

ARCTIC PERSPECTIVE

The Arctic Perspective Initiative (API) is a non-profit, international group of individuals and organizations whose goal is to direct attention to the global cultural and ecological significance of the polar regions. These are zones of contemporary geopolitical conflict and at the same time potential spaces for trans-national and intercultural cooperation and collaboration. The exhibition *Arctic Perspective* documents the development of a mobile work

and habitation system which can be used for nomadic dwelling, environmental monitoring and media based work “on the land”, away from the established Arctic settlements as well as its connection to traditional knowledge and culture. The exhibition focuses on the notions of architecture, geopolitics, autonomy, technology, and landscape, while featuring other positive, northern initiatives and projects that reflect these notions and values of API.

MARKO PELJHAN
PROLOGUE ANECHOIC ⁰¹
 INSTALLATION, 4 SUBMARINE MODELS BUILT BY BORIS VOLKOV, INUIT THROAT SINGING BY ALACIE TULLAUGAQ AND LUCY AMARUALIK, 2010

The Arctic – which is comprised of parts of Canada, Greenland (Denmark), Russia, the USA (Alaska), Iceland, Norway, Sweden and Finland and International waters – is by no account a neutral space, not a blank spot on the map, but a long-disputed geographical area. While the run to the North Pole in the 19th century was certainly spurred by the discoverers’ sense of sportsmanlike competition, it also invariably entailed national territorial claims. During the Cold War, American and Soviet nuclear propelled and ballistic missile carrying submarines (such as the Typhoon and the Ohio class SSBN and the hunter-killer subs of the Los Angeles and Akula class) started patrolling the Arctic waters in a constant state of readiness for a nuclear first or second strike and intelligence gathering missions. The Arctic is littered with military facilities from that era such as the Distant Early Warning Line in the North of Canada and Alaska. The forceful settlement and sedentarisation of Canada’s original inhabitants in the 1950s was itself instrumental to the reformulation of territorial claims in the Arctic. The recession of glaciers and the melting of permafrost in the wake of global climate change are now opening up new possibilities for the exploitation of natural resources in the Arctic, as well as the feasibility of sea routes through the Northwest and Northeast Passages. The submarine hunter killer game is continuing ... In the *Prologue* gallery, visitors can hear Inuit throat singing by Alacie Tullaugaq and Lucy Amarualik. Alacie and Lucy are Inuit women from Puvirnituk, Nunavik (Northern Quebec) They are considered to be the best throat singers of the region. They strongly believe in keeping the Inuit Tradition alive by chanting (throat singing), which

is why they do some teaching to young people to pass this on to the next generation. Alacie and Lucy learned how to chant at the ages of 9–10 from their mothers and grandmothers. They first became partners in the 1970s and since then have travelled around the world. Many of the songs are imitations of animals, and they are the same songs that were sung by their mothers and their mothers mothers before them. Back then they were mainly chanting when in a gathering, celebrating someone’s first kill (animal) when the men came back from hunting. The mothers would also chant to help put the children to sleep. Alacie Tullaugaq was born April 20, 1935 in a camp close to the present day village of Puvirnituk and has always lived there to this day. She has been married since 1955 and is mother to eight children plus two foster children. She teaches throat singing to children from 6 to 11 years of age. Lucy Amarualik was born October 16, 1934 in an camp close of the present day community of Kangirsujuak. Her family established themselves in Puvirnituk where she now lives. She has been married since 1955 and is the mother of eight children. Inuit throat singing is also sometimes practised as a game, where two women face each other to see which one can outlast the other.

PROJECT 941 CLASS TYPHOON NUCLEAR BALLISTIC MISSILE LAUNCHER SUBMARINE (USSR), 1:150, L = 1147 MM

- **SOVIET DESIGNATION:** 941 Akula
- **US-DESIGNATION:** Typhoon
- **DEVELOPMENT BEGAN:** December 1973
- **DESIGN BUREAU:** Central Design Bureau for Marine Engineering “Rubin”
- **CHIEF DESIGNER:** S. H. Kovalev
- **BUILDERS:** Nr. 402 Severodvinsk
- **CONSTRUCTION AND OUTFIT:** March 1977 – September 1989
- **SERVICE TIME:** December 1981 – current

- **NUMBER OF SHIPS:** 6
- **ARMAMENT:** D-19 launch system with 20 R-39 missiles, 2-650mm torpedo tubes, 4-533mm torpedo tubes
- **POWER PLANT:** 2 pressurized water reactors, 190 MW each, 2 steam turbines, 50.000 hp each
- **PROPELLERS:** 2×7 blade fixed-pitch shrouded
- **LENGTH:** 170 – 172 meters
- **BEAM:** 23 – 23.3 meters
- **DRAFT:** 11 – 11.5 meters
- **DISPLACEMENT:** 23,200 – 24,500 tons Surfaced, 33,800 – 48,000 tons Submerged
- **MAXIMUM DIVING DEPTH:** 500 meters
- **SPEED:** 12 – 16 knots Surface, 25 – 27 knots Submerged
- **CREW:** 150 men (50 officers)
- **ENDURANCE:** 90 – 120 days

SSBN-726 OHIO CLASS NUCLEAR BALLISTIC MISSILE LAUNCHER SUBMARINE (USA), 1:150, L = 1138 MM

- **BUILDERS:** General Dynamics Electric Boat Division
- **POWER PLANT:** One S8G nuclear reactor core reloaded every nine years, two geared steam turbines, one shaft, output of 60,000 hp
- **LENGTH:** 560 feet (170.69 meters)
- **BEAM:** 42 feet (10.06 meters)
- **DISPLACEMENT:** Surfaced: 16,764 tons, Submerged: 18,750 tons
- **SPEED:** Official: 20+ knots (23+ miles per hour, 36.8 +kph)
- **ACTUAL:** 25 knots submerged speed
- **OPERATING DEPTH:** Official: “greater than 800 feet”, Actual: greater than 1,000 feet
- **ARMAMENT:** 24 - tubes for Trident I and II, 4 - torpedo tubes with MK48 Torpedoes
- **SENSORS:** BQQ-6 Bow mounted sonar, BQR-19 Navigation, BQS-13 Active sonar, TB-16 towed array
- **CREW:** 15 Officers, 140 Enlisted

SSN-688 LOS ANGELES CLASS NUCLEAR ATTACK SUBMARINE (USA), 1:150, L = 731 MM

- **BUILDERS:** Newport News Shipbuilding Co. General Dynamics Electric Boat Division.
- **POWER PLANT:** One S6G reactor one shaft at 35,000 shp, Improved Performance Machinery Program Phase I [on 688 Improved]
- **LENGTH:** 360 feet (109.73 meters)
- **BEAM:** 33 feet (10 meters)
- **DISPLACEMENT:** 6,927 tons (6210 metric tons) submerged
- **SPEED:** Official: 20+ knots (23+ miles per hour, 36.8+ kph), Actual: 30 – 32 knots maximum submerged speed
- **OPERATING DEPTH:** official: “greater than 800 feet”, Actual: 950 feet [300 meters] test depth
- **ACTUAL:** 1475 feet [450 meters] collapse depth
- **HULL:** HY-80 Steel
- **CREW:** 13 Officers, 116 Enlisted
- **ARMAMENT:** Harpoon and Tomahawk ASM/LAM missiles from VLS tubes, MK-48 torpedoes from four 533-mm torpedo tubes (Seawolf has 8)
- **COMBAT SYSTEMS:** AN/BPS-5 surface search radar, AN/BPS-15 A/16 navigation and fire control radar, TB-16D passive towed sonar arrays, TB-23 passive “thin line” towed array, AN/BQG-5D wide aperture flank array, AN/BQQ-5D/E low frequency spherical sonar array, AN/BQS-15 close range active sonar (for ice detection); MIDAS Mine and Ice Detection Avoidance System, SADS-TG active detection sonar Type 2 attack periscope (port), Type 18 search periscope (starboard) AN/BSY-1 (primary computer); UYK-7; UYK-43; UYK-44 WLR-9 Acoustic Intercept Receiver ESM

PROJEKT 971 SHUKA B, AKULA CLASS NUCLEAR ATTACK SUBMARINE (USSR), 1:150, L = 735 MM

- **CLASSIFICATION:** Podvodnaya Lodka Atomnaya (PLA), Nuclear Powered Submarine
- **DESIGNER:** G. N. Chernyshev at Malakhit
- **BUILDERS:** Zavod imeni Leninskiy Komsomol, Komsolol’sk-na-Amur, Sevmashpredpriyatiye, Severodvinsk
- **DISPLACEMENT:** 5,700 – 7,500 tons Surfaced, 7,900 – 9,100 tons Submerged
- **SPEED:** 20 knots surfaced, 28 – 35 knots submerged
- **OPERATING DEPTH:** 1,475 feet Maximum Safe Depth, 1,804 feet Never-Exceed Depth, 1,970 – 2,160 feet Crush depth
- **DIMENSIONS:** 108.0 meters long, 111.7 meters long 13.5 meters beam, 9.6 meters draft
- **PROPULSION:** 1 190 MW OK-650B pressurized water nuclear reactor, 1 OK-7 steam turbine 43,000 shp, 2 OK-2 Turbogenerators rated at 2,000kw, 1 7 bladed propeller
- **ENDURANCE:** 4,500 full power hours, 80 days stores edurance
- **CREW:** 51–62 [25 officers / 26 enlisted]
- **ARMAMENT:** Missiles: 21 /81R (SS-N-15) or Vodopad (SS-N-16)

- **TORPEDOES:** total of 40 weapons 4 21-in (533-mm) torpedo tubes, 4 26-in (650-mm) torpedo tubes (bow), 6 external tubes [Improved Akula and Akula II]
- **SYSTEMS:** Chiblis Surface Search Radar, Medvyedista-945 Navigation system, Molniya-M Satellite communications, MGK-80 (?) Underwater communications, Tsunami, Kiparis, Anis, Sintez and Kora Communications antennas, Paravan Towed VLF Antenna, Vspletsk Combat direction system
- **SONARS:** MGK-503-M Skat active/passive suite, Akula flank arrays, Pelamida towed array, MG-70 mine detection sonar
- **COUNTERMEASURES:** Bukhta ESM/ECM, 2 MG-74 Korund noise simulation decoys (torpedo-sized), MT-70 Sonar intercept receiver, Nikhrom-M IFF

SUBMARINE MODELS produced by Boris Volkov, Severodvinsk, Russia



MAP (WORLD) ⁰²

WALL PAINTING, APPROX. 12 × 5,2 M, 2010

Recently, the popular understanding of the Arctic has been shifting from an imagined solitary, empty place to a more accurate global understanding of a landscape undergoing dramatic shifts not only ecologically, but culturally, politically, and economically. However, the circumpolar region has been a lens concentrating these global dynamics for decades. Looking at all of these overlapping interests together proves how active the Arctic actually is.

