Editorial

Preface: Proceedings of ArcheoFOSS XIII Workshop—Open Software, Hardware, Processes, Data and Formats in Archaeological Research [†]

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The meaning of an "open" approach in archaeology today probably implies many different, disconnected and even contrasting activities. A scholar may work on the most expensive and "closed" software, but share their data worldwide, fostering public access. Another may spend time working on open-source programs without being able to use high-definition pictures or 3D models of archaeological findings because of their country's IPR law restrictions.

The concept of "openness" touches different sides of the archaeological activity sensu lato, and the challenge of dealing with it, today, is certainly more complex than it was some 15 years ago, when a few young men, mostly PhD students or postdoc fellows, met in Grosseto to hold the first ArcheoFOSS day (namely: workshop on the Open Source, Free software and Open Format "nei processi di ricerca archeologici (in the archaeological research's processes").

As may be argued from the title, the two scholars who conceived and organized such an event (Giancarlo Macchi Janica, a historian, and Roberto Bagnara, a mathematician, both dealing with archaeological research) already targeted an interest spreading beyond coding, and looked to a more general reflection on working processes and models. Nevertheless, the earliest editions were mainly focused on the "open-source" software, thus stressing the aim of disseminating the value (and even the existence) of the open-source philosophy in coding and releasing software tools.

It was November 2006. During the last 15 years, the following edition of the event, in different parts of Italy, unveiled a series of concepts more or less connected with the Open Source approach, but spread its meaning well over the initial intents, as to reach a more general idea of "openness". Initiatives towards open data, the overcoming of IPR restrictions, and the creation of open hardware (allowing reverse engineering) are just a few examples of the content of the workshops organized previously.

In 2020, the movement gave itself a legal form, constituting itself as the ArcheoFOSS Association—APS ("Free and Open-Source Software" for archaeology). The purpose was to organize more systematic and lasting actions both within the national scenario, with the well-known problems relating to the opening of data and legislation in the field of cultural heritage, and towards the internationalization of the movement itself and of the values it represents. In this way, the movement can be recognized as a point of reference in the European academic and institutional network thanks to the decades of experience gained on open-source, free tools for cultural heritage.

The 2019 congress, and this volume, collecting its features, aim to respect and in some way emphasize such a multiplicity. The Scientific Committee paid serious attention

to check, in the proposals, at least one aspect connected to the "openness" in terms of data sharing, of collaboration processes, and of the theoretical analysis of legislation, even lacking the narrow ties of using open-source software. At the same time, they were encouraged to compare different kinds of software, in order to stress their qualities and limits and define improvement perspectives. At the same time, ArcheoFOSS shifted from a purely Italian dimension to an international one, as to reach, for the first time, a fully English proceedings edition.

The essays presented in this volume vary from a Python script for implementing a classification method based on geometric intervals in QGIS, different applications of free GIS, WebGIS, and databases for implementing and highlighting information and archaeological excavations for tourism, the Qfield app in QGIS, how free licenses are an important aspect when sharing knowledge, Bot for Telegram, the use of real-time open-source software and hardware, innovative uses in archaeology of Digital Terrain Models (DTM) from satellite data, and spatial data management.

The scientific soundness of the articles and the variety of the applications and purposes defines the possibility, in the archaeological field, to use new and open technologies to raise the consciousness of tourists and to help researchers in their studies. Even if the tool used is similar, or even the same, the purpose defines the innovation in the discipline. Often, and especially in archaeology, the novelty lies more in the use of the tools that lead to new knowledge of the subject, than in the creation of completely new tools.

The result, we think, is a faceted analysis of the state of the art of whatever may be defined as the "open approach" in archaeology, opening the way to a new generation of scholars, more conscious of the social value of archaeological research and of its ethical implications.