VISUALIZING
VENICE

www.visualizingvenice.org

Geospatial Database: Instructions for Beta Testing

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Getting Started

Thank you for testing out this online database system as an alternative for Filemaker Pro. We hope that this platform will meet the needs of Visualizing Venice now and into the future.

This database is based on the WelshHER platform (WelshHER = Welsh Heritage Environmental Records). WelshHER is a cultural resource management system developed by the four Welsh Archaeological Trusts (WATs), the Welsh Government heritage body (CADW), and the Royal Commission for Ancient and Historical Monuments Wales (RCAHMW). The software was designed for the management of historic assets for planning purposes, and as such has a wide range of functions including full webGIS capability linked to a MySQL database. This web-application is built on an open-source and customizable framework.

During April-June 2013, Rebecca Bennett (Postdoctoral Researcher, Wired! Lab) worked with the software developer Steve Smith to customize the software to the needs of the Visualizing Venice project. This beta sandbox version is available for researchers:

http://www.herwales.co.uk/her/cofiadur3.php?group=ven

This document is intended to explain the structure of the database and GIS, as well as provide a guide toward exploring some of the main functions of the database platform. It is not a full user guide, for this you can look to the generic help manual here: http://herwales.co.uk/her/appDev3/help/her.php

## Data Structure (as adapted for Visualizing Venice)

The database user interface comprises two panel sets that provide data viewing, entry and reporting.

Monuments: These are elements within the database that represent entities within the city, for example buildings, bridges, statues. Monuments can have a parent → child relationship to each other as shown below.

Monuments are linked to the GIS record, primary and secondary sources, images and historical events.

Sources: These are the primary and secondary sources that are known for each monument. This part of the database has been structured to incorporate the existing Visualizing Venice FilemakerPro database and records.

Sources are linked to their collection, images and historical events in addition to the monuments.
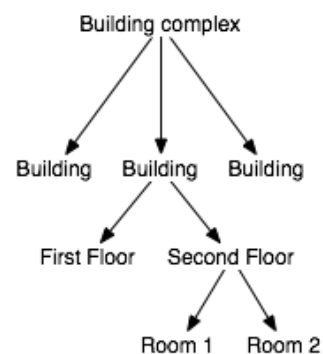
Viewing Data in the Database

Follow these instructions to access the "sandbox" (testing-only) version of the database. With the "sandbox," feel free to explore the database, add content, and try out its features. The "sandbox" version will be reset to its original condition on a regular basis (nightly).

1. A test version of the application is being hosted temporarily by the developer at
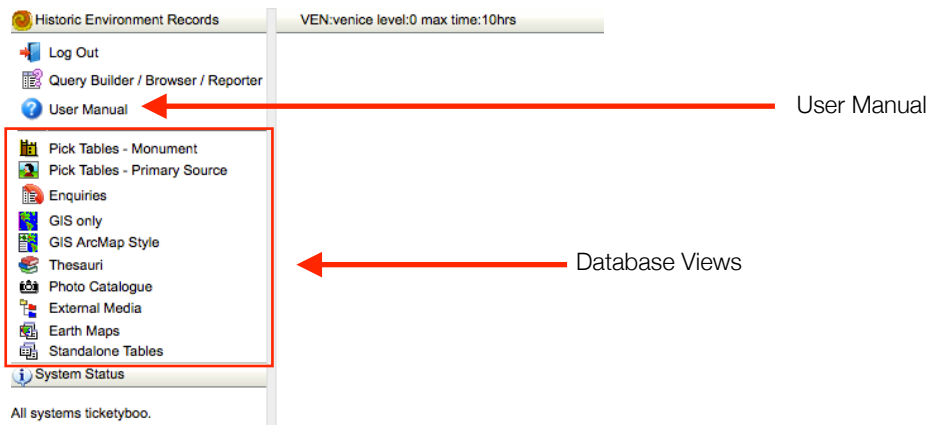
    http://www.herwales.co.uk/her/cofiadur3.php?group=ven

2. To log in to the site, enter the following username and password. Project ID can be left blank.

    User Name: venice
    Project ID (optional):
    Password: venice

3. When you log in, you will be taken to the Home Screen. Here you will find a link to the User manual, as well as different views into the database.

4. For now, we will focus on two views, "Pick Tables - Monument" and "Pick Tables - Primary Source." When you click on a "Pick Tables" view, you will be offered a menu of "Linked Tables" on the right.
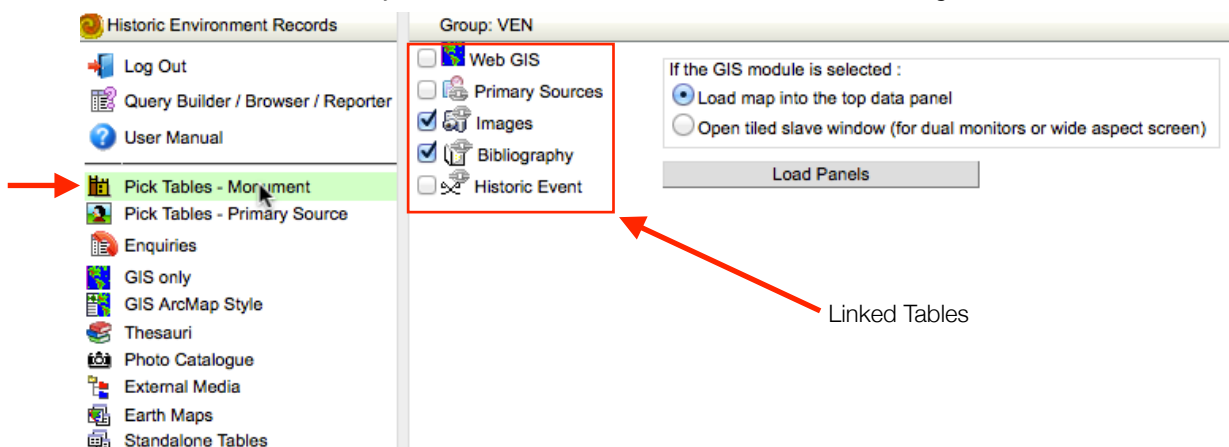
    The options and layout for each Panel View are similar so we will only consider the Monument view here. On the left side of the interface, click on "Pick Tables - Monument."|

