Epigraphic Database Heidelberg (EDH)

Or: the challenge of getting all ancient Latin inscriptions outside Rome available "by one click"

- A The history, formation, and future of EDH
- B The concept of EDH contents and changes
- Cross linking and networking in EDH
- **D** 1 "by one click" ...
 - 2 ... and beyond of it
- Perspectives for the future and their impact on the present of EDH

A The history, formation, and future of EDH

The formation of *EDH* in 1986 is due to two determining and closely connected factors. On the one hand to the vision of a scientific personality such as Géza Alföldy (died in 2011) was, on the other to the "Förderpreis für deutsche Wissenschaftler im Gottfried Wilhelm Leibniz-Programm der Deutschen Forschungsgemeinschaft", the Leibniz price which in that year was awarded for the first time. Alföldy numbered among the awardees of the first competition [Fig. 1]. And from the first moment he had no doubt about how to utilise the prize money of 3 million Deutschemark (corresponding to 1.5 million Euro). It would serve to realise an idea already fostered long before. Collector par excellence of epigraphic data, as he was, perfectly trained in using all the analogue instruments at his disposal by assiduously practicing [Fig. 2] autoptic documentation of thousands and thousands of inscriptions, the temptations of the new digital technologies did not escape his attention. At that time hardly more than mysterious Bytes and sequences of Bits without any evident or attractive value for common daily use, their first and faint-hearted rays were anyway perceptible in the orbit of the humanities.² And Alföldy took the opportunity: It was this the 'Future of Yesterday'! Today, about 30 years later, one might smile at these first attempts to

This paper reproduces my talk given at June 12th 2014 on the occasion of the "INSCRIPTA"-workshop "Rome outside Rome II" at the Mainzer Akademie der Wissenschaften und Literatur. The initially planned online publication on behalf of the organizers of the workshop finally couldn't be realized for various reasons (communication by E. Nikitsch giving the release to the authors for any other form of publication, 15th May 2017). Although the hereby aroused delay the paper reproduces the unchanged originally submitted version. – For correcting and improving the present English text version my sincere thanks are addressed to prof. Emily Baragwanath (Chapel Hill/NC). – Figures: Photos & collagues © EDH

A. Dafferner – F. Feraudi-Gruénais – H. Niquet, Die Epigraphische Datenbank Heidelberg, in: M. Hainzmann – Chr. Schäfer (edd.), Alte Geschichte und Neue Medien. Zum EDV-Einsatz in der Altertumsforschung, *Computer und Antike* 5 (St. Katharinen 2000), pp. 45–65.

walk [Fig. 3]. But, at the same time, one has to acknowledge the fact that here was established the basis for the applied epigraphy of today: both as stimulator, even partly as initiation for a series of further database projects which are now considered indispensable [Fig. 4] - just to mention EDCS, EDB, EDR, Lupa, HEpOnl, Epigraphic Database for ancient Asia Minor, and R.I.D. 24 Cologne³ – as well as of international portals of ancient epigraphy [Fig. 5] - namely EAGLE, and eagle-europeana4; and as propagator within the very epigraphic discipline as well as in cross-disciplinary contexts and, last but not least, outside of the merely academic interest groups, as particularly schools, [Fig. 6] where 'Latin on Stone' will increasingly claim more interest in curricula until now dominated by teaching exclusively ancient literary texts. The term "epigraphy" (although occasionally confused with "epicentric" by amiable but too-ingenuous contemporaries ...) has lost in the course of the past three decades the touch of the exotic and remarkably has found access into related neighbouring disciplines. Ancient inscriptions have gained the broadly accepted status of a category of source to be considered as a matter of course, whose assumed 'smell of the arcane' doesn't seem to frighten any more. Admittedly we don't know how the carreer of epigraphy would have proceeded without the event of 1986 described above. But it should be beyond any doubt that the foundation of EDH had a dramatic impact on it. In any case, Alföldy's vision, to (quotation) "build up a database conceived as a long durable project and constructed according to interdisciplinary criteria for gathering and editing ancient latin inscriptions⁴⁵ became reality. Part of this reality is, that EDH never consisted only of one single database, but, from the very beginning, consisted of three databases. [Fig. 7] In addition to the main database, the text database (EDH-ETH), there also existed, from the very beginning, photographic (EDH-EFH) and bibliographic (EDH-EBH) ones. Alföldy of course hadn't any idea at that time about the term "cross-linking"; nor could he imagine the hardheadedness of some of his future collaborators, who insisted, although against the temporary contrary suggestion of the commission of the Union of the Academies of Sciences, in freeing the smaller electronic data archives gathering photographic and bibliographic information from their shadow existence, by enhancing and cross-linking them with each other and with the taller text database;

EDCS, EDB, EDR, LUPA, HEpOnl, Epigraphic Database for ancient Asia Minor, R.I.D. 24 Cologne.

