and also can be done via physical media, i.e. replacement hard drive exchange sent from the Montreal Hub, requiring no additional bandwidth. MPs are built on robust hardware with minimal local configuration required (plug and play).

MediaPlayers installed in each remote location are used for a variety of purposes:

- local mirroring of IsumaTV website content for high-speed access to site content in the local community, gradually updated through slow-speed online connection, for ongoing screenings, cable TV channel for community-wide home TV; by local ‘mesh network’ for free community-wide WIFI.
- allows video-responses to be recorded and uploaded locally.
- records the local broadcast stream – archived content is available immediately in the local community.
- reflects the local broadcast stream – viewed on local computers wired or wireless by mesh network.
- reflects incoming live streams from other *DID* locations to the local audience.
- brings in fully-updated content from the main website to each community monthly, and retrieves the latest locally-uploaded content to be added to the main website, through monthly hard drive replacements.

Open Mesh Networks

Mesh networks are usually extended WIFI networks, i.e. local non-internet networks for local networking and communication that extend the reach of WIFI to cover a much wider area. IsumaTV MediaPlayer function well in mesh networks that multiply the reach of a single broadcast to wireless devices throughout an entire community.

Mobile Application

DID will create a mobile application for iPhone devices that allows viewing and complete interactivity with IsumaTV and *DID* video streams. Viewers will be able to communicate via text or directly via video and audio with participants in the live broadcasts from mobile devices.

Central Control Studio and Main Stream

www.isuma.tv/did main Network Channel is based in a central control room and studio in Montreal with very high-speed Internet connectivity and a computer optimized for Wirecast with multiple camera inputs, etc. The entire channel broadcast comes from this computer, mixing incoming streams from community channels, filmmakers, Q&A sessions, incoming audience participation or interactive uploads, and special event Network production. Network broadcast is streamed live in HD (720p) and automatically transcoded to high and low bandwidth SD. Pre-recorded media created in HD will be broadcast in HD. Bandwidth capacity determined automatically by the server insures that viewers see the video in the bandwidth level they can handle. The live stream will be secured and encrypted to provide the best copyright protection currently available. Audio dubs in English, French, Spanish and Indigenous languages will be made by live translators when available.

Main Website Technology Platform

- *Hardware:* We are building this site using cutting edge virtualized cloud computing: Amazon EC2 server environment, Amazon S3 environment for file storage, and Amazon Cloudfront for content delivery and streaming. Built with future scaling requirements in mind to launch additional EC2 resources as required.
- *Server Stack:* Our server stack is built on Opensource software, the LAMP (Linux, Apache, MySQL, PHP) Stack – The GNU/Linux distribution (Debian) and the basic web server software. This layer communicates directly with the EC2 environment and does the work of storing information in a MySQL database processing the PHP web scripts and serving web pages. Built to scale, with load-balancing, MySQL clustering, and distributed static content (Amazon S3 and Cloudfront).
- *Development Platform:* Built on Drupal open source development platform; written in PHP and sets up a basic schema for storing information and building a dynamic website. It communicates with the MySQL database and builds HTML pages to be served by the Apache webserver.
- *Web application:* Built on or integrated with the Drupal core and modules are our highly customized web applications. (a) Social networking and authentication structure that allows members to join and create a variety of online content. (b) Content Management System (CMS) that allows site managers to edit user-generated content and manage users as well as create and manage elaborate customized areas of the site. (c) Media Management using the Media Mover software. (d) Live streaming video and audio using the Wowza video server. (e) Management of static content distribution using Amazon Cloudfront and the Media Players we have developed to distribute content to the north and other remote regions.
- *Website:* The public face of the site, visible to the public. Site administrators and members create and manage this site using the tools made available by the Web application layer.

Wider Support, Modular Growth, Sustainable Expansion in 2012 and Beyond

The modular community-based structure of *Digital Indigenous Democracy* is particularly suitable for seamless expansion and network sustainability. IsumaTV has been evolving collectively with a wide variety of global partners since its launch in January 2008 (see 8. *Complete Development History*).

Years of network-building among IsumaTV partners – Canadian and international Indigenous filmmakers and media organizations – makes modular expansion and growth of *Digital Indigenous Democracy* possible at any point during or following the CMF-ES project year. Two additional ‘networks’ of non-Inuit communities already are committed to join *DID* as soon as possible: the Wapikoni Mobile network of Quebec First Nations communities established since 2004, and the Abya Yala network of Indigenous community media organizations across Latin America.

Wapikoni Mobile was founded in 2004 by Quebec filmmaker, Manon Barbeau, to provide film and media arts training to Indigenous youth in remote communities throughout Quebec. In seven years Wapikoni has worked with seven different First Nations - Algonquine, Atikamekw, Cree, Innu, Huronne-Wendat, Naskapi and Mohawk - and provided workshops and training in 18 communities - Pikogan, Lac-Simon, Kitcisakik in Abitibi; Winneway in Témiscamingue, Kitigan Zibi in Outaouais; Wemotaci and Opitciwan in Mauricie; Manawan in the Lanaudière; Mashteuiatsh in Saguenay-Lac-Saint-Jean; Uashat-Maliotenam, Nutashkuan and Betsiamites on Côte-Nord; Wendake close to Québec; Oujé-Bougoumou, Kawawachikamach, Matimekush-Lac John north of Quebec; Kanehsatake in the Laurentides and Mistissini. 1500 young people have attended Wapikoni workshops. Trainees have produced over 250 music creations and 350 video shorts in English, French, Spanish, Portuguese, Italian and Mandarin, many of which have been screened in Canada, North America, South America, Europe, Asia, Australia and French Polynesia. Wapikoni youth productions have won more than 40 prizes in national and international film festivals.