The map shows the most prominent oil and gas fields with their pipelines, shipping routes, and the disasters that inevitably follow the extraction of these resources. The Arctic is not only a place of economic movement, but ecologic movement as well; displayed are, amongst others, minimal sea ice extensions, the gradual shift of the magnetic North Pole and the 10 °C isotherm, providing insight of the Arctic as a place of change and adaptation, and more so today than ever before. Political dynamics are represented through the oceanic ridges, and border extensions, research stations, militarization, and the Northwest and Northeast Passages. The past misconception of the North as an empty place has materialized in the footprints of southern exploitation through nuclear waste dumps, former Soviet GuLAG camps, and early explorer’s routes claiming land for their respective countries while ignoring the indigenous population’s rights.

CONCEPT BY API
 PAINTED MAP DESIGN by labor b designbüro
 HAND-PAINTED BY Sabine Kehse, Silke Bachner, Renata Aarus

CIRCUMPOLAR FLAGS ⁰³

COLLECTION OF FLAGS FROM AUTONOMOUS AND SEMI-AUTONOMOUS REGIONS OF THE ARCTIC, 2010

Hanging from the ceiling of the PHOENIX Halle is a collection of flags from circumpolar autonomous and semi-autonomous regions in the Arctic. In light of the international land disputes often based on economic, natural resource and strategic perspectives, API recognizes its partners, the local inhabitants and their political and economic interests.

CONCEPT/RESEARCH: Matthew Biederman

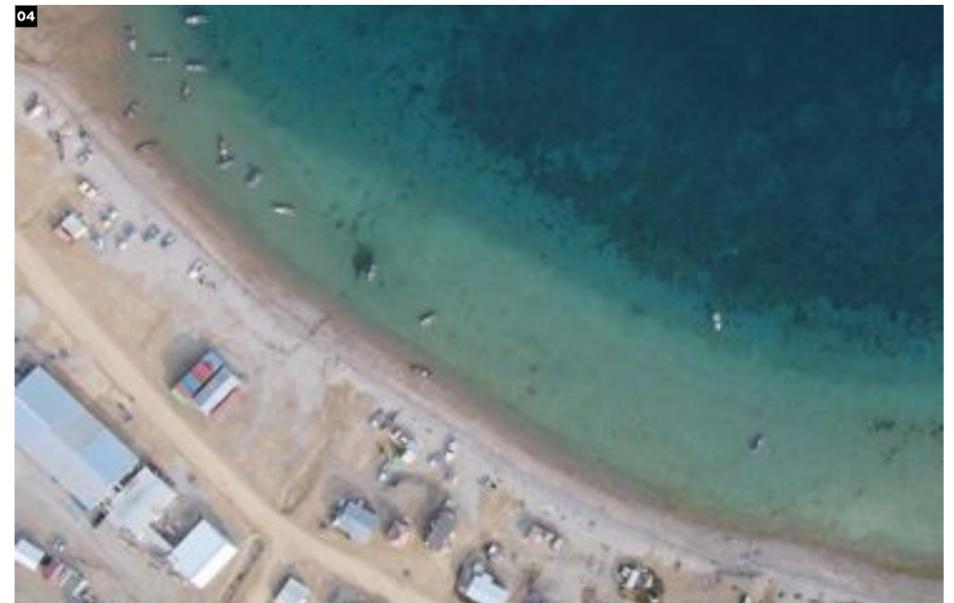
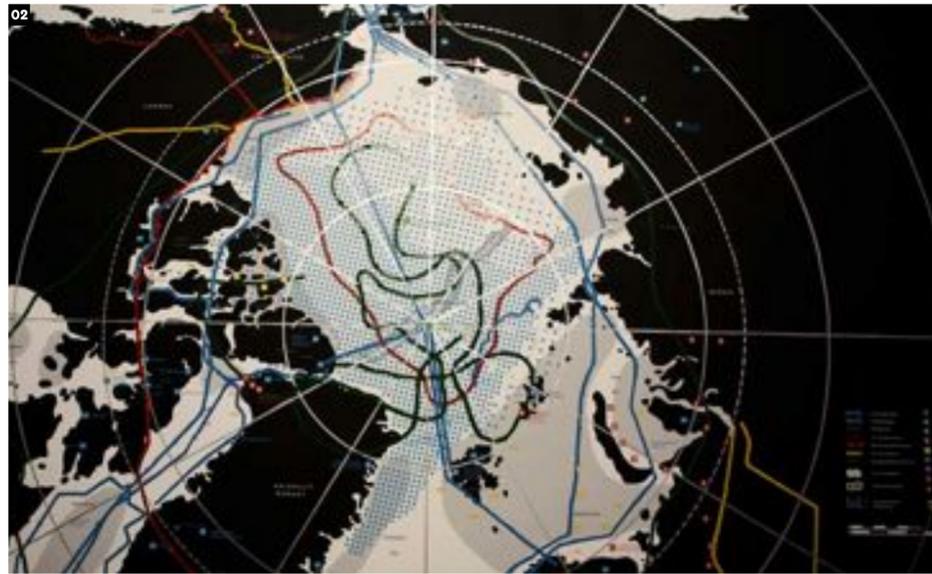


C-ASTRAL ARCTIC SENSING LANDSCAPE (AERIAL IGLOOLIK AND IKPIK) ⁰⁴

REMOTE SENSING OF ARCTIC LANDSCAPE (AERIAL PHOTOS OF IGLOOLIK AND IKPIK), 2009

C-ASTRAL Arctic Sensing Landscape consists of two aerial photographs of Igloolik and Ikpiik, taken in August 2009 with the help of the unmanned aerial vehicle (UAV) BRAMOR, developed by the C-ASTRAL team in Slovenia. C-ASTRAL is an offshoot of the Projekt Atol PACT SYSTEMS activities in the unmanned robotics field that have started in 1999. In 2004 these research and development efforts were joined by two young engineers, Samo Stopar and Nejc Trošt to form C-ASTRAL Ltd. in 2007. In August 2009, Matthew Biederman, Marko Peljhan and Nejc Trošt joined a 21-day trip of several Inuit families and elders from Nunavut organized by Igloolik Isuma Productions in order to visit places of their ancestors and traditional camp sites throughout Foxe Basin, including the Ikpiik bay area. API was invited to join the trip by Paul Quassa. Together with their guide Ikkiiraapik Harry Ituqsarjuat, they landed and worked on several islands and peninsulae in Foxe Basin and Baffin Island, stopping for longer periods on Qaggiagvik Island, Maniqtuuk Island, Ikpiik river mouth area and Ilutulaaq Kangiqllu. They spent long periods of time talking and learning from the elders about the life on the land in the past and potential futures on the land. Several systems were tested: environmental monitoring capabilities for “citizen” sensing solutions in Nunavut, long distance data and voice communication systems and conducted unmanned aerial surveying of the Ikpiik bay area and Igloolik, the result of which are the two composite instant orthophoto images.

For API this exercise allowed the opportunity to further develop the Kallitaaq (mobile unit) and its systems with direct input from community members as well as gaining a greater understanding of the social context in which it will be operating.



ᑕᑕᓯᑦ (TATSIPAA) ⁰⁵

ᑕᑕᓯᑦ (TATSIPAA) = FEEL BY TOUCH ENVIRONMENTAL ASSESSMENT MESH NETWORK, 2009 – PRESENT (ONGOING)

The stereotypical scientific paradigm in the circumpolar regions is that of the southern researcher heading north, collecting data and returning south, using the information for their own work. Instead, the Tatsipaa allows for the opportunity for communities to monitor their environment naturally through typical use, and living on the land. The sensornet is a small, affordable, customizable mesh based network of environmental assessment nodes. An example of its usage might be that a hunter would ‘check-out’ a node, and head out on the land to hunt. Along the way a set of environmental measurements would be logged automatically and stored according to their location. Upon returning, the node would automatically upload its data to a central server. The data would then slowly aggregate, building a database of land use and measurements of microclimates along the way. Under this paradigm of ‘citizen-sensing’ the community owns its own science and allows for healthy, sustainable monitoring of their local environment, rather than relying on southern researchers. The Tatsipaa extends the connection to the land through technology for the entire community.

The nodes can also be distributed on the land in fixed locations and can operate continuously, sending environmental data back to the community in real time as well as serving as repeater stations extending the reach of the network.

CONCEPT: Matthew Biederman, Marko Peljhan
Developed in conjunction with SenseStage/labXmodal (Montreal), and API
The plans of the Tatsipaa will be published in the Technology cahier under an open source license.