EAGLE, EAGLE-europeana.

Cf. C. Freihaut, in: Der Rektor der Universität Heidelberg (ed.), Uni-Spiegel 18, 1986 (Juli), p. 3.

furthermore in retrodigitising the analogue photo inventories and putting them online as well. In any case, it remains the merit of Alföldy not to have undervalued the potential of those side-products, as thousands of thousands of bibliographic citations and photos and to have judged their metadata worth gathering in proper databases.

Established in 1986 and within 5 years grown into a solid working instrument, *EDH* found its long term home at the *Heidelberg Academy of Sciences and Humanities (Heidelberger Akademie der Wissenschaften, HAdW)* in 1993 as a so-called 'long term project', funded since 1995⁶ by the Federal Government and Federal Land of Baden-Württemberg, after an interim period of funding by the *Fritz Thyssen Foundation* (1991-1993).

The most important caesura within its henceforth 11 years duration of life was the connection of *EDH* to the world wide web in 1997, scheduled to coincide with the 13th International Congress of Latin and Greek Epigraphy at Rome⁷, where the very first internet version of *EDH* was ready to be introduced to the scientific community, followed in 2004 and 2007 respectively by the internet version of the Bibliographic Archive (*EDH-EBH*) and Epigraphic Photo Archive (*EDH-EFH*).

The *EDH* lived to see a further caesura with the transition of the project's leadership, which, in the year 2007, changed hands from Alföldy to Prof. Christian Witschel together with the chair of the Institute for Ancient History and Epigraphy in the succession of Prof. Alföldy, where *EDH* had been hosted as a third part funded project since its very beginnings.

But, even so called 'long term projects' do not have everlasting life spans – which is enough to make one expect a third caesura. The end of funding of *EDH* on behalf of the *HAdW* is set for 2020. The criteria for those terminations usually lay outside of both the inner logic of successfully performed projects, funded with several million Euros, and the external expectations of reliable and well established research tools. If the forthcoming running down of the project's funding were to be effectively synonymous with the end of the project, actually this would be a *praematura mors* which certainly would be in no one's interest. Therefore we will pin all our hopes on a fourth caesura ...

By means of the affiliation into the Akademien-Programm of the Bund-Länder-Kommission.

G. Alföldy, Il futuro dell'epigrafia, in: *Atti del XI Congresso Internazionale di Epigrafia Greca e Latina*, Roma 1997 (Roma 1999), particularly pp. 95–102.

B The **concept** of *EDH* – contents and changes

One of the most important requirements for the concept of EDH was, from the very beginning, to gather, in a very close-knit way, ideally ,all' published Latin inscriptions and thereby to incorporate especially all those inscriptions published outside the respective great Corpora, in thousands of often outlying single publications and papers of rare journals. In all this the relevant bibliographical guideline was, and, inter alia, still continues to be, L'Année Épigraphique (AE),8 which anyway lists a large proportion of the mostly Latin inscriptions published or edited since 1888. According to the strong principle of EDH, that no single inscription should be there entered without having been verified at least on the basis of the original publication (or better of course, but far more seldom, by autopsy), EDH from the very beginning has based its revision of the inscriptions on a comprehensive and constantly growing card-index [Fig. 8]. Here are collected, corresponding to the years and numbers of AE, the prints of (nearly) all papers there mentioned. An old-fashioned, voluminous and (for a database project!) quite non digital, analogue 'fossil', admittedly. But a fossil that is extreme welcome and gratefully consulted, not only by the collaborators of the EDH, but also by the staff as well as the awardees of the Department for Classics and especially guests and scholars of the Institute for Ancient History and Epigraphy at Heidelberg. Not at least for that reason this 'fossil' of a card-index will serenely survive any digital hype and, in connection with that, a certain, but I'm sure temporary, lack of understanding of that material kind of research instrument.

