1. EDB 2.0
How Eagle Europeana project improved the Epigraphic Database Bari

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Abstract

The Epigraphic Database Bari (EDB) is an 'old' database, its story dates back to the late-80s of the last century. The implication in the project EAGLE - Europeana, network of Ancient Greek and Latin Epigraphy, has had a big impact on this database, expecially implementing the connection with other projects.

Keywords

Epigrapgic database, EDB, EAGLE Europeana, Christian inscriptions, Late antique inscriptions

1. Introduction

The Epigraphic Database Bari (EDB) is an 'old' database, its story dates back to the late-80s of the last century, when Carlo Carletti[1], inspired by Jory's experience on indexing CIL VI[2] started a project of digitization of the inscritpions commissioned by Christian from Rome between IIIrd and VIIIth century collected and edited in the 27.688 lemmas of the ICVR[3]. The data were stored in a a data processing programm, called ICVR, running under MS-DOS, later converted in a database for Microsoft Access, for internal use only.

To a very simple IT structure, organized by non-experts, matched from the very beginning a data structure that allowed the inclusion for each inscription, in addition to the text, of a number of indicators, expressed through symbols. They've been useful to place each epigraph in space and over time, to define its support, the executive technicque and the specific function and to detect the presence of *signa Christi* or other figurative decorations.

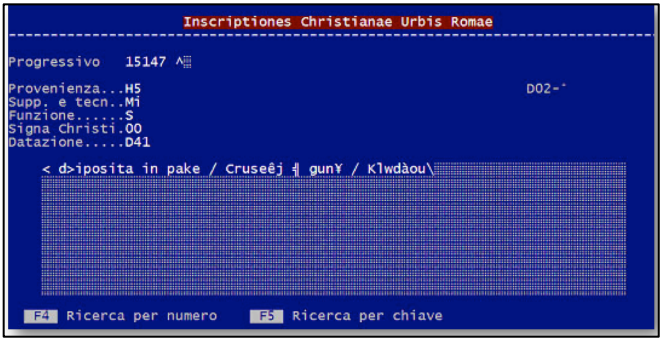

Fig. 1. The data processing programm ICVR in MS-DOS (1988).

[1] He was professor of *Epigrafia e antichità cristiane* in the former *Dipartiment of classical and christian Studies* of Bari University.

[2] Jory - Moore 1974-75. The six volumes of indices KeyWord-In-Context (each keyword is stored in the alphabetical index together with the text that follows it in the inscription) of approximately 40,000 texts collected in the VI volume of the Corpus Inscriptionum Latinarum (CIL) related to Rome are the printed result of a pioneering work of rearrrangement and reorganization of textual inscriptions, recorded in a database.

[3] The *Corpus* of *Inscriptiones christianae urbis Romae*, started in 1922 by A. Silvagni, has been mostly realized, during more than half a century, thanks to the relentless work of A. Ferrua, later supported by D. Mazzoleni and C. Carletti. It continues the work undertaken by GB de Rossi in the mid-1800s (IC), registering the inscription according to a topographic sort order for consular roads and suburban funerary settlements. Up to now for the completion of the work inscriptions found inside the urban walls and *falsae et alienae*, as well as the indexes.

The addition of what we call *metadata*, even if under the embryonic form of acronyms, was the fruit of the attention to the epigraphic object in the widest sense of written product. This feature is made even more meaningful by the characteristics of a large part of the analyzed inscriptions, for which data on the original pertinence to a particular monument or a specific part of it, allow, with reasonable certainty, to determine the membership of the customer to the Christian community and often to suggest dating, even in the absence of specific references in the text[4].

In the early 2000s, the ICVR database, containing more than 20,000 records, became part of the federation of databases Eagle (Electronic Archive of Greek and Latin Epigraphy), under the patronage of the International Association of épigraphie Grecque et Latine (AIEGL) as EDB (Epigraphic Database Bari) and extended its competences to the epigraphic documentation of Christian patronage of the city of Rome published after the volumes of ICVR.

Fig. 2. The EDB homepage in 2004 and 2009.

As a member of the federation the database became available online through its own dedicated website and finally, thanks to the EAGLE Europeana project, through a common portal.

Obviously this step has resulted in a series of changes and adjustments that led from the original basic structure of the database to the current one. Although each database continues to maintain, as part of the EAGLE, its character, dictated by its evolutionary story and the characteristics of its documentary base.