COMMON DATA PROCESSING AND DISPLAY UNIT (CDPDU) ⁰⁶

DATA DISPLAY AND PROCESSING ARCHITECTURE, DEVELOPED SINCE 2008

The Common Data Processing and Display Unit (CDPDU) is a data display and processing architecture built to open hardware and software standards. The CDPDU serves as one of the public faces of the Arctic Perspective Initiative project throughout its duration. The first prototypes of the data collection units were installed in Montreal, Quebec, Santa Barbara, California, Ljubljana, Slovenia and Igloolik, Nunavut. These collection units are all sending their data in real-time to the CDPDU in order to be processed and displayed for the public.

In its next phase, multiple CDPDUS will function as a networked computational cluster for the aggregation, processing and display the data and content produced within the API framework. The

network of the collection units and the CDPDUS will serve as an interface to the public in addition to disseminating the data to be further studied by scientists, used by artists, or aggregated into larger research clusters. The hardware and software architectures of the CDPDU are open source.

The datasets displayed on the CDPDU are acquired, processed and displayed from the following sources:

- Terra, Aqua and SeaStar, (MODIS instrument, SeaWiFS instrument)
- the ARCTIC PERSPECTIVE INITIATIVE Hydroponic Test Units (API HTU)
- the University of California Santa Barbara STEM initiative Experimental Sensor System (UCSB STEM ESS)
- BLACKCLOUD.ORG project, headed by Greg Niemeyer, University of California Berkeley (www.blackcloud.org)
- NOETIX Polarview Ice Edge Monitoring

Sensors and displays list:

1. AQUA SATELLITE MODIS INSTRUMENT CLOROPHYL CONCENTRATION
2. TERRA SATELLITE MODIS INSTRUMENT CLOROPHYL CONCENTRATION
3. AQUA SATELLITE MODIS INSTRUMENT PARTICULATE ORGANIC CARBON
4. AQUA SATELLITE MODIS INSTRUMENT SEA SURFACE TEMPERATURE DAYTIME
5. AQUA SATELLITE MODIS INSTRUMENT SEA SURFACE TEMPERATURE NIGHTTIME
6. AQUA SATELLITE MODIS AEROSOL OPTICAL THICKNESS
7. SEASTAR SATELLITE SEAWIFS INSTRUMENT BIOSPHERE NORMALIZED DIFFERENCE VEGETATION INDEX
8. SEASTAR SATELLITE SEAWIFS INSTRUMENT LAND REFLECTANCE
9. SEASTAR SATELLITE SEAWIFS INSTRUMENT PHOTOSYNTHETICALLY AVAILABLE RADIATION
10. API HTU Montreal, Santa Barbara environmental sensors and images
11. UCSB STEM ESS environmental sensors and image processing
12. BLACKCLOUD sensor systems
13. RADARSAT and ENVISAT ASAR synthetic aperture radar (SAR)

The SeaStar spacecraft, developed by Orbital Sciences Corporation, carries the SEAWIFS instrument and was launched to low Earth orbit on board an extended Pegasus launch vehicle on August 1, 1997. The Moderate Resolution Imaging Spectroradiometer MODIS instrument is operating on both the Terra and Aqua spacecraft. It has a viewing swath width of 2,330 km and views the entire surface of the Earth every one to two days. Its detectors measure 36 spectral bands between 0.405 and 14.385 µm, and it acquires data at three spatial resolutions – 250m, 500m, and 1,000m. The first MODIS instrument was launched on board

the Terra satellite on 18 December 1999, and the second was launched on board the Aqua satellite on 4 May 2002. The MODIS instruments provide calibrated, geolocated radiance data from individual bands, and a series of geophysical products from land, ocean, and atmosphere disciplines that can be used for studies of processes and trends on local to global scales. This data helps scientists understand the Earth as a system, facilitating their ability to predict global climate changes and to differentiate between the impact of human activities and natural activities on the environment.

The satellite data displayed in this first phase is processed by the NASA/Goddard OceanColor Group at the Goddard Space Flight Center Distributed Active Data Center and can be used for research and educational purposes only and are part of research into satellite data display that is being conducted at the University of California Santa Barbara Media Arts and Technology Program under the direction of Prof. Marko Peljhan.

The API HTU systems was designed and developed by the Matthew Biederman and Marko Peljhan for the purposes of the API funded development for polar art/science research, the UCSB STEM ESS is designed and developed by the students of UCSB MAT under the direction of Prof. Marko Peljhan.

The BLACKCLOUD project was designed and developed by the BLACKCLOUD team, headed by Greg Niemeyer at UCB.

CDPDU PROJECT TEAM

CONCEPT: Marko Peljhan

CENTRAL SOFTWARE FRAMEWORK: Wesley Smith
SOFTWARE AND HARDWARE FRAMEWORKS: Matthew Biederman, UCSB MATP (Amichi Amar, Wesley Smith, Pablo Colapinto, Anil Camci, Andres Burbano), SEADAS, NASA/Goddard Ocean Color Group, Marko Peljhan

ENCLOSURE ENGINEERING: Nejc Trošt, Samo Stopar, Andrej Bizjak

RENDERS: Nejc Trošt

WORKSHOP: C-ASTRAL Ltd., Slovenia
SUPPORTED BY: University of California Santa Barbara, Media Arts and Technology Program

Blackcloud was funded by the Digital Media Learning Grant from the MacArthur Foundation, as well as Swissnex, Pro Helvetia and the Mellon Foundation. Team Rhea Cortado (Costume Designer), Aida Eltorie (Arts Manager), Andy Garcia (Teacher, Manual Arts High School), Laura Greig (Artist/web designer), Farley Gwazda (Artist), Nik Hanselmann (Programmer/Artist), Eric Kaltman (Programmer), Geoff Koops (Artist), Reza Naima (Hardware Engineer), Greg Niemeyer (Principal Investigator) and Daye Rogers (Video Documentary).

THANKS TO: UCSB MATP, George Legrady, C-ASTRAL Ltd., Slovenia
With the support of the Ministry of Culture, Republic of Slovenia, City of Ljubljana Cultural Department

PLACENAMES (NUNAVUT) ⁰⁷

WALL PAINTING, PRINTED MAPS, 2010

This map shows the return to the indigenous placenames of Nunavut from imposed colonial names, as well as traditional names that have been in use for generations. In 1999, Nunavut (ᐃᓄᓂᑦ, “Our Land”) became a federal territory in Canada through the Nunavut Act and the Nunavut Land Claims Agreement (see the full agreement in the API Library). Slowly, traditional placenames are officially replacing their colonial counterparts. For example, since 1987, the capital is known as Iqaluit (ᐃᑦᑲᓪᐃᑦ, “place of fish”). It was formerly Frobisher Bay, named after the bay the city sits on. The bay itself was named after Sir Martin Frobisher, who ‘discovered’ the bay in 1576 and returned many times, believing the land there contained gold, but his mining efforts proved futile. In 1942, the US military built an American airbase at the head of the bay during WWII, and the location began to be permanently settled. Since 2006, the Inuit Heritage Trust has officially added over 400 new and changed names officially to Canada’s register, with over 1000 more waiting to be approved.

CONCEPT BY: API
PLACENAME MAPS courtesy of Inuit Heritage Trust (www.ihiti.ca), produced in collaboration with community members
PAINTED MAP DESIGN: labor b designbüro
HAND-PAINTED BY: Sabine Kehse, Silke Bachner, Renata Aaraus

SHARI GEARHEARD

THE IGLINIIT PROJECT ⁰⁸

The Igliniit Project is an International Polar Year (IPY) project that took place in Clyde River, Nunavut from 2006 to 2010. As part of the larger IPY projects, SIKU and ISUOP, the Igliniit Project brought Inuit hunters and geomatics engineering students together to design, build, and test a tool to assist hunters in documenting their observations of the environment. By combining a Global Positioning System (GPS) receiver, a mobile weather station, a Personal Digital Assistant (PDA), and a digital camera, the hunters and engineering students in Igliniit co-developed and piloted a system that allows hunters to contribute to environmental research in an active way, through the regular use of their environment, documenting observations and experiences in context, as they happen.

Despite hardware problems and the challenges of using such technology in Arctic winter, the data collected by hunters provides detailed, dynamic, geo-referenced information about the environment that could otherwise not be collected. With continued development, this technology could be useful in many different regions and applications

for understanding the environment and human-environment relationships over time and space. The approach, of supporting local people in their own activities year-round and outfitting them with a simple but powerful tool to document their environmental observations, proves a promising method in future community-based environmental research and monitoring, with applications as well in land-use planning, resource management, hazards mapping, wildlife and harvest studies, and search and rescue operations.

In Inuktitut, *igliniit* refers to trails routinely travelled. Countless trails are known and used by Inuit; these trails join to create a vast network across the Canadian North and the Arctic. The location, use, condition, and changes in *igliniit* over space and time can help understand a great deal about the environment and human-environment relationships. In our project, the use of *igliniit* provided inspiration for the creation of a tool to help Inuit hunters document observations of their environment as they travel. This tool, in turn, provides a potential means for Inuit to stay active on the land, get younger Inuit involved in land activities, and both contribute to and lead environmental research and monitoring efforts. The development of the Igliniit Project (or simply “Igliniit”, as its team members refer to it) happened in Clyde River (Kangiqtuqaapik), Nunavut in 2005. At that time Gearheard, a Clyde River resident, had been working with the community for five years documenting Inuit knowledge of climate and environmental change.