Wapikoni’s commitment as a core partner in *Digital Indigenous Democracy* is instrumental to success of the project in several ways during the years ahead (see Letter of Support attached). First, Wapikoni brings the Cree community of Wematoci into an expanding *DID* network once the project is underway. Wapikoni will work with Wematoci to install the IsumaTV technology, train local filmmakers and insure local media creation will be produced and uploaded to *DID* along with, and as an enlargement of, the collectivity of the *BEACEN* group of Inuit communities. Wematoci is the pilot for a wider enlargement of *DID* through Wapikoni’s network.

As Canada’s most experienced, successful trainer of Indigenous youth filmmakers in their own communities, Wapikoni also brings to *DID* an increasing focus on engagement of Indigenous youth in creating music and video creations, and in using expanded access to to exchange media among Indigenous youth across Canada and worldwide. Eventually, Wapikoni also could assist its wider network of 17 other First Nations communities to join *DID* in the future, and could bring Wapikoni’s leading Youth Training methodology to *BEACEN* and other expanding *DID* member communities. As a continuing partner in a future, sustainable *DID*, Wapikoni will join IsumaTV to expand its collaboration to other remote communities in Canada and internationally and make its entire archive of more than 600 multimedia productions accessible through IsumaTV’s MediaPlayers.

ABYA YALA (Latin American Indigenous Communication Network) is a second expansion network for *DID* in 2012 and beyond, made up of a growing assembly of Indigenous communities and media organizations across Latin America with whom IsumaTV has developed collaborative partnerships over the past five years. In 2006-07, Isuma International Coordinator, Gabriela Gamez, began outreach to Indigenous media-making organizations around the world to present the concept of IsumaTV, receive feedback and encourage their uploading of archival and contemporary Indigenous multimedia. When www.isuma.tv launched in January 2008, its first 20 channels and 100 hours of digital media included international channels from the Sami in Sweden, Greenland Inuit and the Wírrarika people of central Mexico, in addition to Canadian Inuit and First Nations filmmakers. Three years later, by January 2011, IsumaTV has more than 2650 worldwide Indigenous films in 50 languages; 350 channels including more than a hundred by international members; and monthly unique visitors from an average of 115 different countries.



Three years of active Latin American outreach has attracted a high level of interest from potential partners in a growing global network. In March 2008, Isuma presented the platform to groups of Indigenous women in Oaxaca and Puebla as part of a cultural exchange between Inuit and Indigenous women in Mexico. Later that year, Isuma participated in the *9th International Film + Video Festival of the Indigenous People* held in Bolivia. When a local political crisis made it impossible to attend physically, Gamez presented IsumaTV through Skype and screened films from www.isuma.tv. In August 2010, Gamez was invited by UNESCO to a 'Meeting for Indigenous and Community Media Making Distribution Strategies' in Paraguay, followed in October by an invitation from CLACPI (The Latin American Coordination for Film and Communication of the Indigenous People) and UNESCO to the *10th Indigenous Film + Video Festival of the Indigenous People* held that year in Ecuador. Gamez delivered a practical workshop on how to use IsumaTV and several organizations from Mexico, Bolivia, Ecuador, Guatemala, Paraguay, Argentina and Brazil opened new IsumaTV channels to upload media on a continuing basis (e.g. see www.isuma.tv/ecuador). When no one from IsumaTV could attend the *Indigenous Continental Summit* held two weeks later in Colombia, CLACPI's director Jeanette Paillán and Indigenous media-makers who had attended the previous meetings introduced IsumaTV to the Summit audience. With development of *Digital Indigenous Democracy* in 2011-12, IsumaTV received written support and offers to participate from five Latin American media organizations with long histories of training and organizing Indigenous communities to combat similar social and economic problems faced by Inuit and Aboriginal Canadians (see Letters of Support attached):

- CLACPI (Latin American Coordination for Film and Communication of the Indigenous People) and LULUL-MAWIDHA (Mapuche Group of Indigenous Studies and Communication), *Santiago de Chile*
- CEFREC (The Cinematography Education and Production Center of Bolivia) *La Paz*
- Ojo de Agua Comunicación, *Oaxaca City, Mexico*
- CHULPICINE (Children and Youth Film + Video Festival and Training), *Quito, Ecuador*.
- ÁRBOL (Participatory Community Television in Uruguay), *Montevideo*.