The aim of gathering 'all' Latin inscriptions, with personnel capacity that number, to this day, never more than two full posts for epigraphers⁹ and a half post for a computer scientist, is certainly ambitious, not to say unrealistic. All the more so given an entry mask of about 50 entry fields with a quite differentiated spectrum of input options per field [Fig. 9]. Actually a maximalist enterprise, though no researcher of history would term it as such; but on the other side one must also point out that a database which is to remain feasible, requires compromises, and quite aside from the number of its staff. So, there was the need of restructuring: And its result was a reduced entry mask with only a few requested fields

Revue des publications épigraphiques relatives à l'antiquité romaine (Paris 1888–).

Plus, since 2002 resp. 2013, two half posts by adopting colleagues from two former neighbouring HAdW projects (Papyrus-Editionen resp. Année Philologique) having expired in these years.

[Fig. 10], with indeed still numerous, but nonetheless streamlined optional fields [Fig. 11] and considerably purged selection menus [Fig. 12].

But this was only one side of the coin. For the original concept of gathering ,all' Latin inscriptions had to be aligned to the hard facts not only of a low personnel ceiling, but also of continuously newly discovered and published inscriptions, of constantly new and secondary tasks to be managed, and of the meanwhile imminent end of the project in 2020. The solution was to focus on a *regional principle*. Thanks to the existing cooperation with internationally wide spread partners of EDH at the top of the epigraphic scientific community, it was possible to outsource parts of inscriptions regarding geographic regions so far edited in EDH. Under the label of EAGLE [Fig. 13] (Electronic Archive of Greek and Latin Epigraphy) an international network and internet portal was created in 2003 in Aguileia [Fig. 14]. At this opportunity and as its consequence there have been established two entirely new epigraphic databases, namely since 2003 and according to the model of EDH the Epigraphic Database of Rome (EDR) for the inscriptions of the regiones Italiae, and since 2004 the Epigraphic Database of Bari (EDB) for the Christian inscriptions of Rome and Italy, whereas the project Hispania Epigraphica online (HEpOnI), already existing since 2002, has been imbedded in EAGLE [Fig. 15]. Since 2003, therefore, the responsibility for the database editing of all inscriptions [Fig. 16] of the ,European provinces' falls to EDH. In other words, EDH is actually and in a pretty literal sense dealing with the inscriptions "outside Rome", at least from a geographic point of view!

As an effect of the extensive so called 'modularisation', which was decided at the last major evaluation in 2006, according to which the editing of inscriptions must follow a geographic principle, that is to say by Roman provinces, at this moment there are available in *EDH* nearly completely and provided with a tight set of metadata the Latin and bilingual inscriptions of the following provinces, coloured green on the map: *Dalmatia* (7.500), the Balkan provinces *Moesia Superior* (1.500), *Thracia* (350), *Macedonia* (1.300) and *Epirus* (140), moreover the eastern Danube provinces *Moesia Inferior* (1.900) and *Dacia* (3.500). Currently not far from completion is the editing of the inscriptions of *Noricum* (2.700). From this point we will now carry on with *Raetia*, the Pannonian, the German, the Gallic and, finally the Britannic provinces. There will be a great deal to do, indeed. But, on the other side, much has already been done. Just to quantify it, *EDH* has at its disposal at present more than 67.000 (36.000 of them thoroughly) elaborated datasets offering inscription

texts and extensive metadata; combined with their respectively on an average 16 specified metadata the whole potential amount of information adds up to 1.1 Million metadata freely available through the web search of *EDH* [Fig. 17]. Not included here are the 'collateral' but actually enormously important pieces of information like photos and precise and literally handpicked GIS and further geographic data. But more on that below.

C Cross linking and networking in EDH

How may a workload like this be managed? The magic word is "cross linking"! In fact *EDH* practises cross linking as well as networking on three different levels, namely on an *internal*, an *external* and a *structural* level [Fig. 18].