5. In general, you'll want to open all of the tables that are linked to a particular view. To open all the linked tables in the Monument view, first select the "Pick Tables – Monument" on the left panel (highlighted green) then check the tables you wish to view in the right panel.
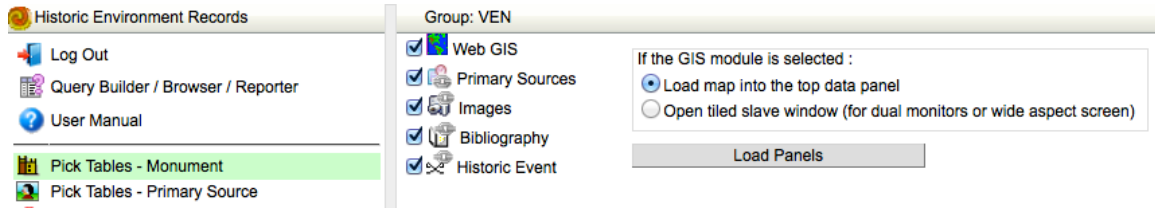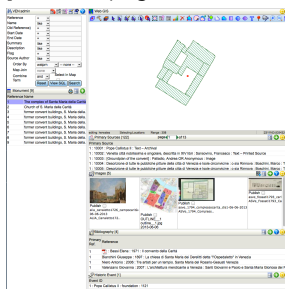

6. Click the "Load Panels" button to enter the Monuments view.

7. A new browser tab or window will open. On the left-hand side of the interface, you will find a filtered search form.   You can filter your search by using any of the filter options in this section. For now, leave the filters blank and click the Search [Search] button to view all of the monument records in the sandbox database.
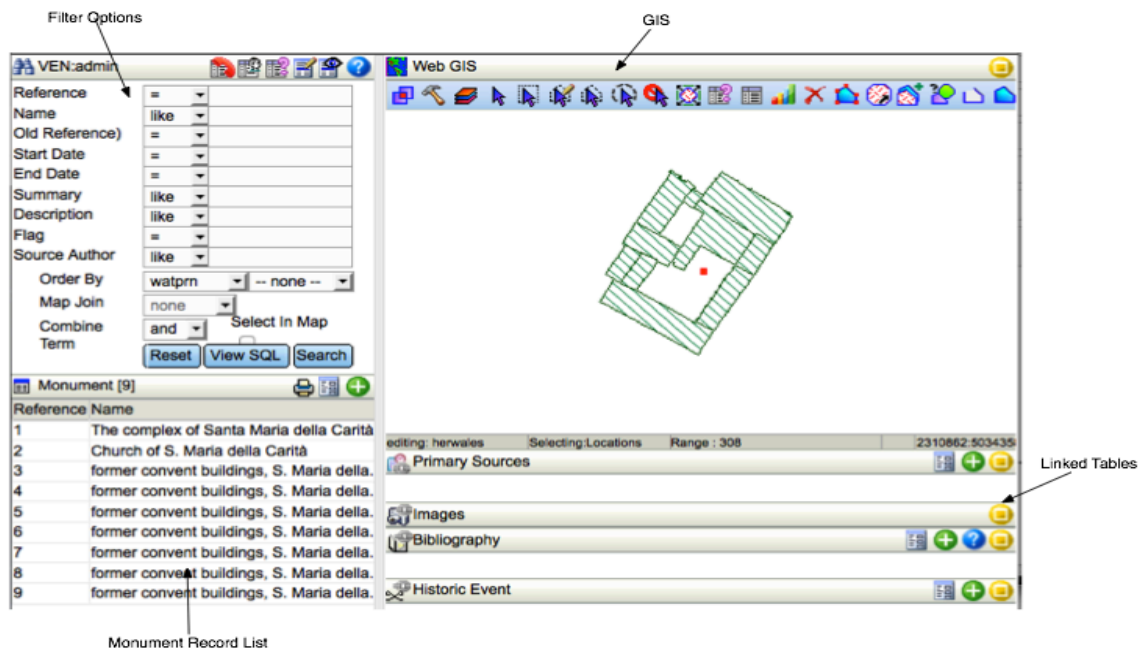
(Note: This sandbox beta database contains only a small subset of the Visualizing Venice data. We will port all of the data from Filemaker Pro at the end of the testing and feedback stage.)

8. To view the linked data for a Monument, simply click on its Reference Name in the left panel. The webGIS interface will automatically zoom in on the selected feature and the panels below the webGIS will display linked data (Sources, Images, Events, etc).