Each of these organizations has agreed to establish *DID* hubs with IsumaTV MediaPlayer in slow-speed neighborhoods or communities to bring their own alliances with filmmakers, international agencies and local municipalities to an expanding international *DID* multimedia network. Not only videos go 'viral'; the same process can occur in media collectivities. Once established and tested in the *BEACEN* partnership in Nunavut, *Digital Indigenous Democracy* has the potential to grow 'virally' through ABYA YALA to other active groups in Latin America, and through Wapikoni Mobile in First Nations Canada. Many obstacles facing Indigenous communities today are shared – often almost identical – in every country where they live: high rates of suicide, alcoholism, family violence, and drug abuse, and the efforts to protect lands, languages and cultures from the socio-environmental impacts of mining and other resource developments. Manon Barbeau, founder of Wapikoni Mobile, also has been building bridges between the Indigenous people of Canada and Latin America; Wapikoni currently trains Indigenous youth media-makers in Bolivia, Chile and Peru. Whenever Wapikoni screens films in Latin America a young Wapikoni media-maker from Canada goes along. The benefits to Canadians are very strong. As Claudie Ottawa, an Atikamekws filmmaker who shared her Canadian Wapikoni experience in Ecuador, reported: "*Looking at everyone here and listening to them makes me realize that I suddenly don't feel alone anymore. I see now that there are other people like me, like my community, in other parts of the world, struggling with the same issues as the ones we are struggling with. Though in this part of the world they seem more united and I feel as if I'm part of this family. I want to go back to my community and start working towards creating a better future.*"

More information, details, videos and related multimedia content from current *DID* test sites in Nunavut, as well as comprehensive background and support material for this application can be viewed at www.isuma.tv/did. This includes the complete collection of Canadian and International Letters of Support from member communities, scientific and academic partners and other supporters; and video trailers and multimedia documents related to the development history of IsumaTV, Wapikoni, ABYA YALA and *Digital Indigenous Democracy*.

Peter Irniq's Letter to the Editor of *The Nunatsiaq News*, excerpted to start this part of the proposal, is also an appropriate way to close this section, by quoting him in full. As a long-time Inuit leader and former Commissioner of Nunavut, Mr. Irniq's letter, appearing both in Inuktitut and English, is brief and to the point.

“We will all remember, with great sadness, when Simeonie Alainga’s boat was sinking off Baffin Bay in October of 1994. We will also remember when Louis Pilakapsie’s boat was sinking off Arviat in August of 2000.

“Both men were yelling on the VHF radio for help: ‘Ikajurtaujumalirtugut!’ ‘We want to be helped now!’ And no one came to help at that moment, as Simeonie’s boat was too far away. For Louis’ boat, it was too dark and too windy! We all could only hope and our hopes faded.

“It is obvious with our residential school survivors, our boat is sinking too. This was said, loud and clear in Iglulik during the recent meetings of Truth and Reconciliation Commission. There is too much water in our boat now, we cannot empty it ourselves. We have no means to do it.

“We are asking for help. SOS! Is there anyone out there in Canada, willing to come forward and help us?”
(Letter to the Editor, *The Nunatsiaq News*, April 8, 2011)

Indigenous peoples have been calling for help for many years. For the first time, new interactive digital media – low-cost, worldwide, easy to use and made in their own image - now gives them a chance to be heard more clearly than ever, among themselves and across the planet, to get organized and do something about it.

4.1 (c) *Distinctiveness of the Business Model*

The distinctiveness of a business model should be based on the distinctiveness of its product. What makes *Digital Indigenous Democracy* distinct as an innovative advancement of interactive media is that it introduces a high bandwidth-demanding tool to low bandwidth-remote Indigenous communities, and so opens up the history of media technology normally developed by and reserved for the wealthy and privileged – to the poor. Filmmaking, television and most recently the first applications of high-bandwidth digital multimedia (i.e. the fast movement of audio-visual media files requiring more than 1.5Mb/s bandwidth capacity) always have been industries of the rich and dominant – either the corporate rich of American Hollywood and global advertising, or the politically dominant governments and autocrats who control the power of media in every poorer country. With the advent first of low-cost small-format video in the late-1960’s, and the parallel development of ‘local access community cable TV,’ an evolution began from the autocratic control by business and governments of Film and Television, toward the potential of democratic access to powerful media by poor and politically-marginalized groups – artists, women, youth and poor and Indigenous peoples – who have been excluded from the role of being creative makers of media and relegated to being passive consumers of them. In this sense, Inter-activity itself – the essential two-way ‘horizontal’ capacity of new digital media that undermines the vertical, autocratic nature of Film and Television to its passive powerless consumers - is only *really* innovative when it begins to include the poor and marginalized people who have been the *most* powerless, the *most* passive victims of top-down media technologies since they first were invented.

