

Introduction to Participatory Mapping

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Introduction to Research Methods Class - Nunavut Sivuniksavut



Outline

Part 1. Why map biographies were so important to the creation of Nunavut

Part 2. How participatory mapping has been used to document, represent and share Inuit knowledge

Part 3. What to consider when using participatory mapping in research

Part 4. Considerations in hard copy vs. direct-to-digital mapping approaches

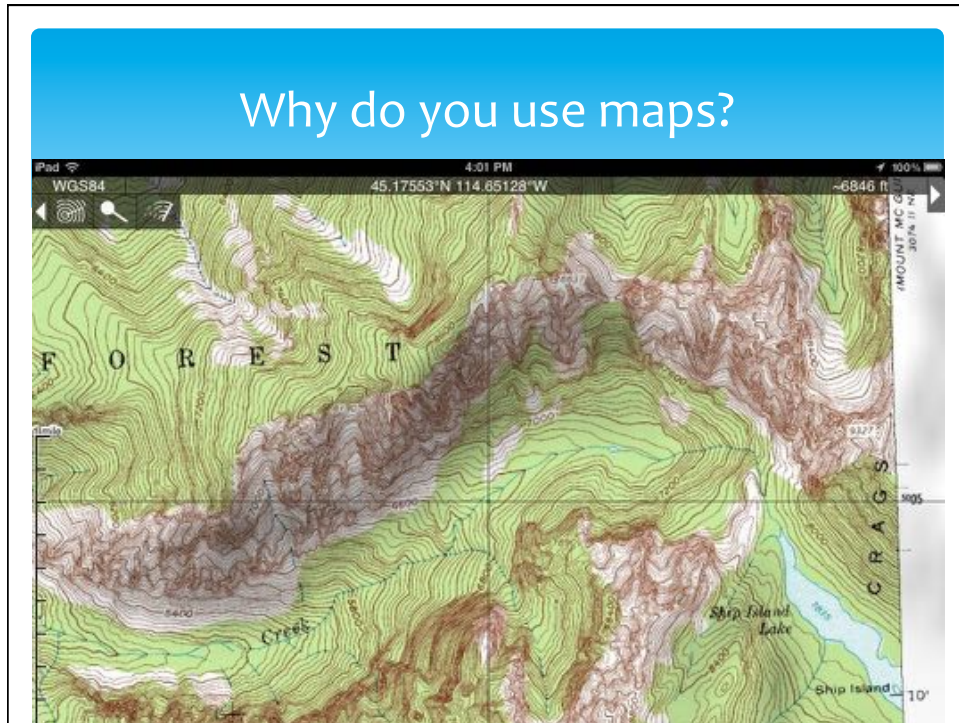
How do you use maps?



Why do you use maps?



Why do you use maps?



