

1. Background/History

iDAI.field is a relational database designed by the German Archaeological Institute (DAI) originally intended for in-field archaeological documentation and research. It is based in Filemaker Pro 12 and has been in development since 2005 with over 35 different DAI projects based throughout the world using it. It is versatile in the sense that it can be used online or offline depending on a project's needs and is interoperable with several other DAI databases, such as Arachne for images and the iDAI.gazetteer for site locations. Additionally, it is in the process of being mapped to CIDOC's Conceptual Reference Model in order to increase interoperability with databases operated by projects outside of the DAI.

The MayaArch3D project has been using the iDAI.field since 2011 and has modified a version of it to fit project needs. It is designed to provide attribute data for the 3D Web GIS and 3D Single Object Viewer, two web-based research tools being developed by the MayaArch3D Project, in addition to acting as a standalone database for archaeological research. The most significant modifications made by the MayaArch3D project include the addition of several tables for storing information about 3D models, iconography, and individuals and organizations. Other modifications include the addition and discontinuation of various fields throughout the database to better suit our needs.

2. Getting started

2.1. Download and installation of FM Pro

Since the MayaArch3D database was developed on the Filemaker Pro 12 platform, users will either have to purchase a copy from the Filemaker Pro website or use an existing version (version 12 or later) on PC or Mac. For a trial copy of Filemaker Pro, click on the following link to the Filemaker Pro website:

<http://info.filemaker.com/US-en-FMP-Trial-Form.html?try=fmp12-product-try>.

From here, fill in the required information, download your copy and install.

2.2. Accessing the database

Once your installation is complete, you will have to log into the database remotely – through the internet. Depending on your association with the MayaArch3D project, you will have one of three levels of access. The first level of access includes reading and query access, the second level includes reading, query and record creation access, and the third level includes reading, query, record creation, and editing or deleting of records.

In order to log in remotely, open Filemaker Pro and navigate to “Remote Access” under the “File” tab. This will open a dialogue box with a number of available options (Fig. 1). Find the field located near the bottom titled “Network File Path” and enter “fmnet:/134.95.117.121/iDAIfield_welcome”. Ignore all other options and click “Open”. This will bring you to a small window with four hyperlinks. Click on the MayaArch3D link and enter the username and password provided to you by Dr. Jennifer von Schwerin. If you are experiencing any problems with accessing the database please contact your IT specialist or Dr. Jennifer von Schwerin at jvonschwerin@dainst.de.

3. Precautions

- 3.1. Please keep in mind that all changes to the database are permanent. There is no undo option. So, if your account provides editing or deletion abilities, do take care when using the database. One of the more common mistakes involves accidentally editing data while the user believes they are in find mode. Please verify which mode is being used before typing in a field. Additionally, do not change any data unless it is necessary. However, if a mistake is made, simply email Dr. Jennifer von Schwerin (jvonschwerin@dainst.de) to inform her of the details.

