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The ARC/Base Project is a critical initiative in digital information services for the field of East Asian archaeology. We conservatively estimate that ca. 300,000 published titles already exist in our field. Thousands of new publications are being added to the East Asian archaeological literature each year, yet researchers still lack a comprehensive, computerized database through which to find such basic information. Simply put, our field has now reached a crisis in its management of bibliographic sources, and because of this, it is becoming more and more difficult to conduct research efficiently and effectively. The ARC/Base Project offers a powerful solution to this crisis. Designed by archaeologists carrying out research across East Asia, ARC/Base will be a continuously updated, internet-based, multilingual database of bibliographic records on East Asian archaeology.
“Gray Literature” on the rise:

Cultural Resource Management (CRM) reports:

government-mandated excavation and survey reports from construction projects

In Japan:

Total number of archaeological investigations each year:

early 1970s: several thousand/year

2000: 35,000/year

Currently, Japan produces the largest number of “gray literature” archaeological reports. These non-formally published “CRM” reports (using United States terminology) are produced for archaeological survey and excavation work that is required before construction projects. New laws mandating CRM work in China, Korea, and other Asian countries are now appearing, and these will result in the production of very large numbers of CRM reports in those countries as well. The boom in the economies of many East Asia countries and the accompanying increase in construction projects are resulting in a great acceleration in the number of CRM projects each year in the region.
Gaining Control over Data: Existing Print Bibliographic Efforts

More prevalent in China and Japan:

• Annual and cumulative indices for certain journal titles

• Thematic bibliographies:
  e.g., publication time span; time period of coverage; geographic region; topical (bronze metallurgy, Neolithic, Silk Road, etc.)

The traditional means of keeping track of scholarly output in East Asian archaeology has been the periodic assemblage of printed bibliographic listings. For example, national and regional journals in China typically produce annual listings of the articles they have published during the preceding year, and a few have also produced occasional cumulative listings for their individual journal, such as *Wen wu: wu bai qi zong mu suo yin* (Cumulative Index of 500 Issues of the journal Wen wu) (Beijing: Cultural Relics Publishing House, 1998). There are also a number of other, more specialized compilations focusing specifically on the archaeology of a region (such as provincial archaeological bibliographies) or of a time period or era within a country or region (e.g., Chinese Neolithic, Yayoi period Japan, etc.). A number of printed bibliographies have also been produced that cover a specific topic (e.g., Silk Road archaeology), artifact category (e.g., Chinese jades), technology (e.g., bronze casting), or subfield (e.g., agricultural archaeology or oracle bone inscriptions). These printed bibliographies, however, all have serious shortcomings in their organization and coverage, and none can come close to offering the power and flexibility in searching that a digital database can now offer.
Problems with Print Bibliographic Efforts

- No searching: limited by primary ordering scheme
- Utility of sub-categories such as “Province”, “Fieldwork”, “Metallurgy”, “Theoretical”, “Xia-Shang-Zhou”, “Qin-Han”, “Slave society”, etc.
- Outdated upon publication
- Usually one language only
Existing Digital Bibliographic Efforts

A few (Western) examples:

**Anthropological Literature** (Tozzer Library, Harvard)

**Anthropological Index** (Royal Anthropological Institute)

**Art and Archaeology Technical Abstracts (AATA)** (Getty)

**ABIA South and Southeast Asian Art and Archaeology Index**

**Southeast Asian Archaeology Bibliographic Database** (U. of Pennsylvania Museum)

[Links to the websites and databases mentioned in the text]
Existing Digital Bibliographic Efforts

Problems (for us):

- Limited in their coverage of East Asia
- No East Asian scripts, or
- Limited to single East Asian language or single country coverage
- Lack facilities for international user base: romanization and translation
- May not be oriented toward archaeologists (keywords)