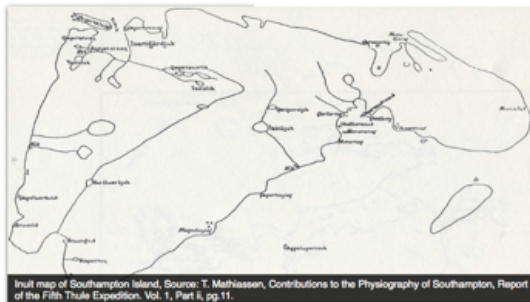
Part 1

Why map biographies were so important to the creation of Nunavut

Maps in Traditional Times

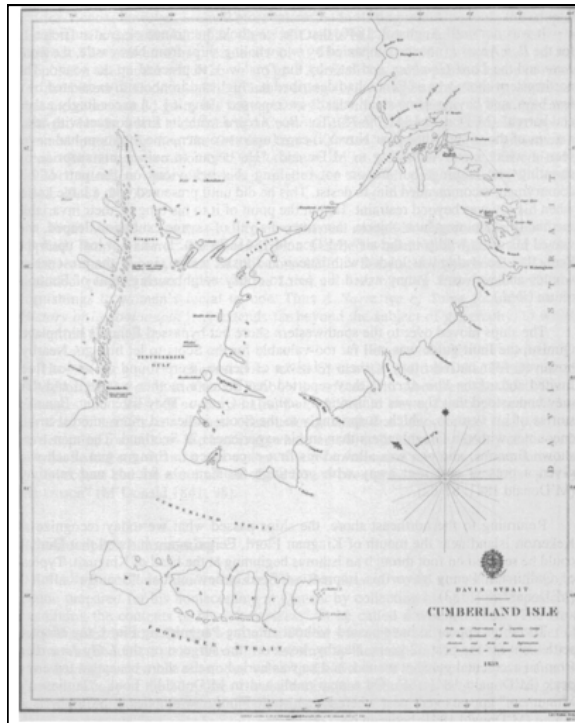
- * Main purposes: 1) for Inuit; 2) for Qallunaat
- * Content and Style
 - * Relative significance (and distortions)
 - * Natural environment and travel
 - * Landscape representation related to navigation (coastal and land-based differences)
- * Mapping Proficiency
 - * Phenomenal spatial representation accuracy and locational awareness
 - * All ages, variable experience and skill, many of the best by women
 - * Accuracy of representation by effort not necessarily by distance scale
 - * Emphasis on physical navigational aids (training in awareness and memory)

Example traditional maps



<http://www.paninuittrails.org>





- * From Jones (2004, 65) "The Inuit as Geographers: The case of Eenoolooapik"
- * Davis Strait/Cumberland Isle
- * 1839
- * Captain Penny's observations and contributions of Eenoolooapik (mostly on left)

Map Biographies

- * "a map compiled by each hunter interviewed, showing the areas he had hunted, trapped, fished, and camped during his adult life" (ILUOP, 1976, 49)
- * Indigenous use-and-occupancy mapping (Tobias, 2009)
- * Evolution along with preparations for land claims negotiations to demonstrate traditional interest in land by showing the extend of both use and occupancy on a map