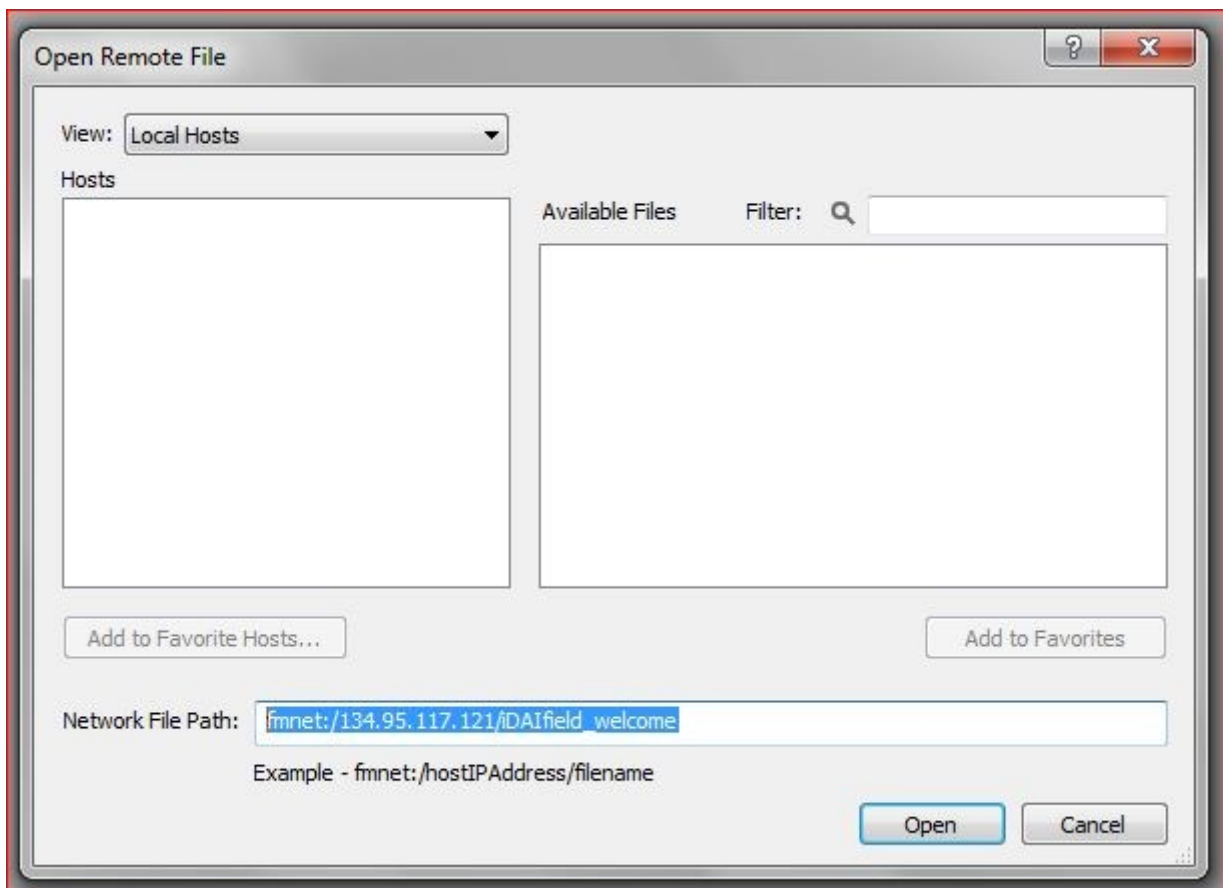


Figure 1: Remote Access Options

4. Navigating the Database

- 4.1. Once the database has finished loading (which will take several minutes), you should be presented with the start page of the database (Fig. 2). This is where you can see the underlying relational structure of the database tables. At the top, the Archaeological Sites table represents the largest scale of the database and as you traverse downwards, the level of specificity increases until you arrive at individual objects, and finally the iconography and inscriptions on those objects. You may also notice that some of the tables are highlighted in red, while others are black. Given the work-in-progress nature of the database, this serves to give the user a quick understanding of where data is located in the database. Tables highlighted in red contain data, whereas those in black do not. As of 27.04.2015, there are a total of 46,781 records held in the database. Roughly 15,000 are held in the Structures table, 6,500 in the Archaeological Sites table, 6,500 in the Coordinates table and

5,200 in the Stone Object table. The rest are distributed throughout the remaining tables.

- 4.2. Towards the upper right side of the page, you will find tables containing various data that can pertain to any of the main tables, such as photographs drawings and 3D models. Additionally, administrative tables reserved for MayaArch3D staff can be found towards the bottom right side of the page. Finally, the two flags provide the option of switching the interface between English and Spanish. However, the Spanish interface is still a work in progress.

