A Union of Dispersed Knowledge and People:
Achievements of Archaeo-GIS Workshop 2007-2010

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Introduction

Over decades, we have obtained a growing number of archaeological data – analog and digital – that derived from both research-oriented and rescue excavations. There have also been available external digital data sources inherently compatible with those archaeological data (e.g., topographic, geological and hydrological). GIS is a vital tool for interpreting and explaining spatial and temporal distributions of material culture, it provides archaeologists with sophisticated means of scalable management, manipulation, and analysis of data different in type and scale.

Nonetheless, without any formal in-class training in academic institutions, our knowledge and skills on practical applications of GIS in archaeology had dispersed across the academia. Most of the problems that archaeologists encountered in the course of utilizing GIS and related techniques had not been explained elsewhere and thus were resolved only through a continuing process of trial and error, A series of valuable know-how gained from such processes should be accumulated and made available freely to those interested. Fully aware of this fact, a handful of Japanese graduate students of archaeology recently inaugurated an online study group, Archaeo-GIS Workshop (AGW), in 2007 and have organized offline workshops for active interaction and information sharing among the participants.

Activities

AGW employs two complementary communication channels to create a scientific *agora* (or "place of assembly" for public activities in the ancient Greek city-states): active, informal online communication through social networking services (e.g., Google Group, Twitter, and Ustream) on one hand and off-line workshop based on hands-on exercises on the other hand. The former facilitates exchange and discussion of new ideas, common problems, and practical tips through

threads of discussions, while the latter encourages more in-depth discussions concerning

particular topics such as: (1) on-site collection of geospatial data using GPS receivers, (2)

attachment of Exchangeable Image File Format (Exit) information to digital photos, and (3)

georectification of hard-copy maps by means of open source GIS software. Additionally,

questions raised from daily online conversations and/or offline workshops have also been

formally addressed during a symposium (e.g., the 25th Semiannual Meeting of Japan Society for

Archaeological Information, Tokyo) and practically approached by collaborative research

projects (e.g., field examinations and renovation of the algorithms for calculating travel-cost), as

reported at the previous meetings of CAA (Kondo et al. 2008; Kondo and Seino 2009),

Important of Interdisciplinary Research

For further integrations of GIS and archaeology from broader perspective, AGW actively

encourages the researchers of surrounding disciplines to join our activities. Informatics

specialists, human ecologists, and landscape ecologists have thus far involved in our activities

and successfully share and exchange useful information and ideas on GIS with archaeologists

across disciplinary boundaries. We expect that this interdisciplinary interaction will provide us

with opportunities for new collaborative researches. In the event of such on interdisciplinary

collaboration, GIS will serve as a common language like *koine* - a Hellenistic supra-regional

dialect.

Important of Interdisciplinary Research

Significantly, the administration and operation of AGW relies exclusively on the spirit of

volunteerism, and all of the activities except for the research projects above are financially self-

sufficient. Nevertheless, disproportionate workload among members may lead to stagnation in

the long term. Thus, AGW has opened its doors to wider audience across disciplinary boundaries

(e.g., anthropologists, landscape ecologists, and informatics specialists) and encouraged more members actively engaged in administrative tasks. Major agendas at hand for the years to come involve: (1) improvement of digital data collection and handling in field archaeology; (2) establishment of a standardized curriculum of geospatial technologies for archaeologists; and (3) further encouragement of interdisciplinary collaborations in archaeological GIS projects.