On the *internal* level networking within *EDH* occurs across the four sub-databases, thus, as well as in the <u>core database (*ETH*)</u>, in the <u>photographic (*EFH*), <u>bibliographic (*EBH*)</u> and <u>geographic (*EGH*)</u> databases. The digital archives for the data related to the inscription texts, the photos, and the bibliography are available online and indeed well-established research instruments in high demand. The user interface already shows the structures of these databases, which are basically the same in each case [*Fig.* 19], whereat the text database with its 10 tables [*Fig.* 20] is certainly the most complex compared to the bibliographic database with only 5 tables and the photographic one with only 1.</u>

With its about 15.000 entries currently, the *bibliographic database (EBH)* gathers all the bibliographic titles recorded in the respective datasets of the epigraphic text database related to a bibliographic reference of *AE*. Cross-linking from the bibliographic to the text database is equally possible as corresponding search results within the complementary databases (e.g. *ETH* to *EFH* and/or *EBH*) [Fig. 21] are additionally indicated.

Searching, instead, in the *photographic database (EFH)* of *EDH* for the modern find spot "Mainz", which contains at present about 1.100 (out of 25.000) digitised items (retrodigitised as well as primary digital images), leads as its result to the ID-number of the respective dataset in the text database *[Fig. 22]* which, all the same, is the requirement for showing the respective photo in the search result of the text database.¹⁰

It is obvious that there is a lot of potential to be tapped out for a bidirectional, if not interactive, linking-up with the newly created systematic database dedicated to the ancient inscriptions of Mainz,

Not yet publicly accessible via the internet, but nonetheless already serviceable for the public user, are the data of the fourth sub-database of EDH, the geographic database (EGH). Actually the user will find a link to each of the 24.500 find spots of inscriptions, located so far, and, ideally, to each of the 14.000 specific find spots (such as churches, streets, guarries, ...) which refer directly to a google map with a handpicked Pin showing the respective find spot. 11 For quite a few Roman provinces this – necessarily manual! labour has already be done, so for Dacia and Noricum and for parts of Raetia and even Tripolitania. The controlling and supervision is carried out by the already mentioned [Fig. 231 geographic database of EDH, which was only established in 2012. Beside the ancient and modern names of the find spot, which can be quite hard to find out as a result of deficient, imprecise, and, especially concerning the valid levels of modern administration, inconsistent declarations in the editions and secondary literature, the geographic database of EDH also specifies the pertinent geo coordinates as well as the respective and unique IDs from Geonames for the modern, and Pleiades/Pelagios for the ancient names of find spots. 12 The internal cross-linking with the text database finally occurs via the internally generated geo ID number, which, for its part, is implemented in a proper field [Fig. 24] of the text database. 13

[Fig. 18] The external level of networking within EDH works in a conspicously different way. It consists of a bundle of linkings to other epigraphic data archives, which need not necessarily be proper text databases. Despite all the heterogeneity of the linking destinations, two requirements must be met at all costs: there must be interfaces which are both scientifically sound, and in quantity adequately large.

Thus *EDH* has links *[Fig. 25]* to the photographic archives of the *Corpus Inscriptionum Latinarum* (Berlin), the *Centro CIL II* (Alcalá), the *Lupa Picture Database* (Salzburg/Wien), the *Inscriptions of Philippi in Pictures* (Nürnberg-Erlangen) and the *U.S.*

11

presented today by Marietta Horster.

Empirically valued there is no way of cutting short this process via automation of this process, so far at least, unless one accepts major imprecisions or even sensitive faults.

Geonames, Pleiades / Pelagios.

In the course of a relaunch of the internal entry masks of the databases of *EDH*, the entry of the geographic data of the various sub-databases of *EDH* will occur exclusively via the *geo db (EGH)* I've just described.

Epigraphy Project (Providence).¹⁴ In effect this implies 5.300 additional photo-links, which make it easy for the user to compare the transcription edited by *EDH* with the original inscription and also to get an idea of the entire monument. – It becomes evident that the projects I've mentioned, in addition to the photos, increasingly make available also the respective metadata and frequently transcriptions of the inscriptions [Fig. 26], which users of *EDH* may access, if required. Thus in nearly all cases we're already dealing with reciprocal links [Fig. 27], since *EDH* links to external photos, which in turn [Fig. 28] link back to the transcriptions of *EDH*.