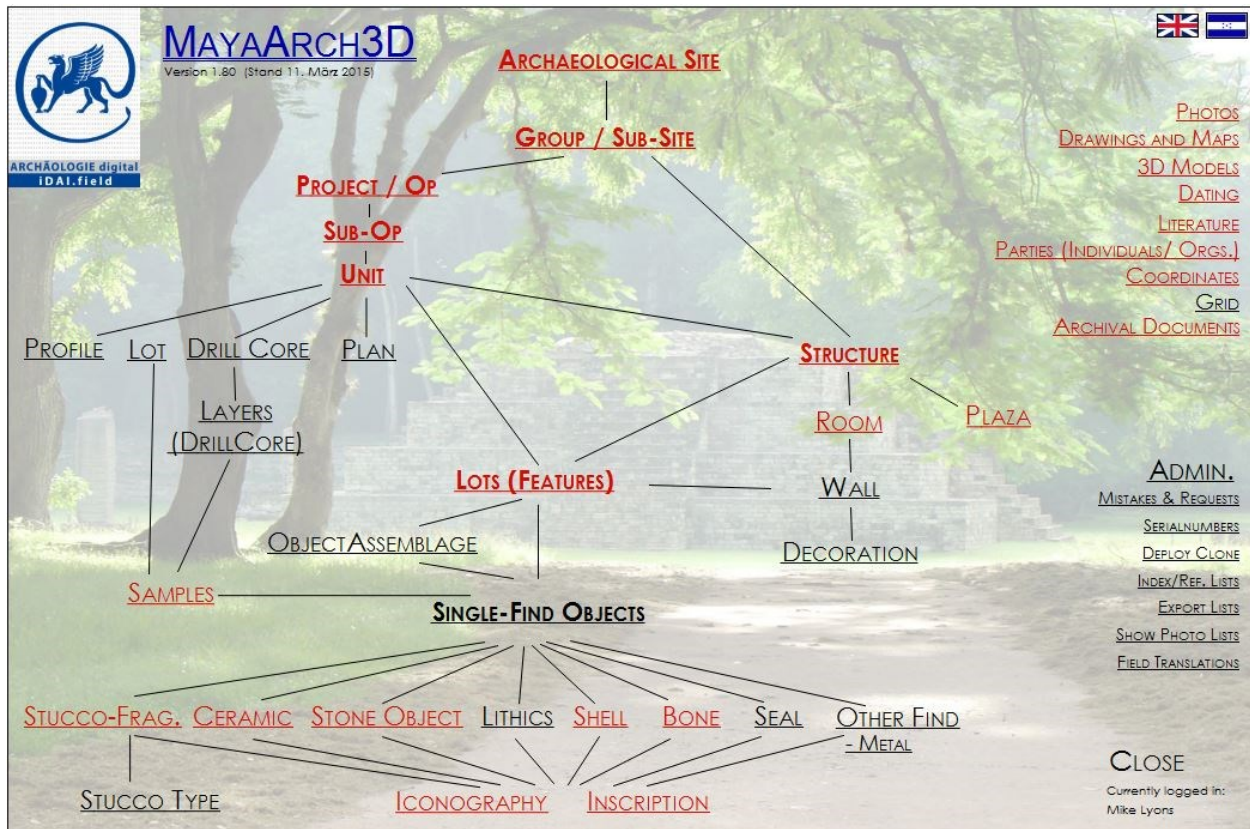


Figure 2: MayaArch iDAI.field Startpage

5. Exploring – Submitting queries

- 5.1. From here, you can select any table you would like by clicking on it. Once you have made your selection, let's say the Archaeological Sites table, the table will load and display a single record from a collection of many. Take some time to look around and see what kind of information is being held in this record. After you have oriented yourself, you may be interested in finding specific data that you are interested in by means of a query. In order to query, you will have to select the "Find" button towards the top of the page (a magnifying glass icon). Once selected, all fields should appear empty and become searchable. To search, simply select a field, type a keyword and select "Perform Find". Any records that match your keyword criteria will be returned to you – at which point you can navigate through them using your mouse's scroll wheel or the arrows in the upper-left corner of the screen.
- 5.2. An extremely valuable feature of Find tool is performing advanced searches. To do this, you will want to make use of "Operators". Just under the "Find" icon, there is a button for selecting a search operator. A search operator expands your ability to

find specific data by either narrowing a search or broadening it. Select a field you would like to use an operator with, select the operator from the drop-down list and enter your search criteria. Lastly, you do not have to limit yourself to searching a single field. Search as many fields in a single search as you would like.