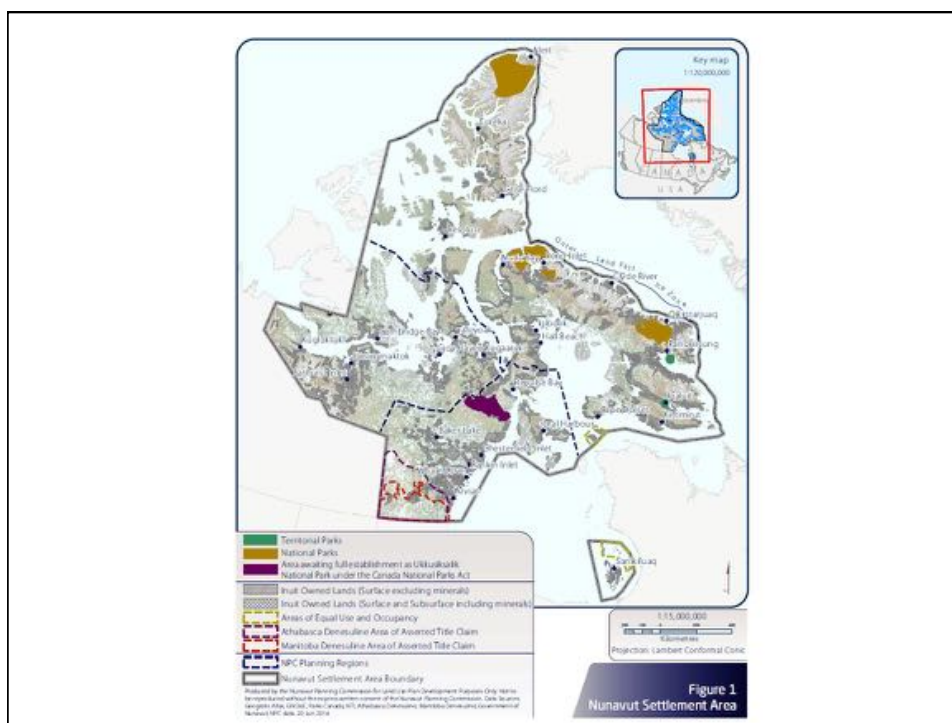
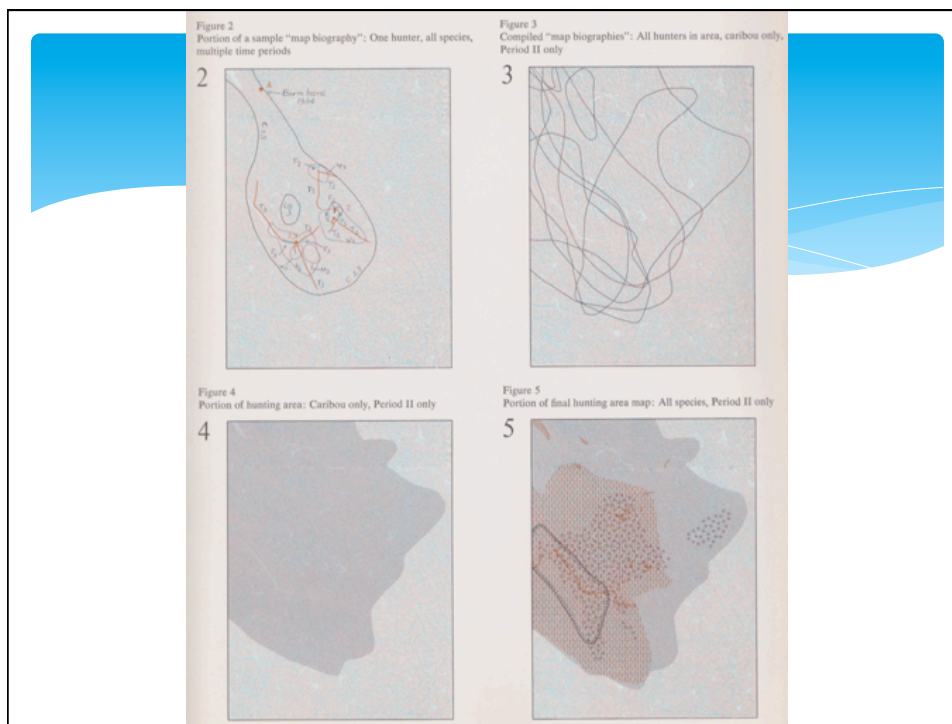
Indigenous use-and-occupancy mapping

“Land-use data is essential if the rights of usufruct, which have been recognized throughout history and in virtually every legal system, are to be respected and enjoyed. It should not be surprising then that more and more people are attempting to document land use. Yet I am concerned that so many so unprepared are setting out boldly to make land-use maps. **There are few kinds of research which carry with them such tremendous social responsibility and which are so thoroughly difficult to perform effectively.** Much can be lost with poorly conceived and poorly executed work. **The problem in this case is that the maps, once drawn, tend to last forever. They appear very substantial even when every line on them is wrong or meaningless. When these lines reflect on people’s rights and property for generations they clearly should be most carefully and professionally prepared.”**

(Karl E. Francis, quoted in Tobias 2009)

Indigenous use-and-occupancy mapping

- * **“Use”** – harvesting of resources (collecting of plants, mining earth materials, fishing, hunting, trapping...), travel to engage in use activities
- * **“Occupancy”** – evidence of fixed cultural sites (habitations, sacred areas, burial grounds, place names, place-based legends and stories...)
- * **“Traditional”** – transmission of customs or beliefs from generation to generation



Part 2

How participatory mapping has been used to document, represent and share Inuit knowledge