[See next page for full-sized graphic]

Monuments

Sources

Images

Bibliography

Events

9. You can alter the size of the any panel in the display by clicking and dragging its header bar up or down the screen.

10. The webGIS panel has its own toolbar, arrayed at the top of the panel:
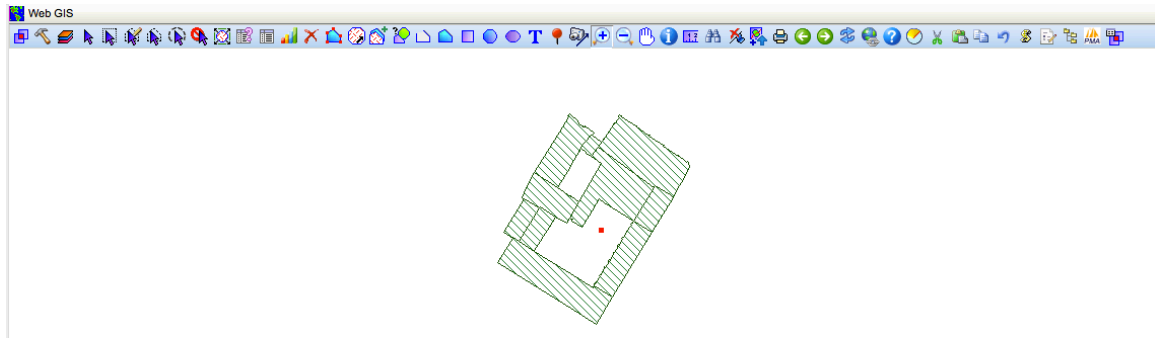

11. For viewing purposes, there are several key tools:

   a. The **navigation tools** are located in the middle of the toolbar:
   The Hand ⍝ tool allows you to pan around the interface. Click on the ⍝ and then left-click and drag on the webGIS panel to pan around the 2D plane.
   The ⊕ and ⊖ tools allow you to zoom in and out on GIS features. Simply select the zoom in ⊕ or zoom out ⊖ tool and click on a feature. Alternatively, you can draw a box around a feature to zoom to the box's extents.

   >>>

   b. On the left-side of the toolbar, you will find the Layers ⬟ tool that allows you to switch different GIS layers on and off, as well as load new layers. Clicking on that tool will bring up a Layers dialog box:
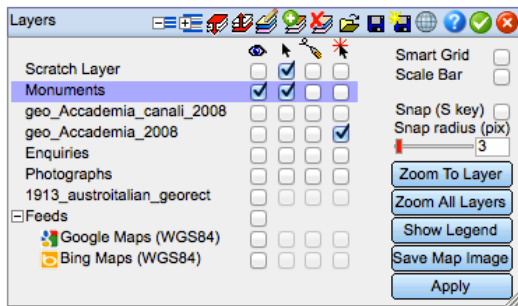
   Here you can toggle the visibility 👁, selectability ➤, and editability ✎ of GIS layers on and off. Click "Apply" to implement changes.

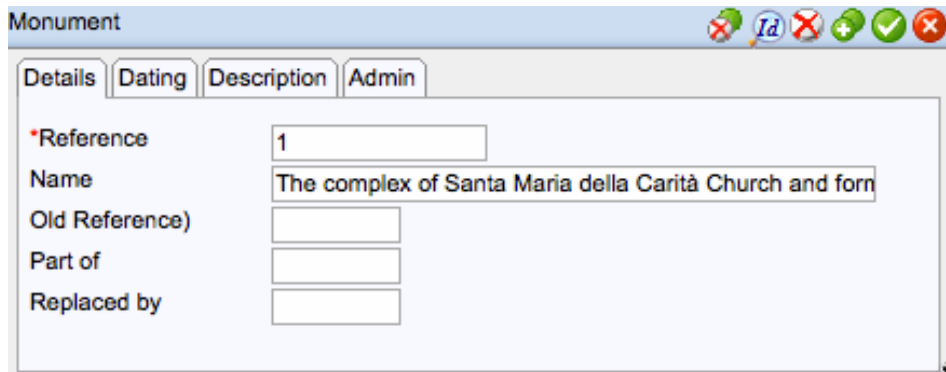   [WARNING: Editing GIS layers edits them for *all* users of the system.]

   You can also load new layers into this view by clicking on the "Add Map Layer from Existing Data Source" tool button: ⬟

12. For a full reference guide on lnkGIS, the database system's webGIS platform, see:
   http://www.herwales.co.uk/her/help/eng/index.htm

Modifying Existing Records in the Database

1. You can add basic data for each monument itself by double clicking on the monument record's Reference Name to open its Monument Form. You can enter data in any of the fields and click the green check to save the changes. ✅

>> The "Reference" field is auto-created by the database.

>> The "Name" is a free-form field. [IMPORTANT NOTE: We need to discuss the creation of a standardized naming schema for all monuments, artists/architects, etc.]

>> "Old Reference" can be populated with the Filemaker database's GIS codes.

>> "Part of" and "Replaced by" should be populated with the Reference #'s of other monuments as appropriate. See, for example, how Reference #2 "Church of S. Maria della Carità" has "1" in its "Part of" field, indicating that it is part of the larger Santa Maria della Carità complex (Reference 1).

[IMPORTANT NOTE: This "nested" functionality will also need to be standardized and better visualized.]

2. Other functions on this form include:

    Duplicate this Monument: ➕

    Delete this Monument from Database: ❌

    Close Monument Form without Saving Changes ❌

3. Note the other tabs on the Monument Form: "Dating," "Description," and "Admin."   You can click on these to enter information on an existing Monument record.