If *Digital Indigenous Democracy* is distinct because it brings fast interactive media to slow passive communities, it is also unique and revolutionary since no other commercial, government or humanitarian interests have made this goal their priority. A deep Google search will prove what may be difficult to believe: there is no other initiative in Canada or anywhere else aimed to equip remote Indigenous communities with more internet capacity than 1.5Mb/s now or any time in the future, and most communities remain stuck at averages of 300-500Kb/s maximum. As readers of this application know best, this 1.5Mb/s ceiling, much less today’s under-500Kb/s reality, effectively means all multimedia today, from YouTube to modestly interactive gaming or networks, *do not work* in Inuit and Aboriginal communities, *and never will*. As a business model, aimed at some of Canada’s poorest communities, *Digital Indigenous Democracy* is unlikely to be commercially profitable from user fees or conventional advertising. Even a target market of tens of thousands of unique monthly Indigenous visitors can’t afford to buy much of anything anyone wants to sell them. Realistically, some other third-party has to pay the costs of network sustainability, or any goal of improving digital information services for remote communities will have to be abandoned. The question is: who needs to pay, and how will they benefit? One advantage of *Digital Indigenous Democracy* is it may be the *only website* able to bring multimedia information into hundreds of remote communities connected to *DID* through our MediaPlayer network. In that case, the large network of national and international information-providers who increasingly will create and try to distribute multimedia information to remote communities will have no choice but to join *Digital Indigenous Democracy* and use IsumaTV.



For example, if Canada's and Nunavut's Departments of Health, UNESCO, Planned Parenthood and other national mental health and social agencies today want to create multimedia videos to discourage Inuit teenagers from smoking, drinking, drugs, junk food and unsafe sex, they post these videos to YouTube where no one in Inuit communities can see them. YouTube doesn't work in *DID's* 8 *BEACEN* communities: videos take forever to download, buffer and barely play. However, uploading these same videos to IsumaTV MediaPlayers, to isuma.tv/did or isuma.tv/youtube, they will play at high-speed in every community where *Digital Indigenous Democracy* is in place. *DID* proposes a unique, distinct and innovative business model of 'Sponsorship,' by which the world's network of aid and information agencies, mandated to communicate effectively with Indigenous communities, will pay monthly subscription fees to *DID* to carry their channels of interactive multimedia into communities where they could not otherwise go. A more down-to-earth example might be Canada Media Fund and Telefilm Canada (or Canada Council, the Canada Interactive Fund, SODEC and every provincial film commission etc.); agencies mandated to provide equal services and access to information to all Canadians who may apply for and benefit from their programs. Certainly, as application processes like e-Telefilm become the norm, and as funding programs like CMF's Experimental Stream increasingly employ sophisticated multimedia to inform potential applicants about programs and procedures, or to enable them to apply through interactive internet, eventually it will become apparent that the Digital Divide divides applicants between haves – who get all this information – and have-nots who don't. At that point, the most cost-effective way to provide equal information multimedia access to remote Indigenous communities will be to rent channel space on *DID* and IsumaTV. So far, *DID* has identified 100 potential Sponsors serving Nunavut Inuit communities alone. What will they pay? Let us build the network and find out. Can they avoid this responsibility? Not without replacing it with some more costly media-delivery system. Can they continue to pretend that remote communities can watch their newly-made videos on YouTube?

Remote communities are so deprived of interactive media today that people don't know what benefits they're missing, and most information providers don't realize what they're *not* providing. IsumaTV MPs are inexpensive tools to get digital interaction into communities that can afford to buy or maintain these once their value is demonstrated clearly. Installing MPs and Open Mesh networks, plugging IsumaTV into local cable TV channels and using inexpensive video cameras to create new media – all are VERY inexpensive solutions to a catastrophic and worsening problem. After 12 months of demonstrating and documenting the practical benefits of user-generated interactivity in 8 Nunavut communities, *DID* will expand in response to demand from other Inuit, First Nations and international communities who purchase the package of technology in order to join. Canadian Indigenous Land Claims Agencies already express interest in financing MP technology for their beneficiary communities, including Grand Council of the James Bay Cree, Makivik Corporation of Nunavik in Northern Quebec and Qiqiqtani Inuit Association in Nunavut; as well as UNESCO, CLACPI, JADE and other international groups. As *DID* expands it reveals itself as the *only* multimedia platform able to deliver increasingly interactive media information to its equipped-communities, from paying Sponsors or agencies mandated to serve them. *DID* will evolve our business model collaboratively with these Indigenous agencies and paying Sponsors. In 2010, National Film Board opened a channel on IsumaTV, www.isuma.tv/nfb. This is our distinct business model.

4.2. Legacy to the Industry

Twitter and Facebook are no longer innovative but using them to get rid of Hosni Mubarak was pretty revolutionary. Migrating local access community TV into online interactivity among 8 Inuit communities facing multinational mining companies threatening their survival is as revolutionary as we're likely to see in today's Canadian media. Sometimes the most innovative way to advance a technology is to put it to a wider use for people who can't make it profitable. Bringing new users to a technology brings the revolutionary power of natural selection to the dynamics of media innovation in an ever-changing complex world. This is our Legacy to the industry.

5.1. *Sustainable Viability of the Project*

Digital Indigenous Democracy's Business Plan (see page 3) is justified by 25 years of continuous experience, recognition and success: first, through Igloolik Isuma Productions and Kunuk Cohn Productions, in innovative, award-winning, Inuit-language media production: 3 unique feature films, 30 shorts and documentaries, 2001 Cannes *Camera d'or*, 16 Genie Award nominations, \$22 million in production. Second, since 2004, Isuma Distribution International embarked on a \$3 million development commitment to digital media creation and experimental online distribution, through IDI's multimedia website IsumaTV [www.isuma.tv] and its affiliated non-profit community-based media collective, NITV (Nunavut Independent TV). Support letters attached from regional, national and international collaborators recognize IsumaTV as a world leader in Indigenous new media innovation. Surviving 25 years as a minority-language outsider in today's complex, rapidly-changing global media industry, also indicates our business acumen, creative imagination and corporate durability.