Participatory Mapping



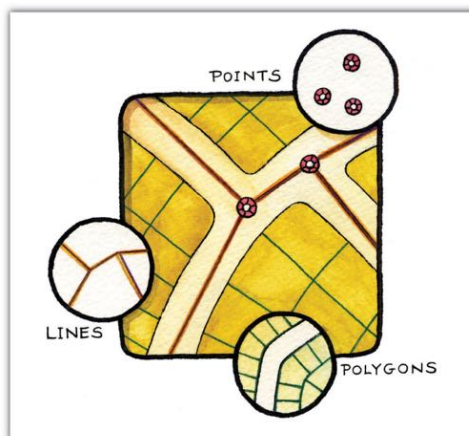
- * A general term often used to:
 - * define a set of approaches and techniques that combines the tools of modern cartography with participatory methods to represent the spatial knowledge of local communities
 - * make visible the association between land and local communities

Participatory Mapping



- * A way to:
 - * Help understand, document, and represent Inuit knowledge of and relationships with the land/water/ice
 - * Evoke memories, spark discussion (map as mediator)
 - * Compile and communicate information in familiar terms to government officials, scientists, decision-makers

Representing land/water surfaces as features on maps





Participatory Mapping



* Application in Inuit knowledge research context:

- * Sea ice conditions and dynamics
- * Wildlife (terrestrial mammals, marine mammals, migratory birds, etc.)
- * Travel routes/way-finding techniques
- * Hunting areas/trap lines
- * Place names
- * Cultural/archeological sites
- * Environmental features/impacts
- * Individual biographies