[IMPORTANT NOTE: If we need to add fields to this or any other form in the database to capture information relevant to a particular research project or to the VV project as a whole, please make note of what is needed and share it with the group.]

4. Don't forget to click the ✅ to save your changes, or the ❌ to close the Monument form without saving changes.

Adding New Data

This section covers adding new data to the sandbox database, including new monuments, images, bibliographic sources, and events.

Adding New Monuments using an Existing GIS Layer

Follow these steps to add a monument record using an existing GIS layer. The basic process involves enabling the GIS layer you want to use as the basis for creating a monument (steps 1 - 5), creating a new monument record in the database associated with that layer (steps 6 - 10), and then assigning that record to geo-located geometry (steps 11 - x).

1.   If you are not already viewing the Monuments view, enter it by selecting "Pick Tables - Monument" from the main page, checking all the panel options and clicking the "Load Panels" button.
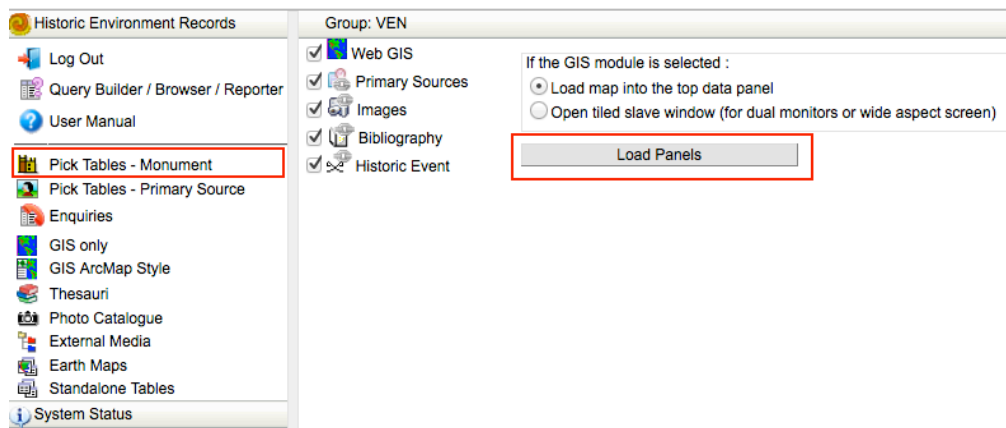
2.   In the webGIS panel, find the Layers ♦ tool and click it to open the Layers dialog box.
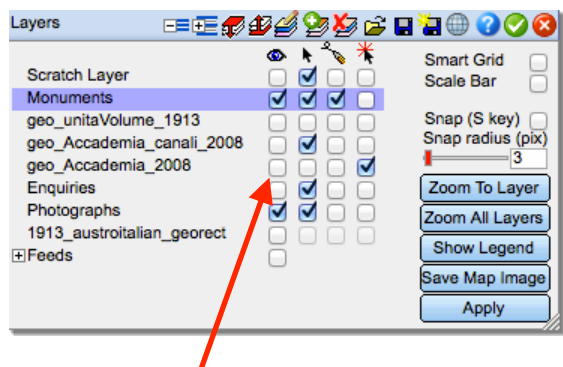
3.   In this example, we're going to annotate using geometry copied from the geo_Accademia_2008 GIS layer (a shape file layer). Click on its Visibility 👁 and Selectable ↖ checkboxes and then click the Apply button.
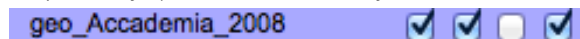
4. If the geo_Academia_2008 layer is not available as an option on your list of layers, you can add it by clicking on the "Add Map Layer from Existing Data Source" button:

    a. This will open the Add Layer dialog box:
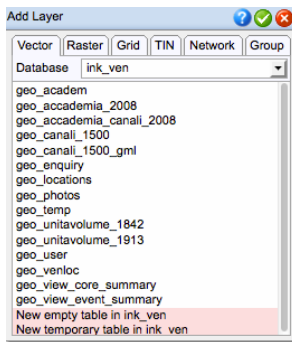
    b. Click on the name of the GIS layer you'd like to add (geo_accademia_2008) to select it, and then click the ✅ to add it to your list of available layer views.
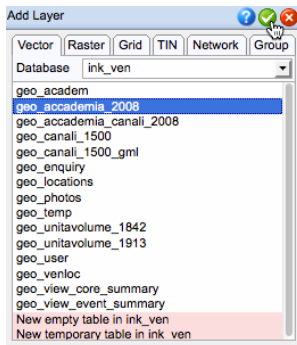