Details of the attached Business Plan are justified as follows:

1. *Participating Community User-fees* starting in Year One (i.e. 2012-13, following the project Year Zero financed by this 2011-12 CMF-ES application) amount to \$12,000 per year per community, a contribution most Canadian and many international Indigenous remote communities can afford from local funding sources available to them every year. However, to assist participating communities to maintain the user-fees, and raise additional funds on their own to expand their creation and interactive use of *DID* in later years, our Plan provides for network help to remote communities in fund-raising their share of the cost. Once the benefits of simple installation of even one IsumaTV MediaPlayer become apparent in pilot communities, word of mouth will spread rapidly and we anticipate a growing demand for more participation throughout Nunavut, Nunavik and northern Aboriginal regions (see Letter of Support from Igloolik Coop regarding community satisfaction with new Channel 51). Projections of 10 *DID* network communities in Year One assumes 8 Baffin Island BEACEN communities continue after CMF funding expires, and two new ones join. Going from 10 to 20 in Year Two, and 20 to 50 in Year Three, recognizes the growing awareness of communities of their need to improve local digital media access or suffer increasing isolation and despair, especially among their younger generation. For the same reasons some videos 'go viral,' a successful well-publicized *DID* pilot year, fully-visible to a national and worldwide interactive audience, will generate new interest in participation by communities for the modest user-fee of only \$1,000 per month.
2. *Participating Sponsor Channel-fees* at the same rate of \$12,000 per year represents a much smaller commitment on the part of well-financed government, public and private agencies whose mandates include providing information to, and getting interaction back from, remote Inuit and Aboriginal clients. Like NFB, already posting a channel on IsumaTV, CMF and Telefilm are strong potential Sponsors if they take seriously their obligations to remote northern Canadians for full interactive access to CMF/Telefilm information, consultation and application procedures that certainly will become increasingly multimedia in character over the next three years. All agencies serving health, education, justice, economic, youth and other needs of Inuit and Aboriginal communities will increase dependence on interactive multimedia to communicate better with target populations. As it becomes clear remote Inuit and Aboriginal populations *cannot use* these multimedia tools and *do not receive* these enhanced forms of communication, all responsible service-providers will look to innovative ways they can bring their multimedia information to target users without discriminating against northerners. At present, *DID* is the only solution that innovates high-speed access in low-bandwidth northern communities that would permit Health Canada, the Government of Nunavut, Amnesty International or Planned Parenthood to deliver interactive multimedia to remote communities where people actually will get it. While our Business Plan again only projects 10-20-50 Sponsors paying extremely modest fees over the next three years of *DID*, an optimistic view of their good will and responsibility for fairness could imagine five times these projections.
3. *DID's same CMF Experimental Stream collaborative partnership* among Baffin Inuit communities, IsumaTV media artists and university-based researchers has submitted a Letter of Interest (LOI) to Social Sciences and Humanities Research Council (SSHRC) to file a 7-year \$2.3 million application for ongoing support of *DID's* core BEACEN project, with Carleton University as SSHRC's academic lead applicant.

If successful, SSHRC financing of \$350,000 per year for seven years would begin sometime in the 2012-13 fiscal year, as *DID*'s CMF Experimental Stream financing would be completed. Of course, a future pending funding application is not a 'guaranteed' source of sustainable revenue; however, the impressive collaboration of IsumaTV with Carleton University, Mount Allison University, the Hamlet of Igloodik leading other regional Hamlet Councils and a wide range of Inuit and non-Inuit groups expressing enthusiastic support gives this application a good chance to contribute to long-term sustainability of *DID* for the next seven years.

4. *The Government of Nunavut* has contributed not less than \$150,000 per year for the past five years to the development of IsumaTV, NITV (Nunavut Independent TV) and the IsumaTV MediaPlayers in Nunavut communities, from its Departments of Culture, Language, Elders and Youth (CLEY) and Economic Development & Transportation (ED&T). Similar contributions are committed to *DID*'s 2011-12 financing structure through NITV as its non-profit Nunavut partner. Positive results encourage CLEY and ED&T to continue supporting this project's expansion to all 26 Nunavut communities over the next several years.
5. *Inuit and Aboriginal Land Claims agencies and national or regional organizations* control large sums of investment capital that could insure the future expansion and sustainability of *Digital Indigenous Democracy* in their remote beneficiary communities. Agencies include Nunavut Tunngavik Inc. and its three Regional Inuit Associations that distribute funds from the Nunavut Land Claims Agreement (see Qiqiqtani [Baffin] Inuit Association Letter of Support attached); Makivik Corporation in Nunavik and the Grand Council of Cree in northern Quebec who are beneficiaries of the James Bay Agreement and related land claims partnerships; and regional or national organizations like the Federation of Saskatchewan Indian Nations or the Assembly of First Nations. These and others across Canada all are in a position to invest in their own beneficiary communities' potential participation in the *DID* network by financing purchase and installation of the IsumaTV MediaPlayer package of technology that allows each remote community to join *DID*.

