

USING ARCGIS TO CREATE 'LIVING DOCUMENTS' WITH  
ARCHAEOLOGICAL DATA:  
A CASE STUDY FROM SVALBARD, NORWAY

By

Edward W. Tennant

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This thesis, "A NEW GIS STRUCTURE FOR ARCHAEOLOGICAL WORK:  
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Committee:

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Dr. Terry Reynolds, Committee Chair

---

Dr. Bruce Seely, Head of Department

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## ABSTRACT

The archaeologists' ethical obligation to data and data sets is as important as their obligation to protect sites, include descendant communities, and publish results in a timely manner. However, discussions of such an obligation are rarely included in archaeological literature dealing with ethics. This thesis examines the archaeologists' obligation to digital data sets, specifically geographic information systems (GIS) data, by creating a 'living document' using data collected during a two-week international field seminar on the Norwegian Island of Spitsbergen, part of the larger Svalbard archipelago.

One of the main problems of not having a structured method for organizing GIS data centers on future usability of a project's data set (i.e. adding survey data to a base map). Specifically, without a developed concern for the future use of a data set, GIS information is in danger of being created that cannot be added to at a future date. This presents numerous problems for the archaeological community since projects commonly involve multi-year time scales. The coming-and-going of students who have varying levels of involvement, from simple excavation to creating the base map used for all future investigations, exacerbates this situation.

This thesis presents an organization scheme for use with archaeological data, making use of the geodatabase structure created in 2001 by Environmental Systems Research Institute (ESRI). This new data structure allows for unparalleled control of spatial data, such as assigning drop-down menu style controls in a feature's attribute table and reducing the total number of system files from dozens or even hundreds to a single file. The goal of this project, besides creating a set of GIS data that could be used by future researchers, is to begin the dialogue on the archaeologist's obligations to data sets.

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