Beyond this, *EDH* also provides links to the pages of projects that collect the data of inscriptions already collated in *EDH*, but don't, at the moment, figure within its main tasks. Currently they concern *[Fig. 29]* the inscriptions of the *regiones Italiae*, completely delegated from *EDH* to *EDR*, the Christian inscriptions of Rome edited in ICUR delegated to *EDB*, the majority of the inscriptions of Spain delegated to *HEpOnI*, and the *IRT* (*Inscriptions of the Roman Tripolitania*) electronically edited by the King's College London. In this way we ensure that all these inscriptions can be found by searching in *EDH*, even as those users are directed to the here-mentioned websites for further and possibly better information.

Finally, the interfaces offered by *EDH* were also used for links coming from outside. *[Fig. 30]* To be specific this concerns first of all links from *EDCS* to *EDH*, thereafter from *EDR [Fig. 31]* to the rich collection of digital images of inscriptions from Italy stored in the photo archive of *EDH*.

[Fig. 18] There remains to be mentioned also the *structural* level of links: Here we are dealing with specific formats of cooperations, practically focussing on work-sharing measures. Implicitly this aspect was already dealt with what we said before, especially because some of the above mentioned projects are identical with the protagonists of EAGLE founded at Aquileia in 2003.

But, beyond such institutionalised cooperation in work-sharing, structural linking regarding *EDH* implies a bit more, i.e. the dedicated temporary involvement of researchers

Corpus Inscriptionum Latinarum (Berlin), the Centro CIL II (Alcalá), the Lupa Picture Database (Salzburg/Wien): (see above note 2), the Inscriptions of Philippi in Pictures (Nürnberg-Erlangen), and the U.S. Epigraphy Project (Providence).
 IRT.

or research institutions in their capacity of proved experts of the inscriptions of determined parts of the Roman provinces. By means of the technical possiblity of entering inscriptions also from outside the Heidelberg Research Center of *EDH* (as one option), or during research visits directly at *EDH* (as a second, not less attractive, option), regional epigraphic know how may be directly imported in *EDH* to the benefit of the user. In practice this kind of linking has been realised regarding [*Fig. 321*] the inscriptions of the following provinces and regions: the *Alpes* (Genoa, Turin), the *Germaniae* (Osnabrück), *Epirus* and *Macedonia* (Munich), the Hispanic inscriptions of modern Catalonia (Barcelona), the Noric inscriptions of Carinthia and Slovenia (Graz, Ljubljana, Vienna), the Greek inscriptions listed in *AE* (Eichstätt), ¹⁶ as well as selected inscriptions of *Tripolitania* (British School at Rome). Certainly it would be quite innocent to believe that all those links would be available 'for free' on both the contributors' and the hosting side, but the benefit in terms of quality and content generated that way would be worth this investment.

But, what's unique about a dataset of the text database of *EDH* as the most complex form of datasets within the various sub-databases of *EDH*, and in view of all these linkings?

It should become apparent from what we've already said that its structure essentially consists not only of a simple addition of numerous metadata on one single level, but that its substance is crucially compounded by embedding of and semantical linking with coordinates on further key levels. A single data set in *EDH* reflects just this constellation: [Fig. 33] on a two dimensional level it consists of the about 50 fields of the text database (ETH). The very linking with the respective levels of the internal subdatabases of EDH [Fig. 34] — photo archive (EFH), bibliography (EBH), geo database (EGH) — enlarges the available information into a third dimension. All that, finally, is supplied by the information packages of external databases [Fig. 35], which are individually attached to the single data sets in EDH. That way an EDH dataset is distinguished in being a closed three dimensional entity, stabilised by the supporting beams in the form of external linkings.

As an experiment regarding how to deal with electronic data archives of Greek inscriptions.

D

1 "by one click" ...

So far on the back stage level. The practical and visible result of the concept, the setting of polydimensional linkings, and, by means of this the embedded synergies, all as described above, takes its form in the search result itself. *[Fig. 36]* We've now reached the core of the "by one click"-issue.

The user is offered the choice between two formats: a complex, and a simple formular. The simple format isn't anything other than a reduced version of the search result based on the metadata content of the detailed dataset. Switching from the one to the other format of the search result is possible at any time. The reduction simply offers a visual clearness that meets the individual expectations and requirements of the rather broad user group, which consists of researchers as well as teaching personnel for Latin or history at school.