Financial Stability of the Applicant

Isuma Distribution International Inc. is in its eighth year of continuous operation and its fourth year of continuous operation of IsumaTV www.isuma.tv. IDI assets, annual revenues and operations are commensurate with the outline of the project. IsumaTV averaged 250,000 visits and 791,000 page views in 2010 from 136 countries and shows continuous growth in every quarter since it was launched in January 2008.

Competitive Market Analysis

A Google Search of 'high-speed internet in low bandwidth remote Inuit Aboriginal Indigenous communities' turns up IsumaTV as its top three results. The fourth is a research paper published in *The Journal of Community Informatics* by Javier Mignone that contains the statement, "*The Qiniq network provides high speed internet services to 25 Inuit communities in Nunavut.*" This is false. Qiniq's \$60/month service delivers 384Kb/s burst speed, and its fastest available service delivers 768Kb/s burst speed for \$400/month after a \$250 one-time registration fee. <http://www.qiniq.com/services-rates>

While *Digital Indigenous Democracy* and its installation of IsumaTV Hi-speed MediaPlayers should be, and some day may be, in a 'competitive' market in Canada or worldwide, that competition does not exist yet. Despite widespread rhetoric by governments, some internet service providers and even scholarly researchers that exaggerate or misrepresent broadband 'equality' initiatives and 'high-speed internet services' for remote and Indigenous users, there is no serious innovative practice going on anywhere today besides ours to bring real interactive multimedia capacity to remote communities, at speeds greater than 1.5Mb/s at costs Indigenous users can afford.

**6. 3-Year Projections for Target Audience www.isuma.tv/did, 2011-14**

ACTUAL & PROJECTED	Year 0	Year 1	Year 2	Year 3
April 2010-2011	<i>Actual 2010-11</i>	<i>2011-12 x 2</i>	<i>2012-13 x 2</i>	<i>2013-14 x 2</i>
Visits	248,299	496598	993196	1986392
Absolute Unique Visitors	182,534	365068	730136	1460272
Pageviews	791,154	1582308	3164616	6329232
Repeat Visits	27.14%			

April 2010-2011 Detail Google Analytic*Visitor Loyalty*

67388 Repeat Visits

24,647 visits that were 1 to 3 minutes

23,390 visits that were 3 to 10 minutes

15,510.00 visits that were 10 to 30 minutes

5,306 visits that were longer than 30 minutes

99319 visits that viewed multiple pages

Visits by Country:

Canada 78,305

U.S. 42,683

U.K. 7,002

France 6,163

Germany 5,183

China 4,857

Pakistan 4,832

India 4,760

Phillipines 4,748

Vietnam 4,414

Visits by Month

April 2010 13,382

May 2010 10,918

June 2010 11,635

July 2010 12,008

August 2010 13,956

September 2010 14,046

October 2010 35,877

November 2010 48,306

December 2010 17,870

January 2011 31,571

February 2011 18,729

March 2011 19,465

Visits From Within Canada:

Toronto 4,853

Ottawa 4,810

Montreal 3,652

Winnipeg 3,545

St-Leonard 3,110

Outremont 2,589

Vancouver 2,497

Edmonton 2,453

Montreal 1,865

Calgary 1,689

Pages viewed:

/fastrunnertrilogy 79,228

front page 52,825

/atanarjuat 21,166

/inuit-knowledge-and-climate-change 16,078

login page 15,644

/isuma-productions 11,307

/tagaq 9,012

Pageviews by Language:

English 477,942

French 30,397

Spanish 25,425

Inuktitut Roman 5,185

Inuktitut Syllabics 9,869

by Bandwidth:

High: 466,410

Low: 81,479

8. *Project's Complete Development History*

There is a desperate need for more Inuit and Aboriginal-language media in Canada's northern communities. Since the 1970's, one-channel CBC has grown to sixty-channel cableTV yet after 40 years 99.9% of television remains in English and French. Inuktitut is considered one of only five Indigenous languages worldwide given a moderate chance of surviving the 21st century. However, of 8400 TV hours now available in Nunavut communities every week, less than *one-tenth of one percent* - only five hours per week - is in Inuktitut. Inuktitut is an oral language, its syllabic alphabet invented by priests around 1900 to translate the Bible. Inuit communicate in Inuktitut orally or audio-visually. No one under-60 writes in Inuktitut syllabics; English texts are routinely and expensively translated to Inuktitut, but no one reads them.

Today's internet makes things worse – with *vastly* more foreign language content, almost none in Inuktitut. And the internet's best features for *oral language* Inuit and Aboriginal users – its increasing potential to communicate more *audio-visually*, in interactive multimedia rather than written text – *do not work* in low-bandwidth remote northern communities where Internet speeds of 300-500Kb/s are insufficient to play most media files. Isuma's Cannes-winning Inuit-language feature film, *Atanarjuat The Fast Runner*, named Best Canadian Film of the Decade by MacLean's and CTV.ca, can be viewed online almost anywhere in Canada but *it will not play* in any Nunavut community.