[4] Carletti 1994, Id. 1997a, pp. viii-ix.

2. The EDB structure

The current structure of EDB consists of a relational database, based on the programme open-source My-SQL, with a complex scheme drafted according to the most recent acquisitions of the epigraphic methodolgy: reestablishing historical and material value to the object, identifing each epigraph as a complex and polysemic product, consisted of text, but not only of it.

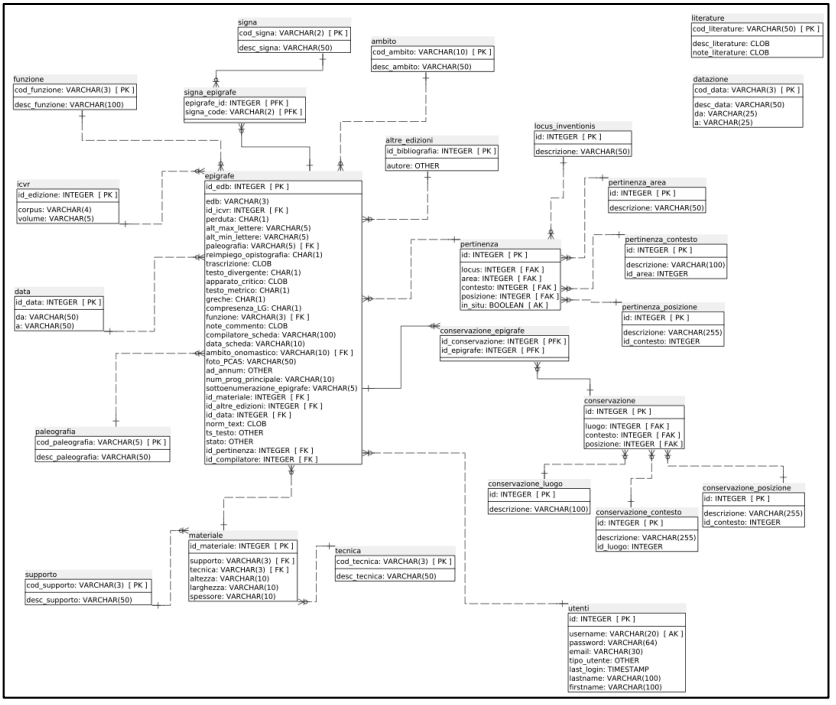

Fig. 2. The EDB database schema.

2.1 Bibliographic data

Each record includes the bibliographic data, in the first place, if any, those related to the ICVR, volume and edition number of the inscription, followed by bibliographic references posterior or alternative to the *Corpus* in case the inscription isn't recorded in it, and by the concordance with the other *Corpora* (CIL, IG, IGUR, IGC). The whole bibliography is structured in metadata and is available both on the website EDB, and in the EAGLE BPN group[5] of Zotero, a tool for managing bibliographic data that makes it

[5] www.zotero.org/groups/eagleepigraphicbibliography/items

easy to export and to cite it by anyone. An additional field allows to record references and links to other online databases. It's even possibile to define the relationship between the epigraph and the cited bibliography: *identity*, when it is an edition; *integration*, if it's the edition of another fragment; *opistographic*, if it's the edition of the inscription in the back side; *reuse*, if it's the edition of another inscription on the same support; *comment*, if it's a study on a related topic.

2.2 Geographic data

One key element of differentiation of EDB from other similar projects is the structuring of the topographic data. This is due to the fact that the inscriptions of interest of EDB pertain only to the city of Rome, an area far more limited compared to large geographic areas managed by other epigraphic databases, but also and above all to the fact that, as has been said previously, a large number of inscriptions of the Christians of Rome is still preserved in the place for which it was created, that is, to seal a tomb of an underground cemetery. Even if it isn't still in in its place on the grave, it is however often attributable to a specific area of the funerary complex.
Consequently in EDB geographic indications require a more detailed articulation than in the other databases, that requirew as maximum level of definition, often in the absence of detailed information on the place of discovery, just the city.

Data on the *original context* are therefore organized hierarchically in three related fields containing controlled lists. After selecting the area of the suburbs, identified by the name of the old street, or by the number of the Augustan *regio* for urban inscriptions, it's possible to select the monument from ta list of those pertaining to them: a catacomb or part of it, if it is large and complex, a church, a public building or an urban area.The third field allows access to a further associated list where can be selected the position of the epigraph inside the monument. In particular for the catacombs, can be selected the gallery or the cubicle, named with the acronyms used in the maps published in ICVR.