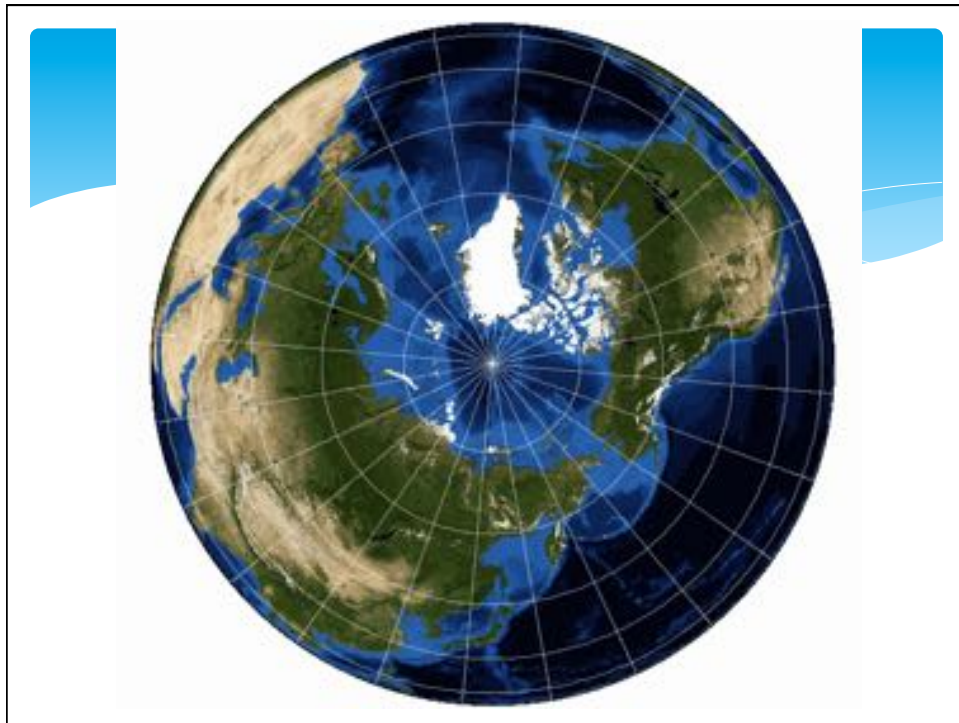
Part 3

What to consider when using participatory mapping in research

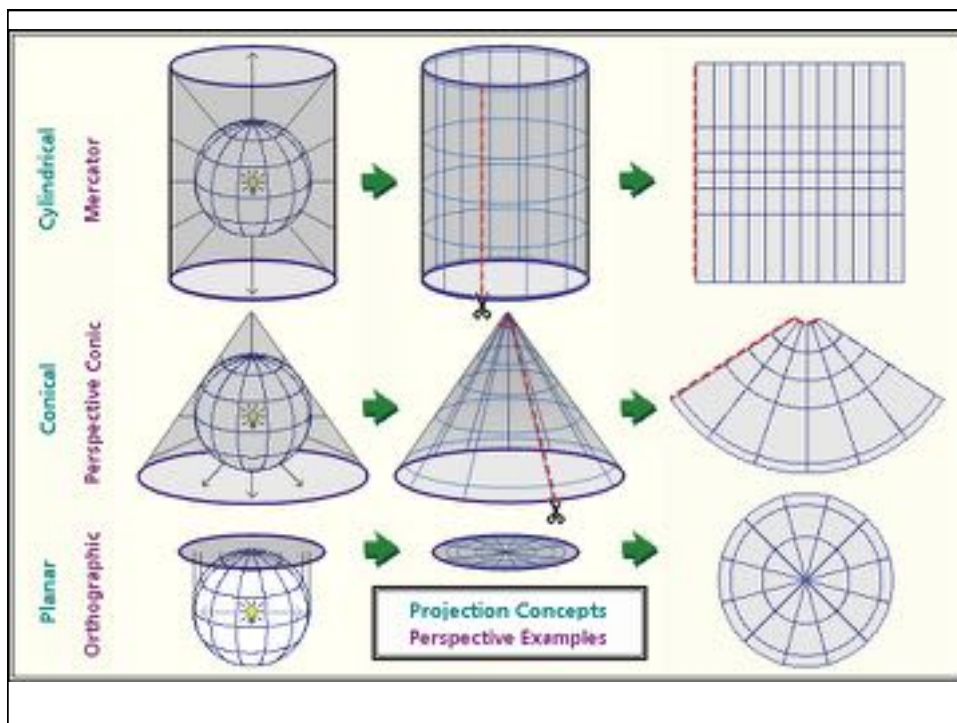
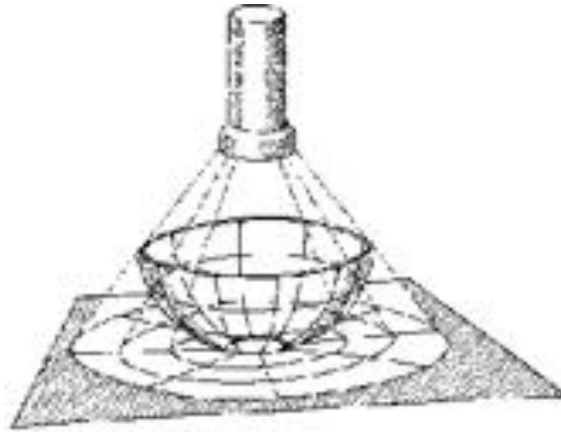
Representing land/water surfaces using maps

* How are maps made?