    c. Click on the newly added layer's Visibility 👁 and Selectable ↖ checkboxes and then click the Apply button.
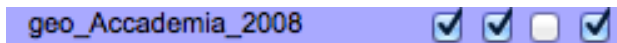
5. The geometry from the geo_accademia_2008 layer should now be visible in the webGIS panel.
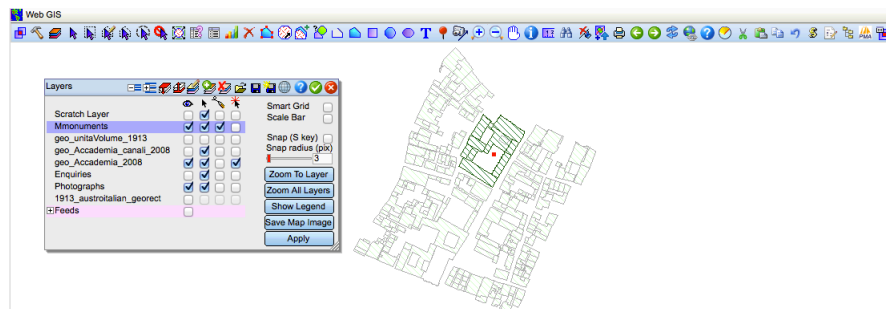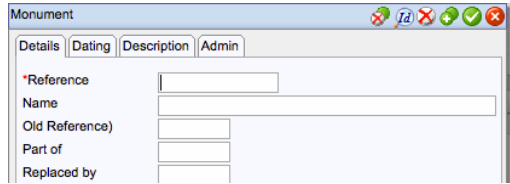
6. Now create a new Monument record in the database. Remember, monuments can be at different scales -- building complexes, buildings, floors, rooms, walls, etc. To create a new monument record, look to the left side of the interface and find the "Monuments Reference Names" panel. Click on the ⊕ button to add a new record.
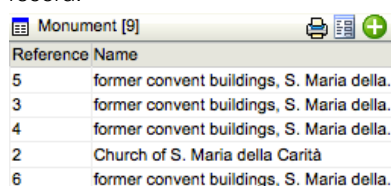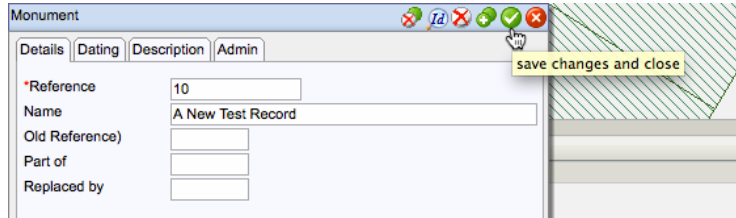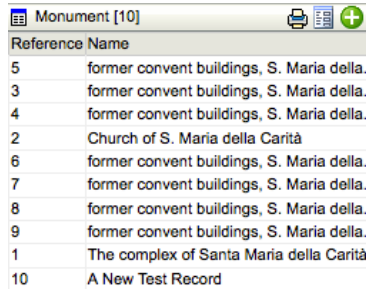
7.   A blank Monuments form will appear.

8.   Give the record an ***unused*** Reference number and fill out all fields as required.
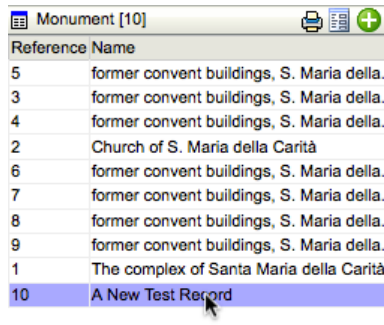
9.   Click the green ✅ button to save the record.

10.   It should now appear under the Monuments list on the left-side of the interface.
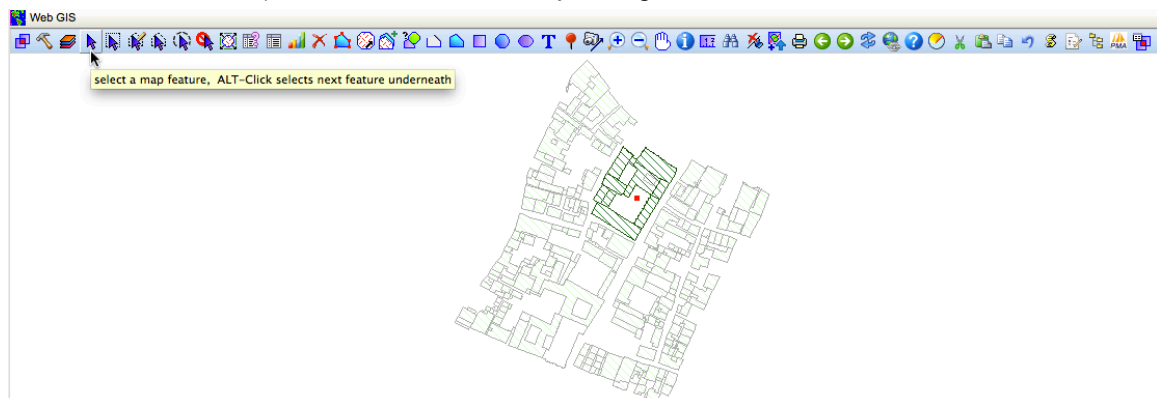

11.   Select your new record on the list with a single left-click. Its entry will turn purple:

12.   Now we will use the webGIS interface to associate this new record with geo-located geometry. In the webGIS interface, choose the Map Feature Selection ⬆ tool by clicking on it in the toolbar.