Since the beginning of this century Isuma has devoted considerable resources to equalizing the internet in northern Indigenous communities to give Inuit and Aboriginals in remote regions fairer access to media in their own languages. As internet capacity becomes more interactive than passive, and more audio-visual than 'literary,' the need for faster bandwidth becomes more crucial in remote communities. Handicapped by geography and poverty, Canada's northern communities are unlikely to receive, within decades if ever, fibre-optic wiring or download speeds better than 1000Kb/s at a reasonable cost. Since 2004, in response to mainstream media distribution's inability to bring *Atanarjuat The Fast Runner*, the first Inuit-made Inuktitut-language feature film, to its primary Inuit audience, Isuma has applied Inuit-style media resourcefulness toward overcoming what seems like an otherwise impossible obstacle, a worsening technological Digital Divide with increasingly catastrophic consequences for Inuit survival.

2004: Incorporation of Isuma Distribution International to manage and innovate better distribution for Inuit and Aboriginal media.

2005-06: Creation of the website www.sila.nu. This was established as a companion website to the 2005 production in Igloolik of Isuma's second feature film, *The Journals of Knud Rasmussen*. Sila included complete web-based background on *The Journals'* story, cast and crew and the history on which it is based. Its most interactive features – for that time - were *Live From The Set*, where local video bloggers uploaded multimedia during filming and viewers could follow the production process and forward questions to the filmmakers as it was taking place; and *The Great Arctic Hunter*, Isuma's first experimental online video game aimed specifically at children and youth. In 2006, with support from Telefilm's Alternate Distribution Program, Isuma Distribution launched the Indigenous Film Network (IFN), touring *The Journals of Knud Rasmussen* to over 80 remote Inuit and First Nations communities where neither Alliance Atlantis's 'national' distribution, nor the TIFF Film Group's 'regional' distribution would go, for digital projections in school gyms and community halls, boosting national gross box office for the film by an additional \$90,000.

2007-08: Development of IsumaTV 1.0, www.isuma.tv. The success of IFN proved there was a remote under-served audience for Inuit and Aboriginal films. However, touring films with video projectors from fly-in community to fly-in community was far more expensive than the old itinerant projections of the National Film Board in the 1940's and 50's across Canada before television. IsumaTV launched in January 2008, with support from both Canadian Content Online and the Canada New Media Fund. In September 2008 the Government of Nunavut passed the Inuit Language Protection Act (ILPA Bill 7), based on Quebec's French-language Bill 101, requiring all large public and private sector organizations to communicate with Inuit in Inuktitut within five years. Despite widespread recognition that Inuktitut remains a 4000 year-old *oral language*, Bill 7 has been interpreted to mean an upsurge in literary translations of English-language documents into written syllabic translations few Inuit can or do ever read, and whose transliteration from

bureaucratic English to Inuktitut makes no sense. However, Bill 7 opened the opportunity for IsumaTV to develop as a multimedia web platform that could allow government departments, NGOs, land claim agencies, mining companies and other organizations providing services and information to Inuit to comply with Bill 7 using by communicating in oral Inuktitut, that is, audio-visually through digital media, on IsumaTV.

2009: With a second year of support from CCO and CNMF, Isuma launched the 2.0 interactive version of IsumaTV, enabling user channels to operate for joining into and sharing media like a social network. IsumaTV 2.0 also developed further the capacity to carry out Live-TV webcasts from the Arctic using the low-cost Wirecast software. IsumaTV webcast the 9th Annual Lafontaine-Baldwin Lecture featuring Inuit Nobel Prize-nominee, Siila Watt-Cloutier, sponsored by the Institute of Canadian Citizenship, in May 2009 from Iqaluit; and then the Alianait Arts Festival in June sending five evenings of entertainment out live to any user able to receive it. In December 2009 Zacharias Kunuk and Ian Mauro, co-directors of *Inuit Knowledge and Climate Change*, ran three nights of live webcasting from their editing room in Igloolik showing clips of the work-in-progress to a global audience during COP-16, the International Conference on Climate Change in Copenhagen. IsumaTV was nominated for a 2009 Canada New Media Award as Best Cultural Website.

2010-11: By the end of 2010 IsumaTV contained more than 3000 Indigenous media files in 46 languages, uploaded by filmmakers and media organizations from 24 countries. VOD in SD, 720p and full 1080p HD was available for Pay-What-You-Can download. In 2010 the URL for *The Fast Runner Trilogy* VOD had 79,228 page views; *Atanarjuat* had 21,000; *Inuit Knowledge and Climate Change*, 16,000.