SOURCE: Shari Gearheard, Gary Aipellee, and Kyle O’Keefe: The Igliniit Project: Combining Inuit Knowledge and Geomatics Engineering to Develop a New Observation Tool for Hunters (Abstract and Introduction). In: I. Krupnik et al. (eds.), SIKU: *Knowing Our Ice*, DOI 10.1007/978-90-481-8587-0_8 (Chapter 8), Springer Science+Business Media B.V. 2010, pp. 181ff.

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SUPPORTED BY: Ittaq Heritage and Research Centre; Nammataq Hunters and Trappers Association; International Polar Year Federal Program Canada; Geomatics Department, Schulich School of Engineering, University of Calgary; Geomatics and Cartographic Research Centre, Carleton University; Inuit Sea Ice Use and Occupancy Project

QILLALLUGAQ QAKKUTAQ QILLALLUGAQ TUGALLIK ⁰⁹

TWO WHALE MODELS, 2010

Delphinapterus Leucas (Beluga) and Monodon Monoceros (Narwhal) whales models.

CONCEPT: Marko Peljhan
MODELLING AND DESIGN: Miha Bratina, Nejc Trošt

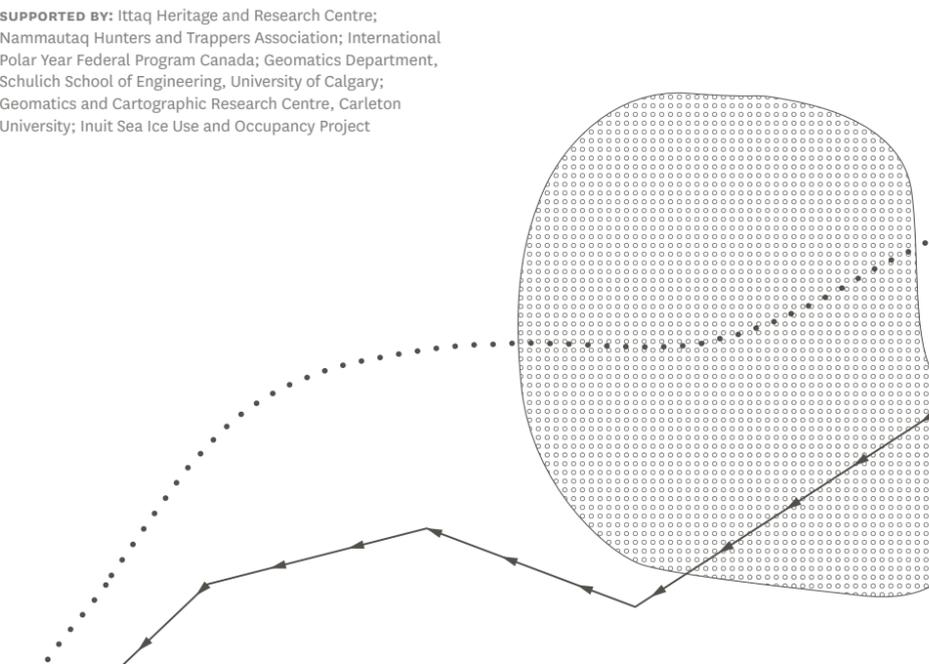
API-HYDRO-1-GARDEN ¹⁰

HYDROPONIC GARDEN SYSTEM, LED LIGHTING SYSTEM, VARIOUS VEGETABLES, 2010

Nearly all fresh vegetables and fruits available in Nunavut are shipped thousands of kilometers. Only the hardiest and most bio-engineered arrive there, and are available only at a great expense. Dehydrated foods, prepared foods and soda are generally cheaper than items that are healthy, fresh and have a higher nutritional value. The Hydro-1 Garden is a hydroponic garden developed for use in Nunavut as a community garden in Igloolik. After the exhibition the system will be custom fit into a container, and shipped to Nunavut in order to become a community garden, providing free vegetables for the community.

The hydroponic garden uses no soil, instead feeding the plants by a nutrient infused water. Light emitting diodes custom tuned for the light spectrum that is best for growth (hence the pink light) uses an extremely low amount of electricity. In the North, the entire system will be powered by renewable resources, and will produce fresh vegetables, fruits and herbs year round.

CONCEPT AND DESIGN: Matthew Biederman / Marko Peljhan
Developed in conjunction with Grow NRW
The plans of the Hydro-1 Garden will be published in the Technology cahier under an open source license.





DORTMUND
51°29'18" N / 7°29'20" E
HMKV IN DER
PHOENIX HALLE

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Incorporated in 1959, the West Baffin Eskimo Co-operative (WBEC) was the first Inuit-owned Co-operative to be formed with start-up assistance from the Canadian federal government. Over the next five years, 20 Co-ops were established across the Northwest Territories (which at that time included the future territory of Nunavut), from Cape Dorset in the east to Holman Island in the west. Today, there are 35. These community Co-ops were established to provide income, employment and services to their growing communities.

The Co-operative is known locally as Kinngait Co-operative. The word kinngait (pronounced “king – ite”) describes the high, undulating hills surrounding the community of Cape Dorset. Collectively, the Co-op’s world-renowned graphic arts studios are recognized as the Kinngait Studios.

The West Baffin Eskimo Co-operative is wholly owned by its membership, representing the majority of the adult population of the community. All members are residents of Cape Dorset and almost all are of Inuit descent.

WBEC is unique among Co-operatives in the Arctic for its sustained focus on the arts and artists of the community. Arts activities fall under the umbrella of the Producer Division of the Co-op, which includes two fine art printmaking studios in Cape Dorset for stonecut and lithography, and the carving buying operation. The Co-op also operates a retail grocery and supply store. Established in 1960, the store has expanded to keep pace with the growing community and now serves as its Home Hardware and Yamaha snowmobile dealership. The Consumer Division also administers several community service contracts, providing essential services such as the local delivery of heating fuel and gasoline. The Co-op’s most enduring contribution however, to both the community of Cape Dorset and the world beyond has been the prints and carvings produced by its extraordinary stable of artist members.

In the exhibition prints from the following artists (from the Kinngait Studios) are included: Mayoreak Ashoona, Soroseelutu Ashoona, Iyola Kingwatsiak, Simeonie Kopapik, Ulayu Pingwartok, Annie Pootoogook, Kananginak Pootoogook, Napachie Pootoogook, Mary Pudlat, Oshoochiak Pudlat, Pudlo Pudlat, Tikitu Qinnuayuk, Eegyvudluk Ragee, Kakulu Saggiaktok, Jamasie Teevee

On loan from Dorset Fine Arts

IGLOOLIK ISUMA PRODUCTIONS 12

Isuma (Inuktitut syllabics, ᐃᓄᐤ; Inuktitut for “to think”) is Canada’s first Inuit production company co-founded by Zacharias Kunuk, Norman Cohn, Paul Apak, and Pauloosie Qulitalik. The company focuses on bringing people of multiple age ranges, cultural backgrounds, and belief systems together to support and promote Canada’s indigenous community through television, the Internet and films. Isuma’s mission is to produce independent community-based media aimed to preserve and enhance Inuit culture and language; to create jobs and economic development in Igloolik and Nunavut; and to tell authentic Inuit stories to Inuit and non-Inuit audiences worldwide.

In 2006, the I-TASC/Polar Tangent crew (Marko Peljhan, Stephen Kovats, Sašo Podgoršek) first visited Igloolik and worked for two weeks with community members and took part in a field visit to Suiraarjuk, facilitated by the Igloolik Isuma crew. The fundamentals of what is today the focus of API was born on that trip in discussion with Zacharias Kunuk, Paul Quassa, Paul Irngaut and the late Pauloosie Qulitalik. Since 2006, API and Isuma have been collaborating on a set of Nunavut based activities.

Beginning in 1988, Isuma’s unique style of ‘re-lived’ drama – *Qaggiq* (Gathering Place, 1988), *Nunaqpa* (Going Inland, 1990), *Saputi* (Fish Traps, 1993), and the 13 part dramatic TV series, *Nunavut* (Our Land, 1994–95) – achieved worldwide recognition and acclaim, winning awards in Canada, France, Peru, USA, Spain, Taiwan and Japan. In 1999, Isuma filmed the first Aboriginal-language Canadian feature movie, *Atanarjuat The Fast Runner*, which won the Caméra d’Or for Best First Feature Film at the 2001 Cannes International Film Festival, six Canadian Genies including Best Picture and 19 international festival awards overall. More than sixty international film critics named it one of the Ten Best Films of 2002.

In 2005, *The Journals of Knud Rasmussen*, a Canada-Denmark co-production set in 1922 Igloolik was released and selected to open the 2006 Toronto International Film Festival. Isuma’s next feature was *Before Tomorrow* (2008), based on a novel by Danish writer Jorn Riel. *Before Tomorrow* was written and directed by Arnait Video Productions (Women’s Video Workshop of Igloolik). Isuma also produces and distributes documentaries for television including *Artcirq* (2001), *Kunuk Family Reunion* (2003), *Urban Inuk* (2005) and *Kiviaq vs. Canada* (2006). Since Isuma means “to have a thought”, the collaborators of Igloolik Isuma Productions encourage alternative and multimedia processes designed to make the world at large think not only about the Inuit and their current plight, but about indigenous peoples in general, and the future of the role of community in society.

In 2007 they launched ISUMATV, a free video Internet portal dedicated to hosting and streaming

indigenous filmmaker’s work, audio and blogs. The site hosts films that put forth an aboriginal view and is intended to help Native communities around the world become connected.

SELECTION

ROOM 1

In the cinema space, three feature films produced by Isuma will be screened at fixed times.