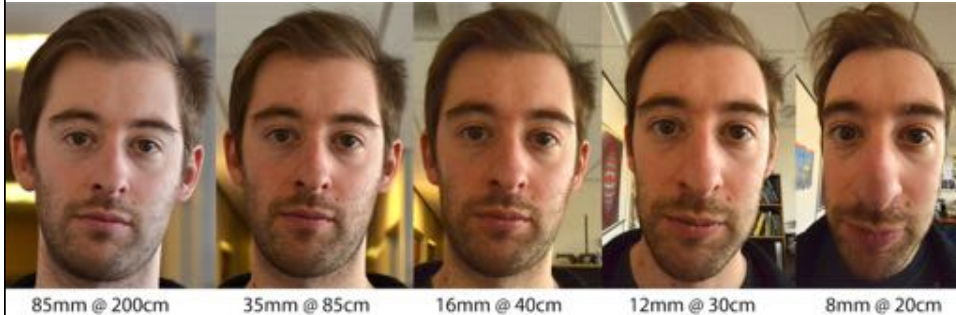




Map Projection

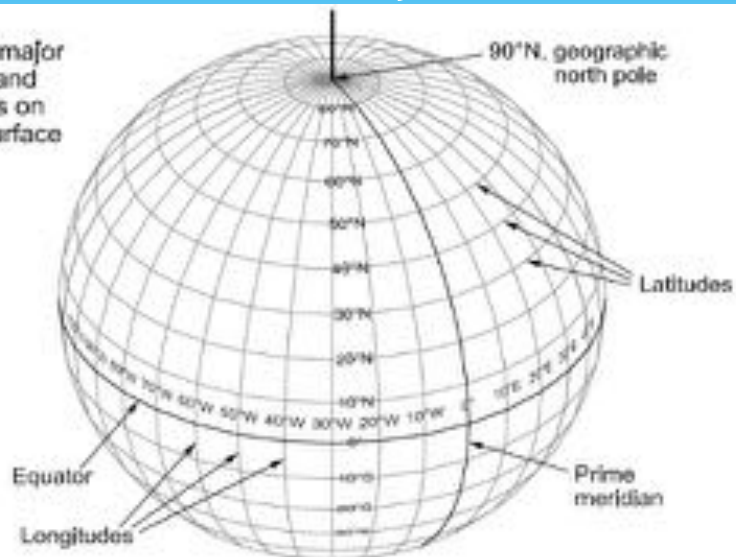


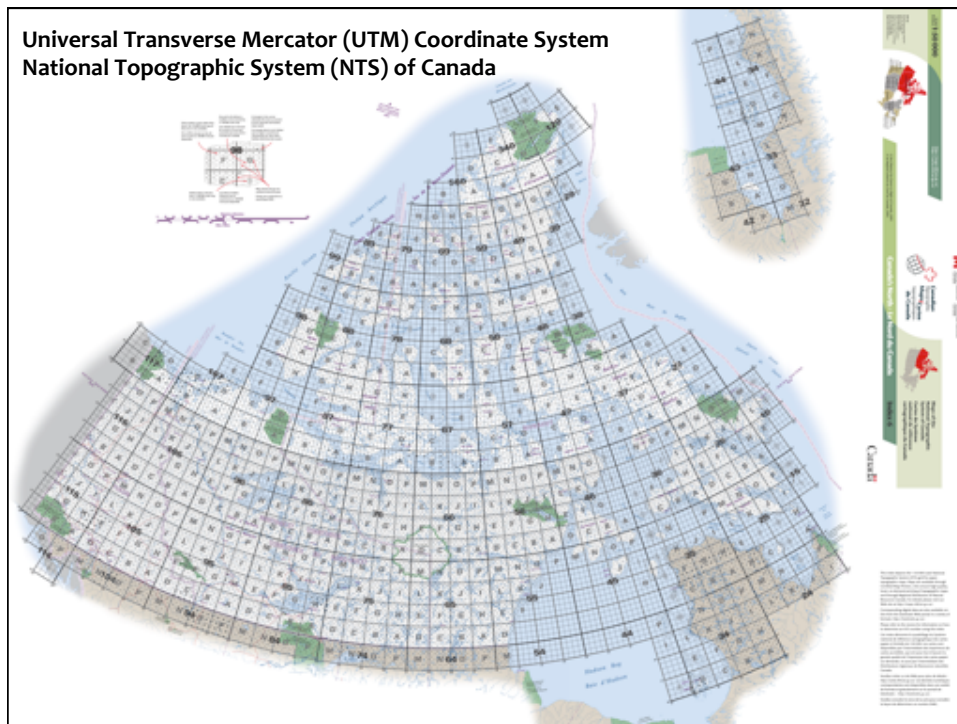
Distortions



Latitude/Longitude (Lat/Long) Coordinate System

Selected major
latitudes and
longitudes on
Earth's surface





Map Scale

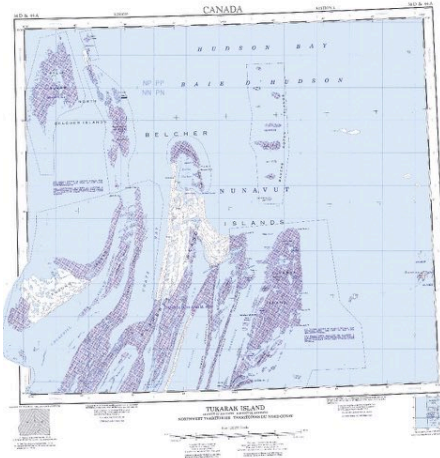
* “Large scale”