2011-12: Despite IsumaTV advances since 2005, remote communities haven't kept up. Today's 2.0 interactive media applications still *do not work* in Nunavut or other remote northern communities where maximum download speeds of 768Kb/s cost \$400/month, average \$60/month users get 360Kb/s and YouTube videos take forever to play. Development of the IsumaTV MediaPlayer as a technological adaptation to low-bandwidth remote restrictions now is in its 3rd generation; while partnership with ATG's new community-based Open Mesh network technology is made possible by ATG's own rapid development in Iqaluit last year. Several test installations already are in place. With 2010-11 funding from the Government of Nunavut Departments of Culture, Language, Elders and Youth (CLEY) and Economic Development & Transportation (ED&T), IsumaTV and NITV (Nunavut Independent Television) have installed and field-tested various versions of the core technology package in three Baffin Island communities so far. Nine MediaPlayers currently are working in Igloolik, Pangnirtuq and Iqaluit, Nunavut's capital, gathering attention and increasing interest by local governments and citizen-users, in preparation for launching *Digital Indigenous Democracy*:

- 4 MPs wired into LAN computers in Igloolik, Pangnirtuq, Iqaluit and Apex high schools;
- 1 MP delivering IsumaTV 24/7 to Coop community cable Channel 51 in Igloolik;
- 1 MP delivering IsumaTV 24/7 to Coop community cable Channel 14 in Pangnirtuq;
- 1 MP connected to an Open Mesh network covering 40% of Iqaluit with wireless access to IsumaTV;
- 1 MP operating wired and wireless to computers in Iqaluit Public Library;
- 1 MP operating wireless from Igloolik Isuma Building antenna covering 80% of the east side of town.

The next step for IsumaTV is *Digital Indigenous Democracy*: first for Baffin Island Inuit, then expanding across Canada's north to more Inuit and First Nations communities and worldwide.

Chain of Title

April 1, 2011: Assignment of Copyrights between the CO-CREATORS, Zacharias Kunuk and Norman Cohn and the PRODUCER (Isuma Distribution International Ltd). The co-creators transfer all their rights of the original idea they developed, wrote and conceived, "Digital Indigenous Democracy", to the PRODUCER.

Digital Indigenous Democracy 2011-12

<i>Financing</i>	<i>Amount</i>	<i>%</i>	<i>Confirmed</i>	<i>Pending</i>
Canada Media Fund ES	1000000	75%		1000000
NITV	150000	11%	150000	
Mt. Allison U.	110000	8%	110000	
Carleton U.	13500	1%	13500	
Baffin Communities	40000	3%	40000	
Producer invest: IDI	21500	2%	21500	
TOTAL	\$1,335,000	100%	\$335,000	\$1,000,000

ACCOUNT	CATEGORY	COST ALLOCATION			COST ORIGIN		TOTAL
		Internal	Related	External	Canadian	Non-Canadian	
01	PRODUCER	89 258	0	0	89 258	0	89 258
02	RIGHTS ACQUISITION	0	0	0	0	0	0
03	PROJECT PROPOSAL PREPARATION	7 500	0	3 000	10 500	0	10 500
	TOTAL "A" - ABOVE THE LINE COSTS	96 758	0	3 000	99 758	0	\$99 758
04	SENIOR PRODUCTION PERSONNEL	67 200	0	148 000	215 200	0	215 200
05	DESIGN LABOUR	0	0	8 400	8 400	0	8 400
06	PROGRAMMING LABOUR	0	0	67 000	67 000	0	67 000
07	AUDIO/VIDEO LABOUR	0	0	139 200	139 200	0	139 200
08	TALENT	0	0	0	0	0	0
09	PRODUCTION ADMINISTRATION LABOUR	0	0	22 776	22 776	0	22 776
10	OTHER PRODUCTION LABOUR	0	0	121 000	121 000	0	121 000
	TOTAL "B" - PRODUCTION TEAM LABOUR EXPENSES	67 200	0	506 376	573 576	0	\$573 576
11	NEW MEDIA EQUIPMENT/MATERIALS	0	0	217 300	184 600	32 700	217 300
12	AUDIO/VIDEO EQUIPMENT/MATERIALS	0	0	101 700	101 700	0	101 700
	TOTAL "C" - EQUIPMENT AND MATERIALS	0	0	319 000	286 300	32 700	\$319 000
	SUB-TOTAL "B" + "C"	67 200	0	825 376	859 876	32 700	\$892 576
13	PREPARATION FOR DISTRIBUTION AND MARKETING	0	0	40 400	26 000	14 400	40 400
14	PRE-LAUNCH PROMOTION, PUBLICITY	0	0	25 500	25 500	0	25 500
	TOTAL "D" - PRE-DISTRIBUTION: MARKETING, PROMOTION, PUBLICITY	0	0	65 900	51 500	14 400	\$65 900
15	PRODUCTION ADMINISTRATION	0	0	98 250	98 250	0	98 250
	TOTAL "E" - PRODUCTION ADMINISTRATION	0	0	98 250	98 250	0	\$98 250
	ADDITIONAL BUDGET SECTIONS						
F	CORPORATE OVERHEAD	89 258	0	0	89 258	0	89 258
G	CONTINGENCY	0	0	89 258	89 258	0	89 258
	TOTAL PRODUCTION COSTS	\$253 216	\$0	\$1 081 784	\$1 287 900	\$47 100	\$1 335 000
H	DEVELOPMENT COSTS						0

BUDGET PREPARED BY:	Stéphane Rituit
BUDGET DATED:	April 11, 2011
TELEPHONE:	514 486 0707
SIGNATURE:	