- Atanarjuat The Fast Runner* (172 min., dir. Zacharias Kunuk, 2001) Sat–Sun 11.15
- The Journals of Knud Rasmussen* (112 min, dir. Zacharias Kunuk, Norman Cohn, 2006) Wed–Fri 15.15, Sat–Sun 14.30
- Before Tomorrow* (93 min., dir. Marie-Hélène Cousineau, Madeline Ivalu, 2008) Wed–Fri 17.30, Sat–Sun 16.45

ROOM 2

In this room, the 1994-95 classic 13-episode TV series *Nunavut* (Our Land) is shown along with a selection of documentaries produced by the National Film Board of Canada.

MONITOR 1

- Nunavut* (Our Land) produced by Igloolik Isuma Productions
 - Episode 1: *Qimuksik* (Dog Team), 1994, 28:50 Min.
 - Episode 2: *Avaja* (Avaja), 1994, 28:50 Min.
 - Episode 3: *Qarmaq* (Stone House), 1995, 28:50 Min.
 - Episode 4: *Tugaliaq* (Ice Blocks), 1995, 28:50 Min.
 - Episode 5: *Angiraq* (Home), 1995, 28:50 Min.
 - Episode 6: *Auriaq* (Stalking), 1995, 28:50 Min.
 - Episode 7: *Qulangisi* (Seal Pups), 1995, 28:50 Min.

MONITOR 2

- Nunavut* (Our Land) produced by Igloolik Isuma Productions
 - Episode 8: *Avamuktulik* (Fish swimming), 1995, 28:50 Min.
 - Episode 9: *Aiviaq* (Walrus Hunt), 1995, 28:50 Min.
 - Episode 10: *Qaisut* (Polar Bear Island), 1995, 28:50 Min.
 - Episode 11: *Tuktuliaq* (Caribou Hunt), 1995, 28:50 Min.
 - Episode 12: *Unaaq* (Harpoon), 1995, 28:50 Min.
 - Episode 13: *Quviasukvik* (Happy Day), 1995, 28:50 Min.

Documentary films produced by the National Film Board of Canada

MONITOR 3

- Qimmiq*, 1981, 24 min 15 s, Production Agency: Inuk Films Ltd. http://www.onf-nfb.gc.ca/eng/collection/film/?id=13715
- Qallunaat! Why White People Are Funny*, 2006, 52 min 05 s, Production Agency: Beachwalker Films Inc., National Film Board of Canada http://www.onf-nfb.gc.ca/eng/collection/film/?id=52432
- In Celebration of Nunavut – Exploiting the North*, Vols. 1–6, 1999, 257 min 32 s, Production Agency: National Film Board of Canada http://www.onf-nfb.gc.ca/eng/collection/film/?id=50138

MONITOR 4

- In celebration of Nunavut – Netsilik*, Vols. 1–11, 1999, 653 min 31 s, Production Agency: National Film Board of Canada http://www.onf-nfb.gc.ca/eng/collection/film/?id=50135

ROOM 3

In another room, early fiction, documentary films, and youth drama produced by Igloolik Isuma Productions are shown on monitors.

EARLY FICTION:

- Qaggiq* (Gathering Place), 1989, 58:00 Min.
- Nunaqpa* (Going Inland), 1991, 58:15 Min.
- Saputi* (Fish Traps), 1993, 30:30 Min.

DOCUMENTARIES & YOUTH DRAMA:

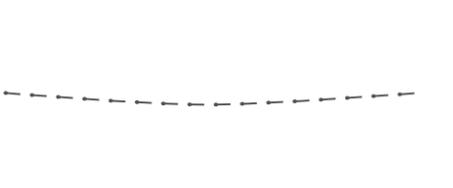
- Nipi* (Voice), 1999, 51:00 Min.
- Nanugiurutiga* (My First Polar Bear), 2000, 48:00 Min.
- Ajainaa!* (Almost!), 2001, 52:00 Min.
- Artcirq*, 2001, 52:00 Min.
- Arviq!* (Bowhead!), 2002, 52:00 Min.
- Angakkuiit* (Shaman Stories), 2003, 52:00 Min.
- Kunuk Family Reunion*, 2004, 48:00 Min.
- Qallunajatut* (Urban Inuk), 2005, 48:00 Min.
- Unakuluk* (Dear Little One), 2005, 46:00 Min.
- Kiviaq vs. Canada*, 2006, 46:49 Min.
- Issaitttuq* (Waterproof), 2007, 45:00 Min.
- 407*, 2006, 09:00 Min.

ᐃᓄᐤᐤ (ISAGUTAQ) MOBILE POWER SYSTEM (MPS) 13

ᐃᓄᐤᐤ (ISAGUTAQ) = RAY OF LIGHT MOBILE POWER SYSTEM, 2010

API’s Mobile Power System (MPS) is specifically designed to be a highly portable, quickly deployable renewable power generation plant and is a result of fieldwork requirements that emerged during the I-TASC and MAKROLAB projects. The MPS is capable of 2kw generation, supporting 2 solar plants, and 2 wind turbines in total. Field-tested on Siuraarjuk Peninsula, NU May 2010 it supplied ample power to light the cabin, power a laptop and satellite internet connection, which in turn allowed for a live video exchange between Suiraarjuk, NU and London, UK.

CONCEPT: Matthew Biederman, Marko Peljhan, Nejc Trošt A design and industrial collaboration between API, PROJEKT ATOL and C-ASTRAL Ltd. (Samo Stopar, Andrej Bizjak, Primož Lemut) The plans of the Isagutaq will be published in the Technology cahier under an open source license.



ᐃᓄᐤᐤᐤ KALLITAQ – API MMCU PA001 14

ᐃᓄᐤᐤᐤ (KALLITAQ) = THUNDER/LIGHTNING MODULAR HABITATION UNIT, ONGOING

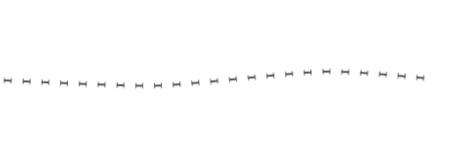
The Kallitaq unit is a modular habitation unit designed for mobility and nomadic life on the land for extended periods of time, while being able to be connected back to the community (and the world) through communications technologies and having access to power generation and technological systems from sensors to water production, amongst others. For example, the multi-function unit will be used for: media authoring and streaming, scientific research, hunting, and environmental monitoring and assessment, which could happen simultaneously. The plans for the Kallitaq, which is essentially a modern, modular version of a traditional qamutik and iglutaq designs, will be published as open source documents, allowing for the rapid reproduction, and adaptation of the unit by communities as they see fit.

The unit will be able to be changed and adapted for local use and conditions, from the use of sealskins for the covering to the use of caribou or polar bear skin interiors for extreme winter conditions or geographical locations with specific materials available. The units produced by API will use advanced, lighter materials, due to the construction in the south. However, the design is meant to be completely adaptable to different materials, and uses.

The unit will be powered by an onboard Isagutaq system, and will support a full suite of Tatsipaa sensors, HF, UHF and VHF rx/tx, and

L-Band data rx/tx systems. A snow and ice melter will also be a design option on future systems as well as an ultra-lightweight design for dog team travel.

Developed in conjunction with Nunavut community members, API architectural submissions, C-ASTRAL Inc., Paleta d.o.o. CONCEPT: Matthew Biederman, Marko Peljhan, Nejc Trošt DESIGN AND ARCHITECTURE: Nejc Trošt MANUFACTURING TEAM: Samo Stopar, Andrej Bizjak, Aljosa Lozej, Miha Bratina