Is worth noting that this set of associated fields refers to the original place of belonging of the inscriptions and not to the place where they have been found, unless the two data coincide, that is in the case of inscriptions *in situ* or *suo loco adplicitae*, accordance with the definitions of the *Corpus*.
To complete information on spatial data, all cemeterial contexts have been georeferenced, so that their name is connected, via a link to *GoogleMap* that shows the modern entrance to the cemetery, with its coordinates and ad-

dress.

Experimentally only for the Domitilla catacomb on Via Ardeatina, the only catacomb with a georeferenced map of almost its entire length[6], it's possible to view maps of the various regions of the cemetery, associated with the acronym that indicates the precise position in the context, the third filed of the original position description. The maps in pdf, in their turn, contain all the inscriptions preserved *in situ* in their original position with a double mark that indicates the bibliographic reference ICVR and the EDB number, connected by a link to the record of the database.

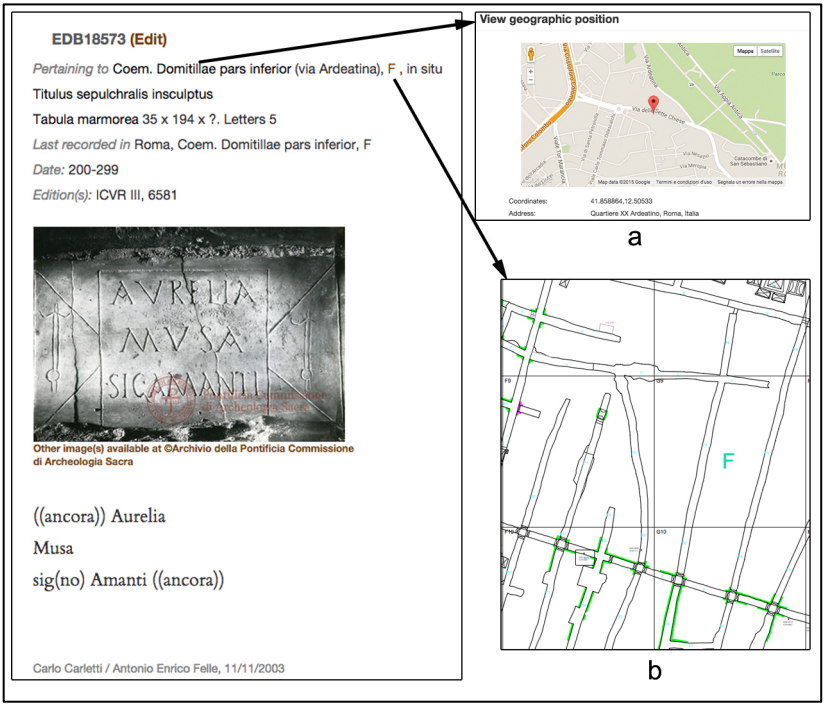

Fig. 3. The *original context* maps.

Even the geographic data relating to the place of conservation of the inscriptions are managed with a similar structure, but since there are not a few inscriptions for various reasons, even if produced in Rome, taken to other places in Italy or abroad the informations in this case are organizd in three related fields reporting respectively the list of the various cities, the list of the structures, such as museums, churches, catacombs, associated to each of them, and the of the specific positions in the context in which the object is

[6] Felle, Zimmermann 2014.

preserved.

Again georeferencing is guaranteed by the connection to GeoNames site[7], which allows to pinpoint the locatio of the city and to resolve any ambiguity between places homonyms, and a link to Trismegistos Collection[8], a database of papyrological and epigraphic collections, if available, helps to identify uniquely the place of conservation, as well as to obtain additional information, included the geographic positioning.

2.3 The description of the support

Ample space is given to the material description of epigraphs, with a range of informations that answer the questions "what?" and "how?": type of support and its sizes, executing techniques, height of the letters and palaeographical features, cases of reuse or opistography. For some of these fields (type of support and excuting technique), as well as to note the definition of the function of inscriptions, have been used controlled lists, integrated in the vocabularies of the EAGLE community, that aligne, harmonize, create relationsand translate into various languages the terms used by the various partners, and returne them in a format that allows to get a stable and unique identifier for each term, accessible and reusable by other users.