Explaining just the result template of *EDH*'s text database would fill up a proper lecture. For that reason I'm restraining myself today to presenting the basic structure of a single dataset, especially in view of the already mentioned linkings and synergies, which the following three aspects bring into focus:

- A) the unique features of *EDH* (compared to other epigraphic databases),
- B) the actual and potential interfaces with other epigraphic databases, and
- C) the challenge of producing within a limited span of time a quantitatively and qualitatively optimum of datasets.

[Fig. 37] Let's start from a concrete case, a search for inscriptions from "Dacia" found in the ancient colonia of "Sarmizegetusa" in today's Romania.

Actually, the very existence of Dacian inscriptions in *EDH* and the very way of their recording already represents a central and unique feature: Not only that the about 3.500 inscription texts and the respective metadata of this province, which in view of its relatively short-lived existence of less than 200 years (106–271 A.D.) is markedly rich in epigraphic sources, are completely gathered and edited in the best possible way: that is with the relevant bibliographic information, strictly avoiding generating doublets, triplets, or even quadruplets, which may be taken for granted only by an attentive and time consuming

bibliographic comparison and which has been assured by the systematic localizing of every single find spot. The approach, in this example realized for *Dacia* with its extremely difficult geo- and topographic local factors, is in any case a valid showcase also for the working method to be applied in further Roman provinces. *[Fig. 38]*

For *Sarmizegetusa* the result amounts to 616 datasets, which is indicated on the top of the result page; that, by the way, together with the information about how many entries regarding the requested data of *"Dacia"* and *"Sarmizegetusa"* are to be found also in the remaining sub-databases, the bibliographic and the photographic one. But let's now focus on a single dataset of the text database *(ETH)*.

A dataset of *EDH* consists, in its extensive format, of all together 10 semantic sections respectively subdivided into several tablets: *[Fig. 39]* These are 1) general data, 2) find spot / present location, *[Fig. 40]* 3) type of inscription, of monument and engraving technique, 4) chronological data, 5) historically relevant data (social, economic, legal history), *[Fig. 41]* 6) basic literature, 7) short commentary, 8) analytical prosopographical section, *[Fig. 42]* 9) text of inscriptions in a twofold display (transcribed and diplomatic) 10) visualization section (photos, drawings) from internal as well as from external inventories.

A) From the perspective of the *unique features*: Yet the clear arrangement of inscription text and metadata on the result page, despite its complexity in terms of content, is one of the central unique features for the electronic presentation of the latin and bilingual inscriptions from the provinces of the Roman Empire. And, mutatis mutandis, is the same true for the detailed single items of information, in regard to which the *EDH* attempts to connect a simple presentation with the essential depth of focus:

thus emphasis needs to be given to information that supplies the necessary orientation [Fig. 43] in section 1) regarding the date of the last update (visible in the detailed view) and the actual work status; [Fig. 44] in section 2) the handpicked localization, frequently narrowed down to the very point of the single find spot, and the actual present location; [Fig. 45] in section 3) all representative information necessary to classify a monument in terms of its content, and regarding the physical materiality of an inscription considered as part of a monument, including the data regarding its measurements and its material; [Fig. 46] in section 4) chronological data; [Fig. 47] in section 5) at least the indication whether an inscription contains evidence for social, economic, legal, military or

religious history; [Fig. 48] in the sections 6) and 7) the relevant differentiated, aligned and, where necessary, even commentated, bibliographic references; [Fig. 49] in section 8) summary ("Name") as well as analytical prosopographic, biographic (lifetimes) and social (social status) entries; [Fig. 50] in section 9) the most reliable possible transcriptions including their diplomatic display; [Fig. 51] finally in section 10) controlled links with digital images, originating both from the internal inventory of EDH and from external picture libraries.

B) From the perspective of the *interfaces*, i.e. the potential of the existing interfaces of *EDH* and its specific use: As already mentioned, these are by no means merely additional accessories; in fact they have gained, in the course of the genesis and enhancement of the project, the status of a distinctive feature of *EDH* sine qua non.