API ARCHITECTURAL DESIGN COMPETITION 15

PRESENTATION OF THE RESULTS OF THE INTERNATIONAL ARCHITECTURE COMPETITION, 2009

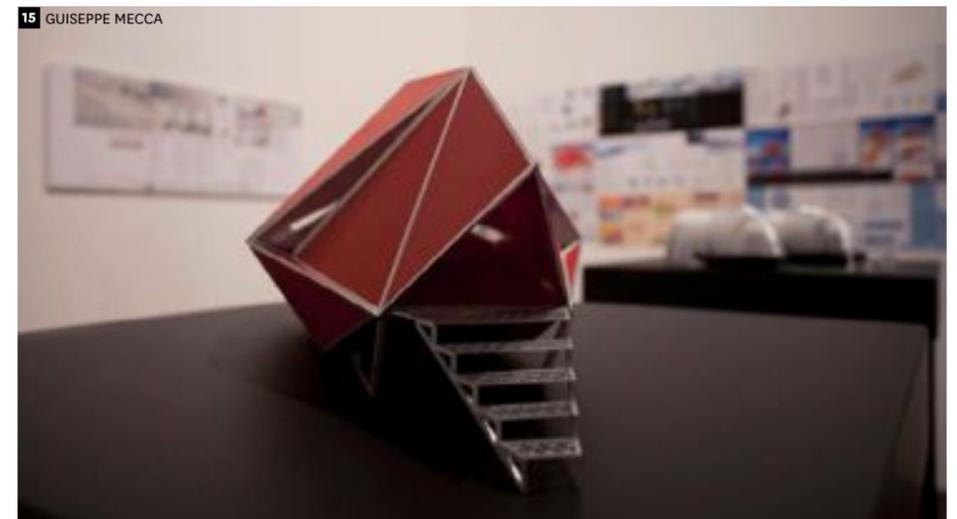
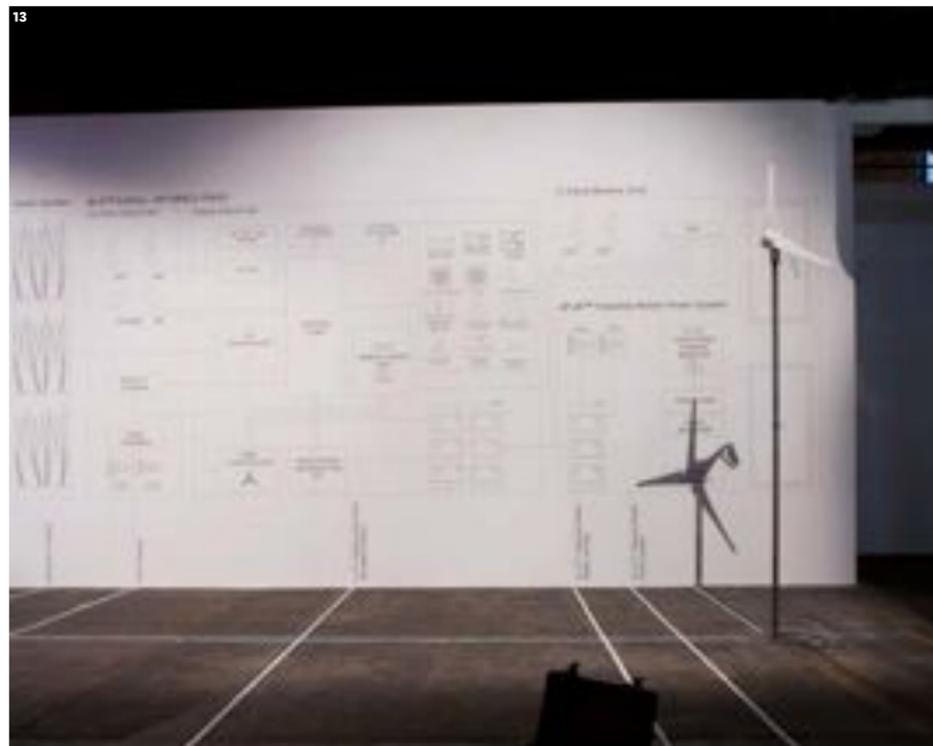
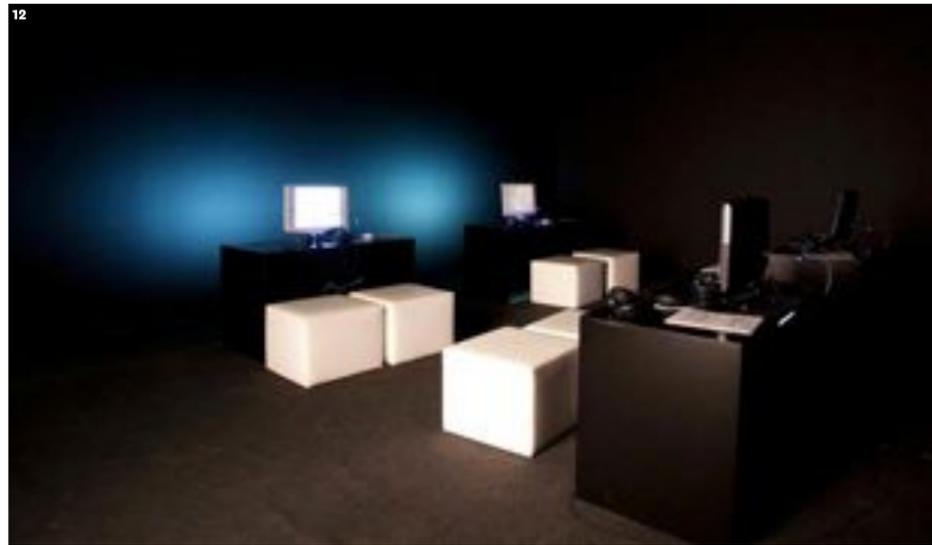
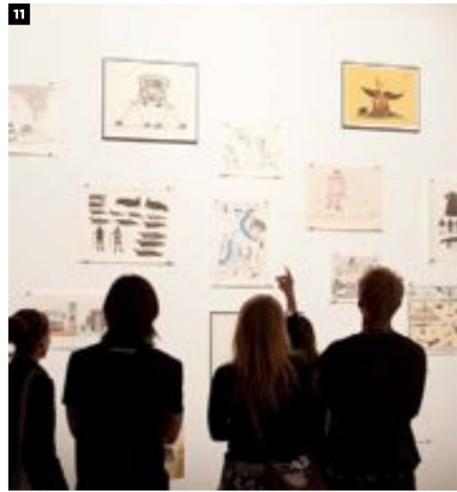
Three architects – Richard Carbonnier (Nunavut, Canada), Giuseppe Mecca (Italy), and Catherine Rannou (France) – have been selected as joint third place winners of the Arctic Perspective Initiative (API) open architecture competition. The challenge of this international competition, announced in early 2009, was to design a mobile media-based work and habitation unit, capable of functioning in extreme cold as well as in temperate climates, and incorporating the use of renewable energy, water and waste recycling systems.

From geopolitics to climate change, the global community is increasingly focused on the circumpolar regions. This was evident in that API received a staggering 103 architectural and engineering submissions from 30 different countries and territories, proving that the earth’s polar regions and communities are seen as at the heart of a critical global junction. With progressively more access to these regions – and consequently more interest by domestic and foreign governments and corporations in the North’s natural and economic resources – API is committed to the empowerment and sustainable development of Northern communities through the collaboration and combination of science, arts, engineering and culture.

For the international call for proposals for the MOBILE MEDIA-CENTRIC HABITATION AND WORK UNIT 33 applied as teams and 70 of them as single applicants. The greater number was male (75), but also some female teams, single female applicants (13) or mixed teams (12) contributed their ideas.

In detail, these are (name country and number of submissions): Belarus 1, Canada 6, Chile 2, China 1, Denmark 1, France 5, Georgia 1, Germany 18, Great Britain 7, Greece 1, Hong Kong 3, Hungary 1, India 6, Indonesia 1, Italy 4, Japan 2, Kuwait 1, Mexico 1, Netherlands 2, Nunavut, Canada 1, Pakistan 1, Poland 1, Romania 1, Russia 5, Slovenia 3, Spain 4, Turkey 1, Ukraine 1, USA 19, Venezuela 1, Yakutia, Russia 1

The jury convened in Reykjavik, Iceland, from September 15–18, 2009.



Jury members: Inke Arns (Artistic Director: hmkv, Dortmund), Johan Berte (Princess Elisabeth Antarctic Station Project Manager: International Polar Foundation, Brussels), Matthew Biederman (Artist, Director: c-TASC, Montréal), Michael Bravo (Head of History and Public Policy Research Group: Scott Polar Research Institute, University of Cambridge), Francesca Ferguson (Independent Architecture Curator, Basel), Andreas Müller (AnArchitektur, Berlin), Marko Peljhan (Artist, Director: Projekt Atol, Co-Director: UC Institute for Research in the Arts, Ljubljana / Santa Barbara), Nicola Triscott (Director: The Arts Catalyst, London)

Out of the 103 submissions, the jury awarded three third prizes each worth 1.500 € to:

- Richard Carbonnier, Mittimatalik (Pond Inlet – Nunavut, Canada)
- Giuseppe Mecca, Florence (Italy), and
- Catherine Rannou, Plouezoc’h (France)

A selection of 30 shortlisted submissions are displayed along with three 1:15 models of the winning proposals.

SHORTLIST ARCHITECTURAL COMPETITION

- Ben Addy, moxon architects (UK)
- Jo Blackburne (UK)
- Marijn Bokhorst (NL)
- Natasha Borisova (RU)
- Tim Boyd, michaelis boyd associates (UK)
- Carl Burdick, Laura Karnath (US)
- Severn Clay-Youman, studio les betes (US)
- David Cole (UK)
- Matevez Francic, Iztok Prosen, Jernej Jalovec (SI)
- Gabriel Andrei, Alexandru Ifrim, Mugur Panaite, team UAIM (RO)
- David Garcia, Alanna Baudinet (DK)
- Natasha Harper (US)
- Etienne Jaunet (FR)
- Alexey Karachinsky (RU)
- William Kemper (US)
- Simon Kettel (DE)
- Robert Klein, Loftwerk (DE)
- Michael Kleshchyov (RU)
- Janina Kreis, Selina Jansen (DE)
- Benny Chiu Ming Lee, Oi Kee Agnes Hung, Paul Kui Chuen Mui, Bread Studio (HK)
- Benjamin Leucht (DE)
- Umair Zia Malik (PK)
- Carlos Patricio Torres Olguin, Javiera Campano Cabrera, Enrique Barria Noziglia, Marylinne Valdivia, TOHAAS Arquitectos (CL)
- Takuya Onishi (JP)
- Lance Rake, Monica Carric, Gavin Baxter, Bert de Muynck (US)
- Joaquin Rodríguez, Aaron Onchi, Javier Garay (MX)
- Saiful Islam (IN)
- Dustin Stephens, Alan Ho (US)
- Sabrina Wolf, Eugen Becker, bumble bee & tank (DE)

LIZE MOGEL

AREA OF DETAIL 16

INSTALLATION, 2008, UPDATED 2010

The translation of the spherical world onto the flat plane of a map is a mathematical problem; the translation of the political world into a map is an ideological problem. How does one represent the world in a way that does not show dominance? Something or someone is always on the top or at the center.

The United Nations emblem is a world map centered on the North Pole. The continents are not divided by national boundaries, thus geopolitical relationships are not pictured. This map is purely symbolic, representing nations united under common interests, all parts considered equal.

What is at the center of the UN emblem? A blank spot that belies the geopolitical realities of the area. This area of detail, the ice-bound ocean of the Arctic Circle, is regulated by the UN through the Law of the Sea which sets how nations define and exploit their territorial boundaries. As the climate warms and ice recedes, new possibilities for commerce and capital become possible. This center of the World is becoming a focal point in other ways, as surrounding nations look to claim territory in order to develop new energy resources and commercial routes. LM



API SONIC LANDSCAPE 17

TENT, DIGITAL AUDIO FILES, 2010

The sonic landscape of Nunavut is at times strikingly different than in the south and at other times exceedingly similar. Sounds of traffic, birds, snow underfoot, construction, and music dominate the soundscape. Inside the tent is a selection of audio materials ranging from field recordings, produced contemporary music of Nunavut, ethnographic recordings of early Inuit Songs, Ayaya songs, community radio, HF radio Net, and throat singing.