2.4 The text

As for the aspects related to the text of the inscriptions, a series of fields record the data about the language (Latin, Greek or forms of coexistence of latin and greek) allowing to describe bilingual and bigraphic phenomena, and if it's a metrical verse. The proper text of the inscription is transcribed in an apposite field, following the Krummrey - Panciera conventions[9], with some adjustaments. In particular as for the so-called "aberrant" forms that are not "normalized" to the "standard" model, if they are grapho-phonetic outcomes of linguistic modifications of both Latin and Greek.

While the fidelity to the original document respects and take in the due account the evolution of Greek and Latin language, it compromises the comprehension of the text and greatly complicates the search text. A standard query system, infact, is not able to match a query with all the inscriptions containing different spellings of a word. To face with this issue each inscription is stored in its original form and in a “lemmatized” form, where

[7] www.geonames.org
[8] www.trismegistos.org
[9] Krummrey, Panciera 1980; Panciera 1991.

each term is actually replaced with its corresponding lemma, possibly by taking into account its inflexed forms[10].

In EDB the transcription of the text provides a real pre-edition, with systematic expansion of abbreviations, hypothesis of integration, and, if possible, also an update version of the texts. It includes the description in double round brackets of non-alphabetic signs, such as figurative elements (fish, birds, praying, etc.) and the Christological monograms. The latter, among which include the monogram of Constantine made up of the initial letteres in greek alphabet of Ἰησοῦς Χριστός and the cross in their various forms, have been subjected, since the very beginning of the project, to a special attention due to their value as chronological indicators and as symbol of adherence to the Christian faith.

Other field record onomastic notes, about names not greek or latin, the proposed date and notes.

2.5 The search engine

It's possible to query the database through two options: a *Quick search* allows to choose the search only in one of the following fields: identifier EDB, bibliographic data and text; an *Advanced Search*, provides the opportunity to combine the search in the text and in other elements of the description of the documents.

Similarly to today's web search engines, EDB provides an advanced text search, in Latin and Greek, in the latter case an integrated tool facilitates writing in Greek[11], which allows users to obtain different results according to a default syntax, both in the case of search for a single word or for a set of terms, in sequence or not. Additionally, it's possible to choose whether or not to consider epigraphic diacritical marks, Greek accents and spirits and capitals. The textual search can be combined with other metadata related to bibliographic, geographic and material data, to the function, the reuse, the language and date, for single year or for defined intervals.

This wide range of possibility has been designed to reach users with iffe-rent needs: the occasional user looking for a particular inscription could just

[10] On the contrary, if the compiler recognizes aberrant forms as outcomes of misstatements and material mistakes of the stonecutters, he transcribes them with the appropriate corrections, following the Krummrey - Panciera conventions. Felle 2014 e Ceci, Pio, Rocco 2014.

[11] *Greek Inputter 2*, developed by J. Naughton it allows to write in greek using their usual keyboard and to digit with simple steps, various greek diacritical marks (http://babel.mml.ox.ac.uk/ naughton / polytonic-greek-inputter.html).

type one or morf words that that he is able to read and decipher, and the specialist who can access detailed information about a single epigraph or use the advanced search to query the database on groups of documents with common characteristics.

The search results are listed in a table showing the identifier EDB, bibliographic data, places of pertinence and conservation, the text of the inscription and a link to access the full record.

2.6 The images

EDB records are completed by one or more images and/or drawings and casts, if available, that help to evalutate the inscription into its material aspects, such as support and the techniques, and specialy the paleographic features. A series of cooperation agreements established between the EAGLE consortium and the Ministry of Culture (MIBACT) and the Pontifical Commission for Sacred Archaeology (PCAS) provide the ability to publish online photos, in low resolution and with a visible digital watermark, respecting the italianrules of the *Codice dei beni culturali*. Part of the digital images stored in the EDB repository have been taken from various collaborators during the past years, part drawn from publications, while a large number coming from the Photographic Archive of PCAS[12].

3. Conclusion

In this paper has been briefly described how the participation the project EAGLE - Europeana, network of Ancient Greek and Latin Epigraphy, impacted on EDB, a database with a long story that dates back in late 80s of last centuries, expecially implementing the connection with other projects.

[12] www.archeologiasacra.net

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CIG = *Corpus Inscriptionum Grecarum,* I-IV, Berolini 1828-1877

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