That is, of course, especially true for the opening of the electronic archives of photos and images, which gives users the chance to compare transcription and original by themselves, and recently also for the indication of the find spots, which are generally connected to each dataset and offers another chance to analyze and realize the potential of this kind of information. - The background for all that is the objective, not to see the inscriptions, historical and sociocultural sources that they are, as isolated objects, but to understand them as much as possible in the context from their original or at least (re-) contextualised sphere of action. Towards this objective, EDH treads several paths at the same moment: first, the handpicked and as far as possible precise localisation of the findspot (visualised by a pin on google-maps); second the linking on already existing, standardised, even if less precise archives of geodata such as *Pleiades* for the ancient and Geonames for the modern findspot names [Fig. 52], controlling for which is organized via the internal sub-database of EDH, its geo database (EGH); finally the linking on the web-based open data platform for ancient geo data as Pelagios [Fig. 53]. 17 One must emphasize, that in all this we are concerned with a reciprocal exchange of information and data, since not only does EDH refer to the aforesaid archives (Pleiades, Pelagios), but the precisely identified geo data, via a complex matching procedure, also serve to optimise those archives. 18

See above note 12.

Via cooperations with the *Ancient World Mapping Center (AWMC)*, and the *Pleiades Project* (see

Moreover, the *prosopographic data* of *EDH* in particular have much potential, and are, hence, available for use as further interfaces. As a first step the linking to the *Prosopographia Imperii Romani (PIR)* is already active, though there is still need for much further optimization *[Fig. 54]*. On the other hand, the use of the high prosopographic data potential of *EDH* currently is in a status nascendi, namely within the framework of a quite ambitious project for the identification of all documented persons in the Ancient World in the shape of the *SNAP*-project *[Fig. 55]*. ²⁰

C) Form the perspective of the *challenges*: All of these ambitions, however, in the every-day work of the project meet their very concrete limits, whether natural or arbitrarily set. The combination of a relatively small number of scientific personnel, an increasing effort per data set due to its growing complexity, and the limited ,life time that remains (until 2020), necessarily demands that one walk on a tightrope between preserving of the approved quality and fulfilling the claimed quantities. That is all but a cakewalk! Time is marked out by the so called 'modules' defined by external committees to evaluate the project. *EDH* is running according to plan, it will, hopefully, pass the challenge; but, in doing so, one also has to realise that the work of *EDH* won't be concluded in 2020. *[Fig. 56]* For, just to choose an example, what about the 'non-European' (Latin, bilingual, Greek) inscriptions of the Roman Empire? In terms of a scientific responsibility as well as a social one (just to mention the continously stressed taxpayers' money!) the real challenge lies just now in attending to the care of the post-2020-future.

2 ... and beyond of it

Regarding that future time, in fact, there exist many ideas but few final conceptions. Anyway it is sure, that one must immediately secure a sustainable form of data storage! Though invisible to the user, this is a large issue which can only to be touched on here. Most essential is that existing data be kept available in a format that ensures their proper archiving and, hopefully, their further utilisation. It is no question, [Fig. 57] by now, that XML in the internationally established schema of TEI/epidoc is the format to be preferred.

above note 12).

¹⁹ **PIR**

Standards for Networking Ancient Prosopographies.

Appropriate conversions of data from *EDH* into *epidoc* have already been started and will

be carried forward.

Thus, the backstage for achieving reasonable results "by one click" is quite complex, as

should have become clear. We started from a 'simple' search of *Dacian* inscriptions from

Sarmizegetusa. But it is exactly here, where we are confronted with the understanding

required for working on and with an interactive and multifunctional service of databases.

That is: the easier to handle their front end [client side] is ("by one click"), the more

complex and labour-intensive it is on their back end [server side]. It is an illusion to believe

that databases would diminish work on all fronts.

E Perspectives for the future and their impact on the present of EDH

With this I'd like to conclude for today. Not however without stressing the fact that the

highly esteemed "by one click"-service of EDH is equipped with all but an automatic

guarantee for a ,long-life-durability'. The challenge of making inscriptions available "by one

click" implies, therefore, a strong time limited component. The effective presence of EDH

will noticeably be determined by the perspectives and plans for its future. Let that be

material for another talk, which, no doubt, today would look different than it would in one

year's time. [Fig. 58] But, luckily, the challenge remains.

Dr. Francisca Feraudi-Gruénais

Epigraphische Datenbank Heidelberg (EDH)

FS der Heidelberger Akademie der Wissenschaften

c/o Seminar für Alte Geschichte und Epigraphik

der Universität Heidelberg

Marstallhof 4, D - 69117 Heidelberg