FIELD RECORDINGS BY: Matthew Biederman, Inukjuak Soundmap Project (Nimilan Yoganathan / Max Stein with recordings by: Mattusie Pov, Tommy Weetaluktuk, Tukai Rousseau) COMPILATION EDITED BY: Matthew Biederman RECORDINGS FROM: Inuit Songs from Eskimo Point, Ramon Pelinski, Luke Suluk, and Lucy Amarok The Copper Eskimo Tradition: Jeam Oqhena, Frank Kuptana, Jimmy Memorana, William Qagyun WITH ADDITIONAL SONGS FROM: Leena Evic, Alacie Tullaugaq & Lucy Amarualik, Errol Fletcher

API FIELDWORK DOCUMENTATION 18

SPRING 2006, SUMMER 2009, SPRING 2010 (ONGOING)

Video and photo documentation from Igloodik, Mittimatilik, Qaggiagvik Island, Maniqtuuk Island, Ikpik river mouth, Ilutulaaq Kangiqllu, Suirarjuuk, QiqtaltaLUUK, Sikusiilaarmiut imanga

PHOTOS/VIDEO BY: Matthew Biederman, August Black, Charlie Ittukssarjuat, Stephen Kovats, Marko Peljhan, Sašo Podgoršek, Nejc Trošt



NATHALIE GRENZHAEUSER THE CONSTRUCTION OF THE QUIET WORLD/THE ISLANDS 19

SELECTION OF 7 PHOTOGRAPHS FROM THE SERIES *THE CONSTRUCTION OF THE QUIET WORLD* AND *THE ISLANDS*

- Zuckerhut* (Sugar Loaf), 2007, LightJet print, Diasec face matte, 120×60 cm, from the series *The Construction of the Quiet World*, Courtesy Deutscher Wetterdienst, Offenbach
- Winkelstation* (Angle Station), LightJet print, Diasec face matte, 120×60 cm, from the series *The Construction of the Quiet World*, Courtesy Galerie Anita Beckers, Frankfurt am Main
- Schmelze* (Melt), 2007, LightJet print, Diasec face matte, 120×60 cm, from the series *The Construction of the Quiet World*, Courtesy Galerie Anita Beckers, Frankfurt am Main
- Palanderbukta*, 2007, Fine Art Print, framed, 56×65 cm, from the series *The Islands*, Courtesy Galerie Anita Beckers, Frankfurt am Main
- Würzburger Hütte*, 2006, Fine Art Print, framed, 56×65 cm, from the series *The Islands*, Courtesy Galerie Anita Beckers, Frankfurt am Main
- Elveneset*, 2007, Fine Art Print, framed, 56×65 cm, from the series *The Islands*, Courtesy Galerie Anita Beckers, Frankfurt am Main
- Hytevika*, 2006, Fine Art Print, framed, 56×65 cm, from the series *The Islands*, Courtesy Galerie Anita Beckers, Frankfurt am Main



Nathalie Grenzhaeuser’s work is concerned with the perception of expansive landscapes. Deserts, abandoned industrial sites, urban and natural landscapes are recurring motifs in the artists’ photographs, through which she considers the relations between man and nature. Opening a space for dialogue between association and memory, the seeming emptiness and barrenness of these landscapes are essential to Grenzhaeuser’s work.

The series entitled *The Construction of the Quiet World*, which was shot on the Spitzbergen Archipelago in the Arctic Ocean, addresses the developments and mutations of the Arctic landscape. The title of the work refers to the New

Zealand-produced science-fiction film *The Quiet Earth* (1985) by Geoff Murphy. Grenzhaeuser’s photographs show facilities related to the mining and settlement history as well as science and research work on the archipelago. *Zuckerhut* (*Sugar Loaf*, 2007) depicts the disaffected coal mine ‘Gruve 2’ in Longyearbyen, the capital of Spitzbergen, while *Winkelstation* (*Angle Station*, 2007) presents a building in ruins, which up to around 1960 was used to redirect the cableways tracks from the two mining pits towards the harbour. *Schmelze* (*Melt*, 2007) shows the loading station of the Svea coal mining settlement.

The Islands series analyses the relations between architecture and topography on the backdrop of Spitzbergen’s settlement history. The pictures show individual huts, most of which were built at the outset of the 20th century by hunters and trappers, but also miners. In the past they were used for overwintering or as a protection against sudden weather changes. Some of the huts are still used today by scientists.



API LIBRARY 20

VARIOUS AUTHORS, IN PROGRESS

The library contains a selection of essential readings selected by API in order to understand the circumpolar region and issues surrounding it from arctic geopolitics, governance, autonomy, militarization to climate change debates, art and traditional knowledge. There are hard to find selections from the *Interviewing Inuit Elders* and *Memory and Inuit History* series published by the Arctic College that contain insights and recollections from elders on a variety of issues from the militarization of Nunavut in the 1940’s, Cosmology and Shamanism, to health issues both past and present. A bibliography is also provided with a complete booklist.



API DOCUMENT ROOM 21

VARIOUS LEGAL AGREEMENTS AND DOCUMENTS, GOOGLE EARTH LAYERS, MAPS, INTERNET TERMINALS, 2010

Inside the document room, you can find a selection of maps, legal documents, and other materials to further contextualize the political, social, and cultural landscape of the North. There are computer terminals with links to external websites and document repositories with pertinent information, and a Google Earth layer documenting API’s work as well as a geolocated archive of DEW and BMEWS sites with archival photographs, and Inuktitut place names for many

geographical features with translations. The United Nations Law of the Sea (UNCLOS) and the groundbreaking Nunavut Land Claims Agreement can be read here. Together, these documents (among others) define the contemporary political situation in Nunavut and beyond.

Google Earth Placename layers and maps courtesy of Inuit Heritage Trust Google Earth DEW Line Archive: Matthew Biederman Research and Collection: API



ECHO OF THE LAST HOWL 22

Guy Fradette (director), Taqramiut Productions for Makivik Corporation, Nunavik, CA, 2005, 54 min.



NANETTE CROCE SLED DOG SLAUGHTER, OR: WERE INUIT HUSKIES SYSTEMATICALLY PUT DOWN?

According to many Inuit, a systematic sled dog slaughter took place between the 1950s and 60s in Canada. Was it animal control or an attempt to destroy Inuit culture? Because the affected communities were so remote and scattered, it was not until the 1990s that a pattern of sled dog slaughter emerged, indicating that these may have been more than isolated acts for the purpose of animal control.

HISTORY OF INUIT SLED DOGS

The relationship of Inuit cultures and their sled dogs may date back 2000 years. Known as Inuit Huskies or Eskimo dogs they bonded strongly with their owners, pulling sleds, sniffing out prey during the hunt, and often saving lives by warning of thin ice or fending off enraged polar bears. “Dogs equaled life,” according to Inuit Johnny Munick.

WHERE HAVE ALL THE SLED DOGS GONE?

According to the Canadian Eskimo Dog Association the numbers of purebreds dropped from 20,000 in the 1950s to perhaps 200 now. The site attributes this to various factors including an increase in snowmobile use leading to a lack of interest in perpetuating the breed. However, many Inuit see it the opposite way around. According to them, it was after the sled dog slaughter took place that they were encouraged to replace their teams with snowmobiles, which were not only less versatile but far beyond the economic reach of the average Inuit hunter of the time.

SLED DOG SLAUGHTER COMES TO LIGHT

In the late 1990s the Makivik Corporation began holding meetings in several Inuit communities with memories of the slaughter. It soon came to appear that these were not just random events. At the time the government claimed the killings were to prevent a rabies epidemic and/or dogs running

loose (it is almost impossible to keep these strong pulling dogs tethered). However, the destruction of their dogs denied heads of Inuit households their livelihood and plunged them into poverty. The alleged slaughter was documented in the 2005 film Echo of the Last Howl. At the premiere, Inuit victims personally told heartrending tales of dogs filing off dutifully to their slaughter or being cut down in front of their owners’ eyes by Royal Canadian Mounted Police.

The Canadian government has never acknowledged that the sled dog slaughter took place, and records of the Royal Canadian Mounted Police from that time were, some claim, destroyed by fire.

FIRST PUBLISHED in Native American/First Nations History, May 5, 2006, http://nativeamericanfirstnationshistory.suite101.com/article.cfm/sleddogslaughter



BRAMOR UAS (UNMANNED AERIAL SYSTEM, OPERATIONAL) 23

230 CM × 96 CM × 65 CM, 2007

Blended wing modular airframe, modular sensor payload, wireless video link, orthophoto capabilities, ground control station

MAIDEN FLIGHT 2007 DESIGNED AND MANUFACTURED BY C-ASTRAL (Ajdovščina, SI)



SPECTRAL SYSTEM S-77CCR UAS (UNMANNED AERIAL SYSTEM, PROTOTYPE) 24

400 CM × 170 CM × 70 CM, 2005

Modular sensor payload, wireless video link, ground control station

MAIDEN FLIGHT 2005 DESIGNED AND MANUFACTURED BY C-ASTRAL (Ajdovščina, SI)



API SYSTEMS SCHEMATIC 2010 25

The schematic presents the current status and interconnections of the API ,system of systems’ as currently envisioned and implemented.