Existing digital bibliographic efforts can be of limited use for East Asian archaeology due to their limited coverage of East Asia or lack of East Asian language support. For those that do focus on East Asia, they can be limited to one country or language, or have limited archaeological coverage. Research in our field now requires comprehensive digital bibliographic coverage, and ARC/Base has been established to meet this need.
ARC/Base coverage extends across the modern-day areas of mainland China, Japan, Korea, Mongolia, the Russian Far East, mainland and insular Southeast Asia, and Taiwan. This broad regional scope—along with its multilingual records—distinguishes ARC/Base from previous bibliographic efforts and recognizes a requirement for much research in our field to transcend modern-day political and linguistic boundaries. ARC/Base can include bibliographic records in any language covering the diverse range of publications that are commonly incorporated into East Asian archaeological research. In addition to archaeological publications, ARC/Base includes relevant publications in anthropology, history, art history, paleography, geography, environmental sciences, religion, geology, history of science, and numerous other disciplines. Record types comprise individual journal articles (including papers from smaller-circulation, local-level journals), individual papers in edited volumes, books and monographs, excavation reports (including “gray literature” reports from cultural resource management projects), dissertations and theses, and selected newspaper articles.
The ARC/Base Project is being organized as a collaborative project, in which partners across the globe can contribute bibliographic records. ARC/Base can gain control over the large pool of potential records by dividing efforts among many collaborators. The project is administrated by ICEAACH, which serves as the central node of the ARC/Base network of collaborators. Because there will be a large number of collaborators in the ARC/Base Project, Regional Project Managers (RPM)—an individual selected from the main institutional collaborator in each country—will oversee the efforts of collaborators in their home countries, organize data input in their regions, and serve as the main channels of communication for the Project. Our collaborators recognize that for ARC/Base to work as a collaborative project, we have to create a community of partners, brought together by a shared recognition of the great benefits of this project to our field.
Above is a list of our collaborators for the initial phases of the ARC/Base Project. As the project starts-up, we are working closely with a select group of collaborators to establish work-flow and editorial routines.
The ARC/Base Project is being organized and administrated by ICEAACH, which serves as the central node of the ARC/Base network of collaborators, overseeing and managing ARC/Base development, technologies, editorial controls, central administrative functions, and legal/contractual issues. In addition to ICEAACH personnel, implementation of the ARC/Base project also requires the assistance of outside consultants in business planning and sustainability, technology (especially web database design and programming), website design, library science, and intellectual property and contracts.
ARC/Base covers a number of different reference types, each with its own requirements for bibliographic citation information. This bibliographic information, along with additional fields for romanization, translation, keyword coding, and workflow/editorial needs are covered in ca. 55 fields in our reference input forms.
For an efficient, highly adaptable, and easily distributable data input system, we have found, after trying several other systems, that FileMaker Pro can meet our current data collection needs. FM Pro is now Unicode compliant, so we can use multiple language characters in fields. We can easily set up related databases or tables for lookups and run scripts in the background to allow efficient data entry by personnel with no FileMaker experience. We have also been able to easily make different language versions of our input forms for use by collaborators in different countries. The “Advanced” version of FM Pro also allows for the production of free standing “run-time applications” that allows our collaborators to run our input forms on their computers without needing to have the FileMaker Pro application on their computers.
This is a screen shot showing the start-page of our data entry form now being used by our collaborators in China. It features full Chinese translation of labels and instructions. The buttons have scripts attached which takes the person to the next appropriate page.
This screen shot shows that a field record is kept for input personnel. By selecting the Reference Type in the second field, a script attached to the button takes the person to the appropriate template for that reference type automatically.
The data entry forms for each reference type have been designed for the most efficient data input and only show the subset of fields required by that reference type. Authority tables of authors and publishers are present, and multiple fields (such as the romanization and place of publication fields) are filled by entering or selecting the entry for the first field (i.e., Author and Publisher in language as published). For journal records, a related database inserts all journal information fields automatically by entering only the journal title. For “Sections in Edited Book” records, if the Edited Book record itself is entered first, when entering a record for each section, the book information fields are automatically inserted upon entering the book title.
Practical consideration of project sustainability from the start is essential.

Outside expertise (Raym Crow, Chain Bridge Group) has been invaluable to us in business planning.

We have learned that planning for the future should be integral to any project such as ours from its very first stages. Working closely with a sustainability consultant on a business plan for ARC/Base has proven invaluable to us, and we have a much clearer understanding of the many considerations we need to make for the project to succeed and stand on its own.
The success of the ARC/Base Project also depends on other people recognizing its importance and being willing to participate in the project with us. Because we need to include people from every country in East and Southeast Asia, ARC/Base must transcend many cultural, linguistic, and political boundaries and barriers. This has never been done on such a broad scale in our field before, and so we also must build a new community and a new culture of collaboration within our field.
Please contact us for more information on the ARC/Base Project, or if you would like to contribute to our work.