- 5.3. Another way of creating advanced queries is to use the “New Request” button. This is useful if you would like to include multiple values in the same field. For example, perhaps you would like to search for all archaeological sites in both Honduras and Guatemala. In order to accomplish this, enter find mode, type “Honduras” in the field for Country, then press “New Request”, type “Guatemala” in the field for Country and select “Perform Find”. This will present you with all records of archaeological sites found in both Honduras and Guatemala
- 5.4. As an important note, take care to know which records you are searching through. Once you perform a search, you will be presented with however many records that matched your criteria. You can see this number of records as indicated in the upper-left of your screen (Fig. 3). If you perform a search immediately afterwards, you will only be searching through these previously found records. In order to search through all records once again, select the “Show All” button.

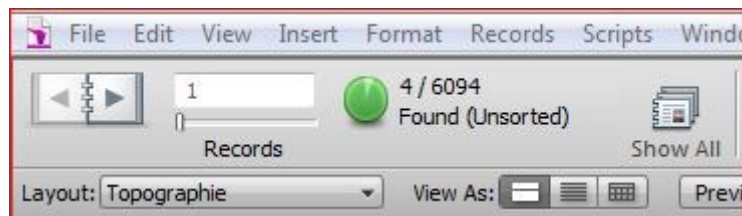


Figure 3: Found Records

6. Creating and editing data (pending access level)

- 6.1. In order to create data, open a desired table and click on the yellow “Add New Record” at the upper-right corner (Fig. 4) (Note: do not use the “New Record” button at the top-center of the screen). When you do this, you will notice a number increase on the upper left of the screen indicating a new dataset has been created. From here, you can input information into individual fields simply by clicking on a corresponding field and typing. Some fields include drop-down menus or check-boxes indicating the required use of only certain terms. Once you are finished entering data, no saving is required. If you are not happy with your created dataset, verify that you have the record that you just created open – it should be the last record of the table – and choose “Delete Dataset”.

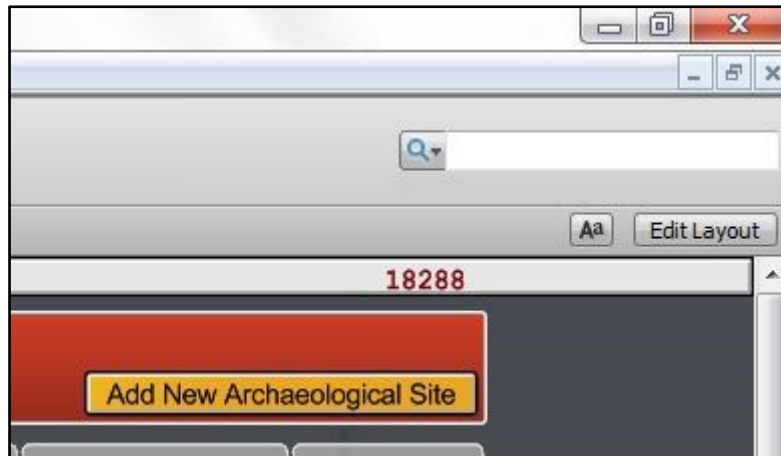


Figure 4: Add New Record Button

6.2. Editing data works in a similar way to creating data. However, instead of creating a new dataset, find one that has been previously created, select a field containing data and edit as you wish. Again, no saving is necessary. Please keep in mind that all modifications to the data are permanent. There is no undo option. So, please be careful while using the database. Verify that you are in find mode before you begin typing in a field and don't change anything that does not need to be changed.

7. Submission of data sets for own research

7.1. To be written...

8. Table Themes

8.1. In total, there are over 40 different tables that make-up the MayaArch3D database. Each table covers a specific theme relevant to an archaeological find or finds. However, as mentioned before, this is a work in progress, and not every table has data present. In fact, there are quite a few tables without data, but with additional submissions from collaborators and contributors around the world, we expect to see a significant increase in the coming year.