CONCEPT: Matthew Biederman, Marko Peljhan, Nejc Trost DESIGN: Nejc Trost



16

United Nations
Convention on the Law of the Sea

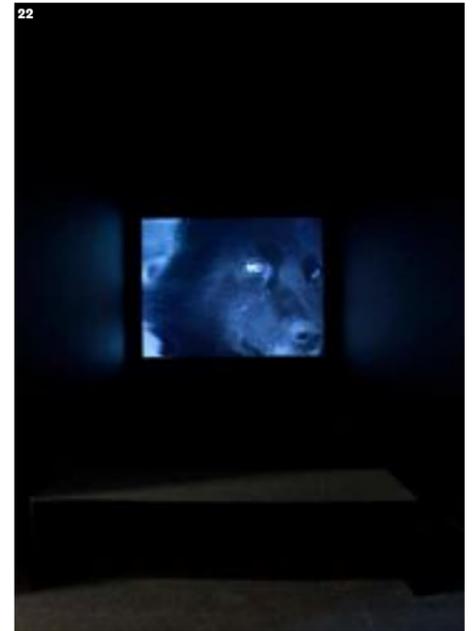
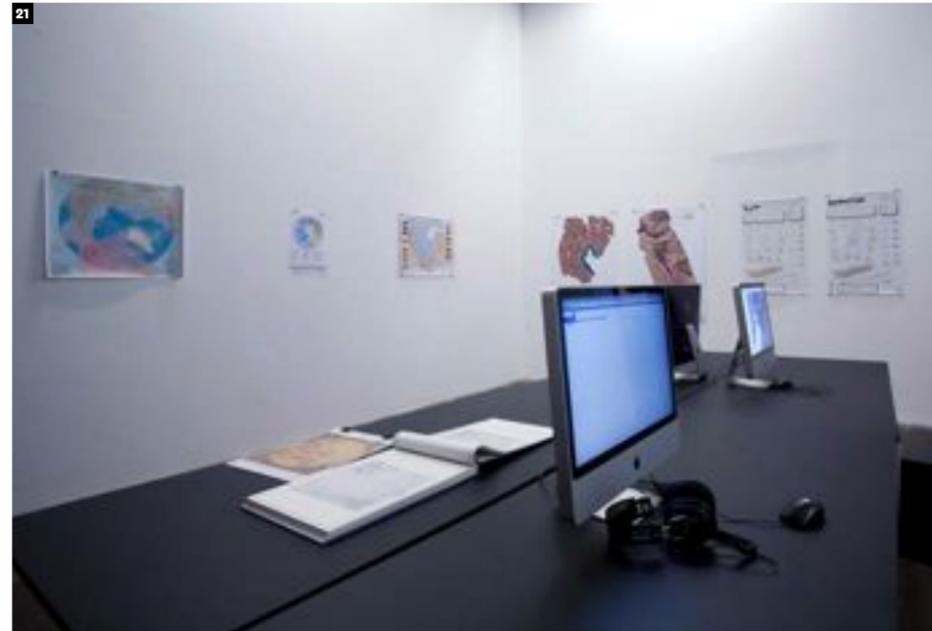
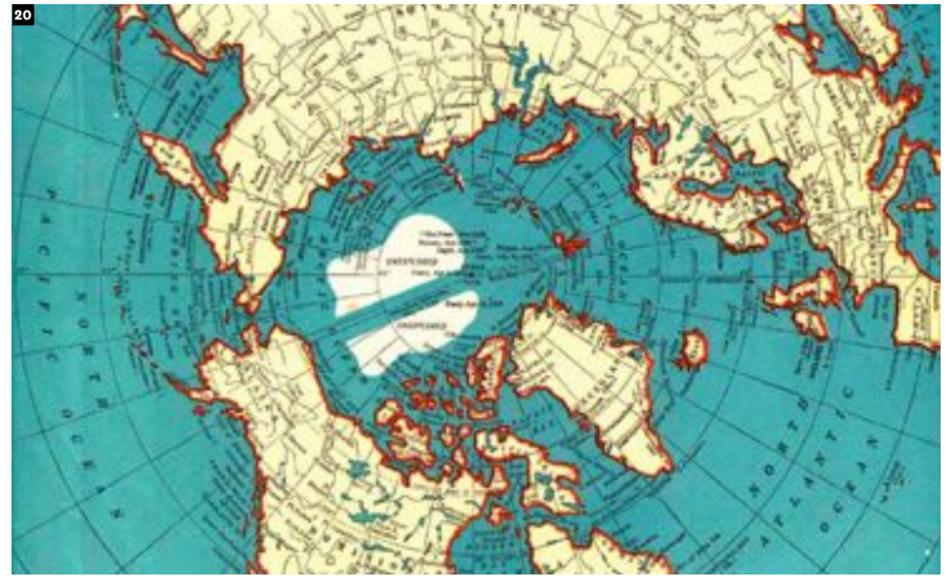
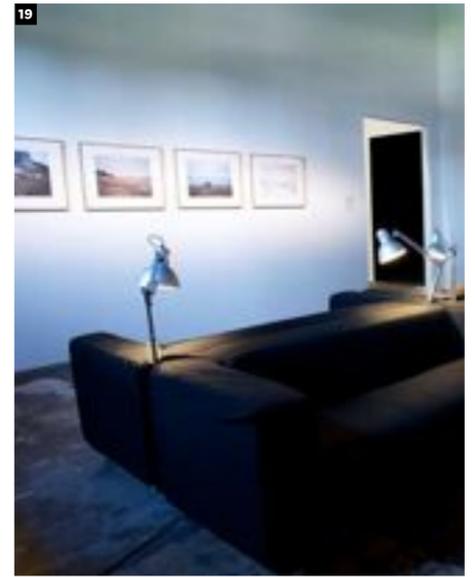
Part II, Article 10. Extension of the continental shelf

1. The continental shelf of a coastal State comprises the seabed and subsoil, that extend beyond its territorial sea throughout the natural prolongation of its land territory to the outer edge of the continental margin, or to a distance of 200 nautical miles from the baselines (2) the outer edge of the continental margin does not extend up to that distance.

2. Information on the limits of the continental shelf beyond 200 nautical miles from the baselines, shall be submitted by the coastal State to the Commission on the Limits of the Continental Shelf, on the basis of equitable geographical representation. The Commission shall make recommendations to coastal States on matters related to the establishment of the outer limits of their continental shelf. The limits of the shelf established by a coastal State on the basis of these recommendations shall be final and binding.

Part XI, Article 77. Rights of the coastal State over the continental shelf

1. The coastal State exercises over the continental shelf sovereign rights for the purpose of exploring it and exploiting its natural resources.



ARCTIC PERSPECTIVE

HMKV AT THE PHOENIX HALLE DORTMUND
JUNE 18 – OCTOBER 10, 2010,
OPENING: FRIDAY, JUNE 18, 2010, 19:00

A cooperation between
Hartware MedienKunstVerein, Dortmund (DE),
Zavod Projekt Atol, Ljubljana (SI), The Arts
Catalyst, London (UK), C-TASC, Montreal (CA),
Lorna, Reykjavik (IS)

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WITH THE PARTICIPATION OF

Matthew Biederman (CA)
Andrej Bizjak (SI)
August Black (US)
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Nathalie Grenzhaeuser (DE)
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Iglolik Isuma Production (Nunavut, CA)
Inukjuak Sound Map, Nimalan Yoganathan (CA)
Kinngait Studios (Nunavut, CA)
Stephen Kovats (CA/DE)
Makivik Corporation (Nunavik, CA)
Giuseppe Mecca (IT)
Lize Mogel (US)
Cornelius Nutarak Sr. (Nunavut, CA)
Marko Peljhan (SI)
Sašo Podgoršek (SI)
Catherine Rannou (FR)
SenseStage/labXmodal (CA)
Taqramiut Productions (Nunavik, CA)
Wesley Smith (US)
Samo Stopar (SI)
Nejc Trošt (SI)
Boris Volkov (RU)

Results of the international
API architectural competition

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Inke Arns, Matthew Biederman, Marko Peljhan

PROJECT MANAGEMENT AND PRODUCTION

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ASSISTANCE

Ulrike Schurl

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MANAGING DIRECTOR

Frauke Hoffschulte

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Uwe Gorski, Stephan Karass

TECHNICAL TEAM

Sanja Biere, Jens Eberhardt, Sylvia Johst,
Kai Kickelbick, Željko Petonjic, Martin Titze

VENUE

HMKV at the PHOENIX Halle Dortmund
PHOENIX Platz 4 (Hochofenstr. / at the corner of
Rombergstr.), 44263 Dortmund, www.hmkv.de

OPENING HOURS

Wed – Fri 15:00 – 20:00, Sat – Sun 11:00 – 20:00

ADMISSION

5 € / 3 € (concessions)

GUIDED TOURS

Each Sunday at 16:00
and by appointment

PUBLICATION

SERIES EDITORS: Inke Arns, Matthew Biederman,
Marko Peljhan, Nicola Triscott
Designed by Ziga Testen

CAHIER NO. 1: Architecture, edited by Andreas
Müller, 148 pp., 92 illustrations (16 in color)
(ISBN 978-3-7757-2679-5)

CAHIER NO. 2: Geopolitics and Autonomy, edited
by Michael Bravo and Nicola Triscott, 96 pp.
(ISBN 978-3-7757-2681-8)

CAHIER NO. 3: Technology, edited by Adam Hyde,
96 pp. (ISBN 978-3-7757-2682-5)

CAHIER NO. 4: Landscape, edited by Inke Arns,
Matthew Biederman and Marko Peljhan, 96 pp.
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Ostfildern 2010, www.hatjecantz.de

OPEN SPACE CONFERENCE

PHOENIX Halle Dortmund, September 24–26, 2010

CONTACT

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