13. Using the Map Feature Selection tool, click on a polygon in the geo_accademia_2008 layer that you want to associate with your monument record. The selected geometry will turn pink.
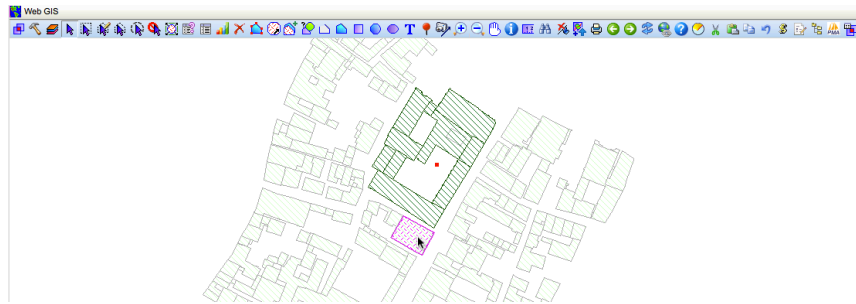

14. In the webGIS toolbar, click on the Copy tool 🗐 button, located on the right-hand side. You will be prompted to confirm your intention to copy the selected feature. Click the "Copy Features" button to confirm.
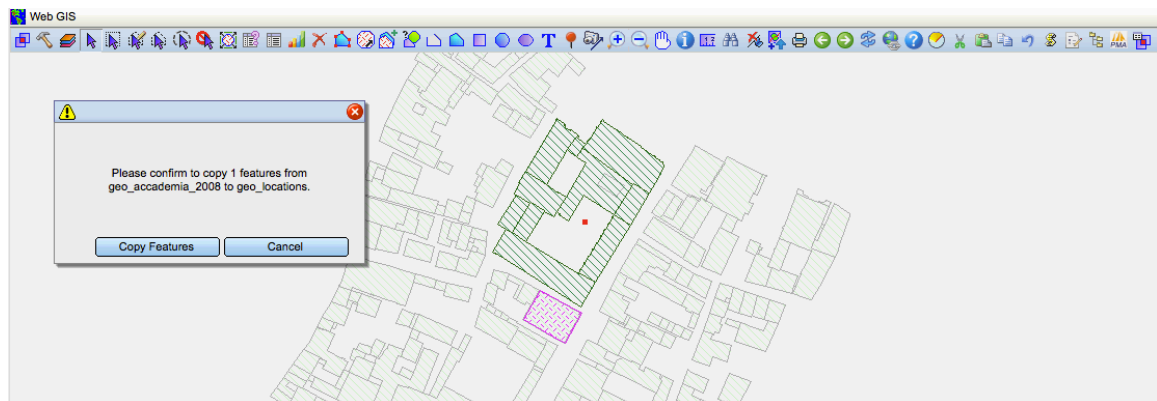

15. The copy will be confirmed. Click the OK button:
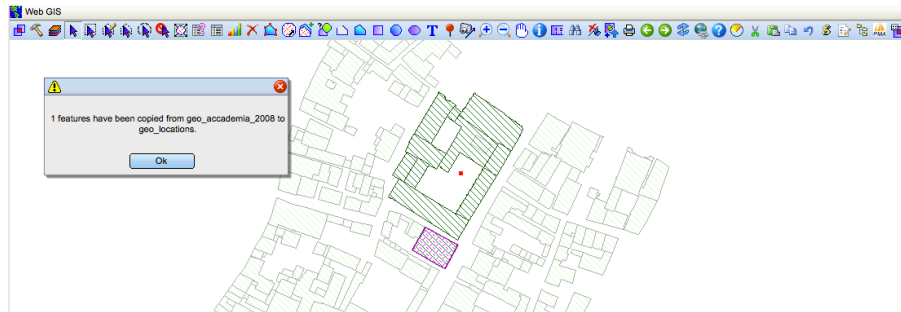
16. Click on the Info ℹ️ tool in the webGIS toolbar to select the Info tool and then click on the selected geometry again. This will open up a dialog box for that geometry.
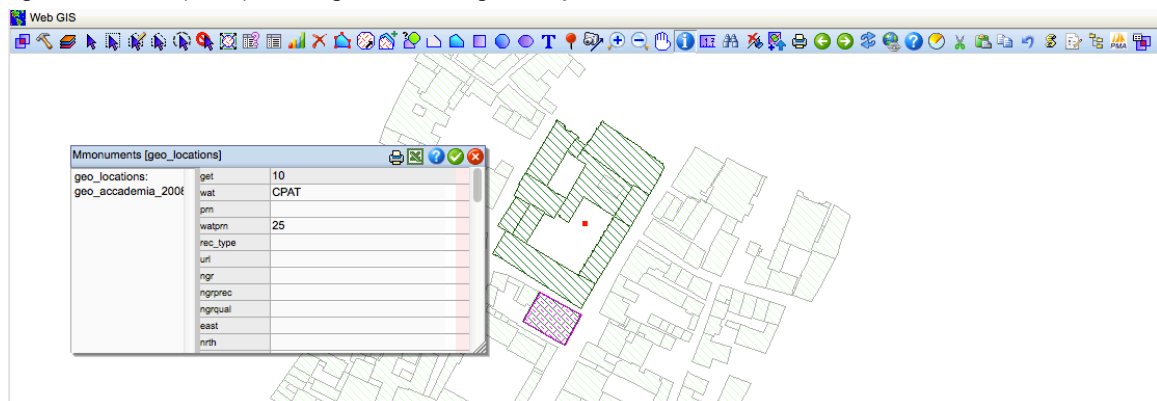
17. Since two different polygons fall under your selection (one on the geo_accademia_2008 GIS layer and the copy you made to the geo_locations layer), make sure you have selected the copied geo_locations geometry. It will highlight in blue:
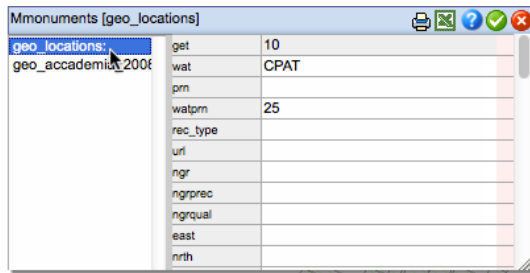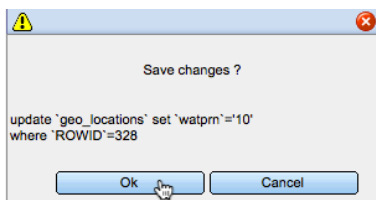