- * More detail
- * Smaller area of land
- * 1cm = 100m
- * 1:10,000

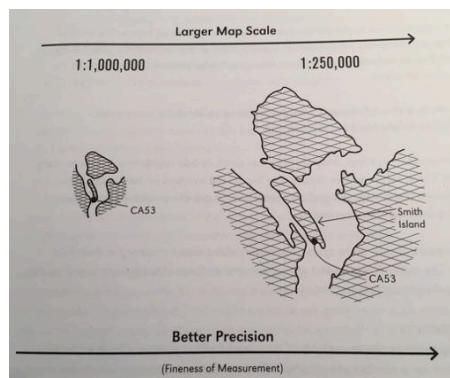
* “Small scale”

- * Less detail
- * Larger area of land
- * 1cm = 1,000km
- * 1:100,000,000

Map Scale



Influence of scale in participatory mapping



- * **Precision** – fineness with which interviewee marks data (influence of scale!)
- * **Accuracy** – closeness of fit between mapped position and real position on the ground

Scale and Measurement

* How long is this river?



Scale and Measurement

* How long is this river?



Conducting participatory mapping

examples from Pangnirtung, Gjoa Haven

- * Scale/type of basemap
- * Registering overlays/maps
- * Identification
- * Colour/thickness of markers
- * Timeframes
- * Seasons
- * Labelling
- * Defining features
- * Feature choices
- * Information source
- * Comfort level with maps
- * Who is drawing
- * Accounting for variability
- * Verifications/updates
- * *All in relation to appropriate scale/questions for purpose of the study*

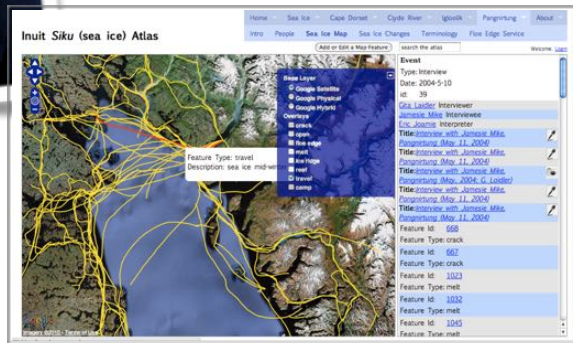
Part 4

Considerations in hard copy vs.
direct-to-digital mapping approaches

Hard copy vs. direct-to-digital mapping



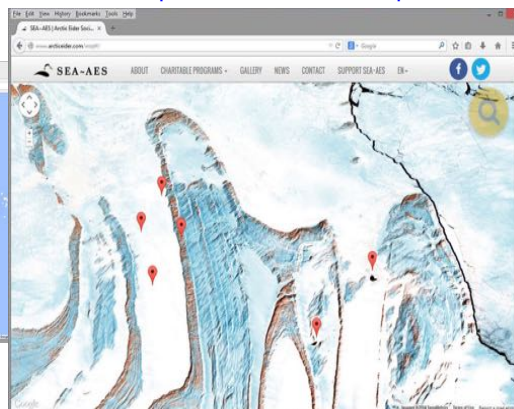
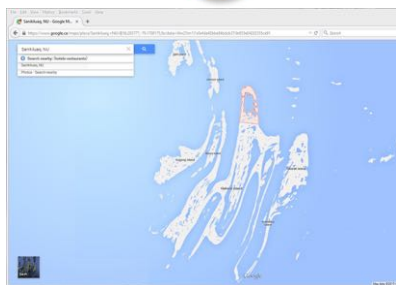
<http://sikuatlas.ca>



Hard copy vs. direct-to-digital mapping



<https://arcticeider.com/map>





Thank you!

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