A Computer System for Retrieving Information by Artifact Type

— A Pilot Study Using Kofun Period Stone Bracelets —

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The quantities of artifacts and features studied by archaeologists in Japan have increased dramatically in recent years as a result of construction-related excavation work. At present the only way to get details about these new finds from all parts of the country is by reading excavation reports. But obtaining these reports is becoming ever more difficult. This interim report describes a computer system for retrieving the detailed information about specific artifacts published in various reports. This system will eliminate the need for the user to pore through a mountain of literature by hand.

The objects used as an example here are the stone bracelets thought to have been given to the powerful provincial overlords at about the time of the formation of the ancient Japanese state in the 4th century A.D. We made a formal typology of eight characteristics that reflect the manufacturing process used for the bracelets. We then used these characteristics to describe individual bracelets and thereby build the database. In a test of the system, we easily retrieved lists of all similar bracelets and mapped their distribution. The lists and maps then were used to abstract groups of bracelets made by the same craftsman and to study the historical significance of the bracelets in relationship to political developments.