18. [NOTE: This step will not be necessary in the post-development version of the software.]
    In the "watprn" field, type the number of the monument record you have just created.
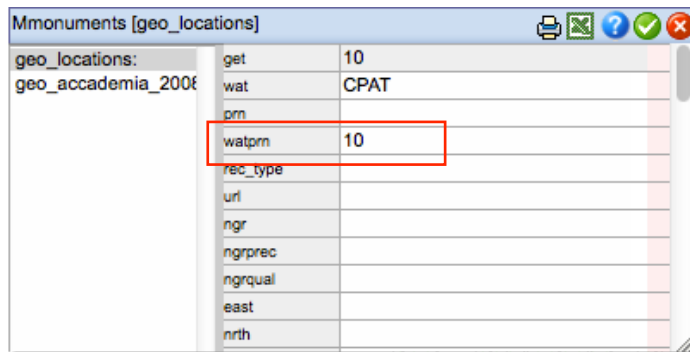
19. Click the green ✅ button to save your changes. You will be prompted to save your changes. Click the OK button to confirm the save.

20. Now when you select the new monument record in the left panel ("A New Test Record"), the webGIS will automatically zoom to the extent of the associated geometry's footprint.
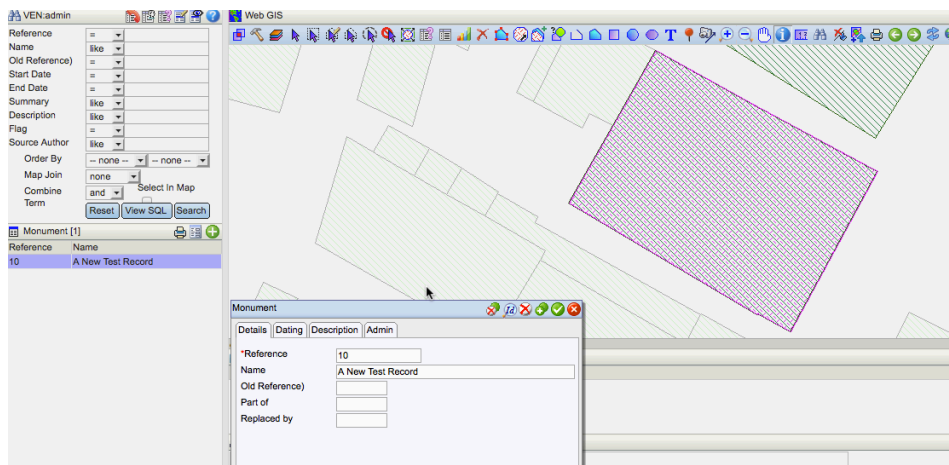
Associating Images with a Monument

These next steps indicate how to associate an image (or multiple images) with a Monument record.

1. In the left-hand Monuments panel, click on a monument for which you want to associate an image.
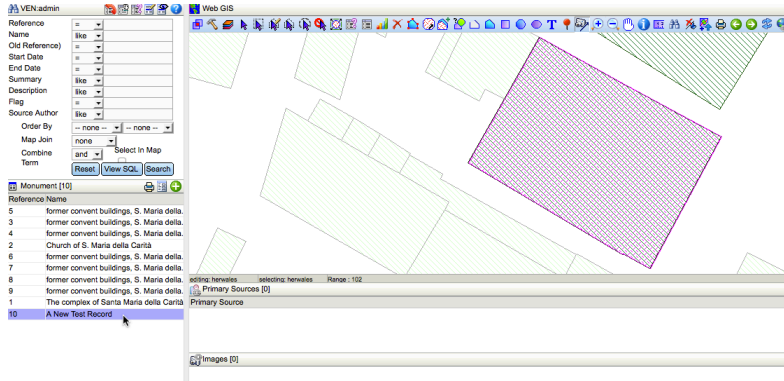

2. The webGIS interface will zoom to any geometry associated with that interface, and the panels below will show any sources, images or events that are already associated with that monument.

3. Below the webGIS panel, find the Images panel and click on the panel's ⊕ button to associate an image with the selected monument.
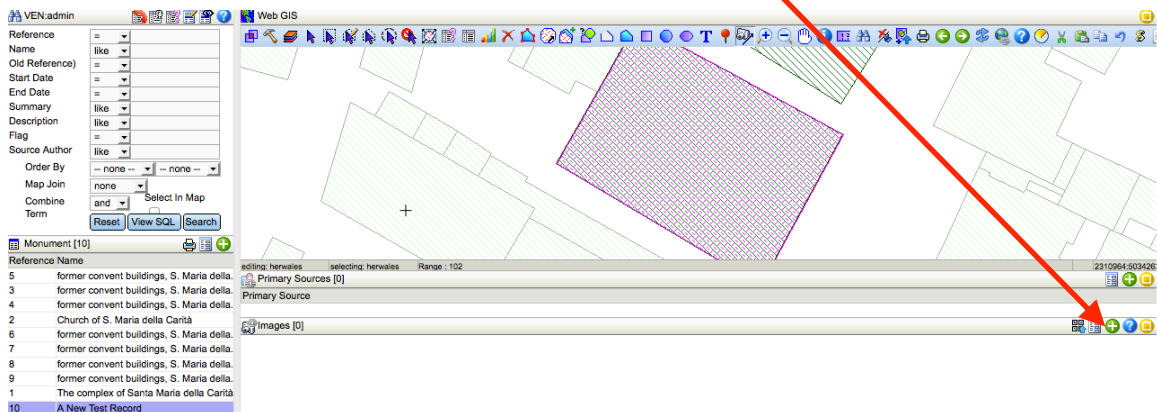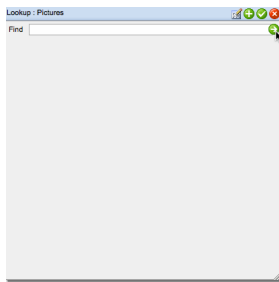

