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Polish National Record of Archaeological Sites - a Computerization

Andrzej Prinke

As described in the former paper, a systematic nation-wide site registration, carried out in Poland during the last fifteen years or so resulted in creating huge inventories at each voivodship (i.e. provincial) department of Archaeological Service. In Poznan, for example, we have so far about 20,000 file cards, while the whole of Polish Archaeological Record contains as much as 240,000 forms. This rich source of information could not be used efficiently in its traditional, paper-card shape and was therefore too often neglected or ignored. As we also very well know, in activities concerning protection of archaeological sites, quick access to adequate information sources is often crucial.

To make the first step towards computerization, we had to find a compromise between our needs and anticipations on one hand, and real limitations in terms of both funds and technology, on the other. Since in Polish conditions it was - and still is - rather unrealistic to plan a big, central database, that could be installed on a mini- or a mainframe computer, which could cover the whole country's inventory, we turned to the idea of so-called dispersed databases, of local character, operating on microcomputers (PC XT/AT/386), but using unified software and data structure; in that way, one still has a potential chance to combine the whole set of data in a future central system.

Starting with this presumption, during the years 1986-1990 we designed several successive versions of a database management system for the inventory of archaeological sites. The first one, of a reconnaissance character, was soon set in motion on a small 8-bit AMSTRAD computer; although very limited by the hardware, the system has played an important role at that primary stage of computer implementation in our everyday work, until the museum bought its first PC. The present version of the site database system, called SYSTEM AZP, (i.e. Polish Archaeological Record - PAR SYSTEM), v. 2.3, is written in Clipper '87. It is designed for a medium-range user, i.e. for a provincial museum or voivodeship branch of Antiquity Service and is supposed to manage a database of up to 20,000 records at a reasonable speed.

The structure of the data covered by the system is almost identical with the traditional file card, used in the Polish Archaeological Record project, which has become a Polish standard for any site inventory. It contains 38 fields, divided into 11 groups, such as: localization, physiography, present use of the area, chrono-cultural classification, soil type, site area and finds distribution pattern, threats to the site, survey authors, museum collections and other data (research history of the site, archives, bibliography, map no. and coordinates, etc.). The structure fields are as follows:
1. Town/village
2. County
3. Voivodship (province)
4. Number of an PAR working area
5. Site number within town/village
6. Site number within PAR working area
7. Finds inventory number
8. Physiographic region
9. Physiographic unit
10. Exposition type of a site
11. Exposition height of a site
12. Exposition direction of a site
13. Present use of site area
14. Soil type - general
15. Soil type - detailed
16. Observation conditions during the survey
17. Site area
18. Finds density
19. Site threats (Y/N)
20. Kind of site threats
21. Site value
22. Conservatory postulates
23. Date of survey
24. Card author
25. Card checked by
26. Collection
27. Sources of informations on the site (archive/field: excavation, surface, stray finds)
28. Former researches of the site
29. Bibliography
30. Map sheet number and name
31. X,y, coordinates of site location
32. Notices
33. Number of chrono-cultural units identified on the site

The following 5 fields describe each chrono-cultural unit in detail:
34. Site function
35. Culture
36. Chronology
37. Mass materials
38. Outstanding finds

printout parameters, no. of most often used data file to be open automatically after the program has started, name of the institution and its department - to be included into all documents created by the system, subdirectories for several types of files, created by the system, password, etc.).

The first menu (Fig. 1) offers some general functions, such as:
- changing the active data file
- further work with the PAR System
- creation of the structure of a new database
- copying, joining and deleting files
- execution of a single DOS command

It also leads us to the second menu (Fig. 2), which activates operations on a chosen, active data file. It includes the following options:
- displaying a single site card
- data retrieving menu
- printing menu
- copying of retrieved cards
- performing content frequency analysis for chosen fields
- execution of a single DOS command
- displaying current parameters of the system
- editing data
- deleting records
- appending new cards

Information on each archaeological site is shown on three following screens:
1. Chrono-cultural classification (Fig. 3)
2. Geographical data (Fig. 4)
3. Museum, archival, bibliographical and other information (Fig. 5)

Entering data includes several additional options, such as control of duplicated records, entering most typical information in abbreviated form and repetition of the last entry. The system checks the correctness of the data wherever it is possible.

The main function of every database system - data retrieval - is driven by a separate menu. It enables the user to formulate a retrieval condition which can be composed of any number of single criterium, each referring to any field of the record. It is possible to define two independent retrieval conditions and then to activate them separately or jointly by the use of the logical "or" conjunction. In more complex cases, the system allows external retrieval con-
Fig. 1. The Main Menu. Options: 1 - choose data file, 2 - continue work with the system, 3 - define file structure, 4 - join files, 5 - copy file, 6 - delete files, 7 - PC DOS command

Fig. 2. The Second Menu: 1 - display and browse records, 2 - retrieve conditions menu, 3 - printout menu, 4 - copy chosen records, 5 - analytics of current data file, 6 - PC DOS command, 7 - system parameters, 8 - modify data, 9 - delete chosen records, 10 - append new records
Fig. 3. Information on archaeological site - screen 1 (chrono-cultural data).

Fig. 4. Information on archaeological site - screen 2 (geographical data).
dations, formulated in dBase III code and read from a separate file. Printing parameters are formulated in a similar way by using the next menu. One can choose from among 7 types of printout of various format and contents; a user-defined printout with a free choice of any database field is also included.

After successful preliminary exploitation of the system in the Poznan Archaeological Museum, it was accepted by the Ministry of Culture and Fine Arts as the standard software for all local divisions of Antiquity Service in Poland. Copyright has been bought by the Historical Monuments Documentation Center (ODZ) in Warsaw, which systematically distributes it free to all those voivodeship (provincial) branches of Antiquity Service in the country, which have already been equipped with computer hardware.

Promotion of the system has been an important part of the whole enterprise, especially in a country where computers are not yet in general use. Taking this into consideration, we have organized training courses for 30 persons working for Antiquity Service from over all Poland; we have also prepared an extensive, simple, illustrated user's guide. As a further step in development of the PAR System, a tool kit of additional programs for database administrators, called PAR TOOLS, has been created, to simplify checking, modifying and analyzing of data. We are also planning to add some options with graphic presentation of the retrieved data, i.e. frequency of chosen features and cartographical illustrations.

Notes

1 Let me make a personal remark. It is especially pleasant for me to present the first Polish archaeological database here, in Copenhagen. It was here, in the prehistoric department of the National Museum, that I was for the first time attracted by the idea of computerizing larger sets of archaeological information, when, as long ago as 1985, I had been observing here the impressive development of a new EDP section of the prehistoric department. Some other sources of inspiration for thinking about computers emerged after coming back home; they came up in our everyday work with rich collections and intensive protection and rescue duties at the Archaeological Museum in Poznan.