4. The Images dialog box will appear. The number in the Primary Ref field should match the Reference number of the monument you want to associate the image with.
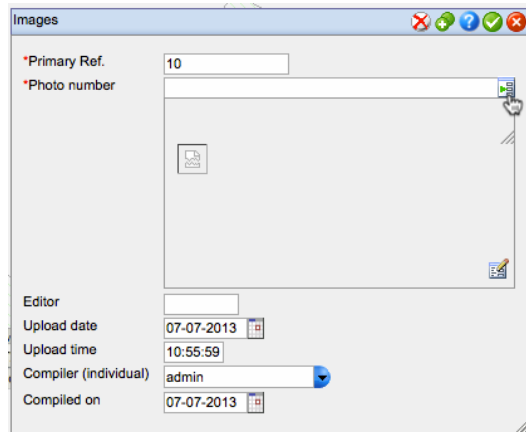
5. On the right side of the "Photo number" field, find the "Lookup Pictures" ▶ icon and click it to bring up the "Lookup: Pictures" dialog box.


6. To add associate an image already in the database with your monument, follow the sub-steps below. To upload a new image to the database, skip to step 7.

   a. You can search for an existing image by entering a keyword in the "Find" field to filter the results. Or if you wish to see image thumbnails of all images already in the database, leave the box empty and click the green ➡ arrow.
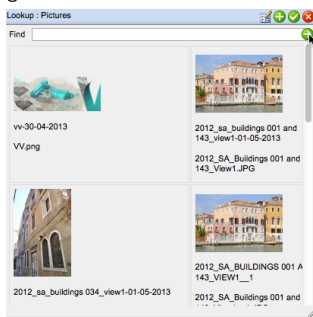
   b. Double-click on an image thumbnail to select it for association with your monument.
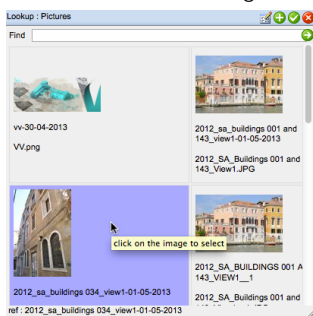

   c. Note that the Images dialog box gets populated with information about that image, as well as a thumbnail.
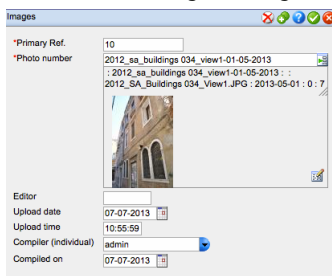

   d. Click the green ✔ button to save changes and close the Images dialog. The image is now associated with your monument and should appear in the Images panel.

7. To upload a new image to the database, follow these sub-steps. [It's always a good idea to check the database for an image before uploading a new one. This will help prevent duplicates.]

    a. In the "Lookup: Pictures" dialog box, find the ⊕ button and click it.
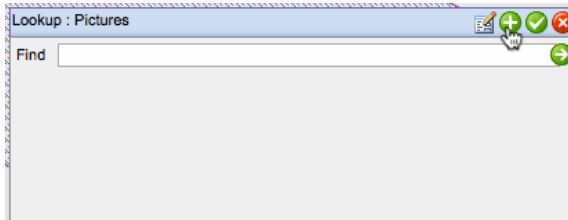
    b. In the Pictures dialog box that appears, click on the blue up arrow:
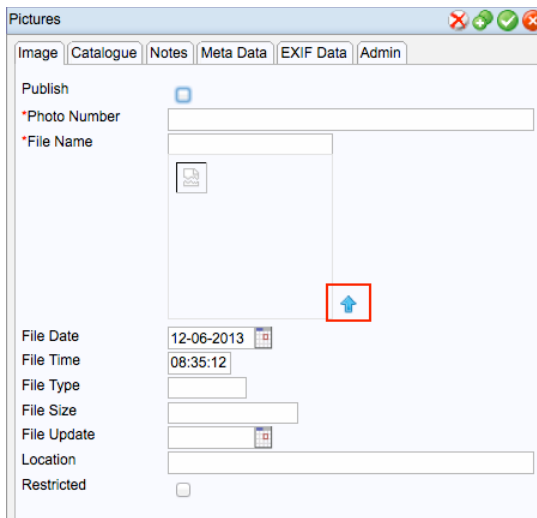

    c. This will open an Open File window, and allow you to browse your computer for an image to upload.

    d. The image will upload to the database (this may take awhile - be patient) and then the Pictures dialog box will be populated with a thumbnail, filename and EXIF data associated with the image. You can add more metadata about the image by filling out the fields in the Pictures dialog box.
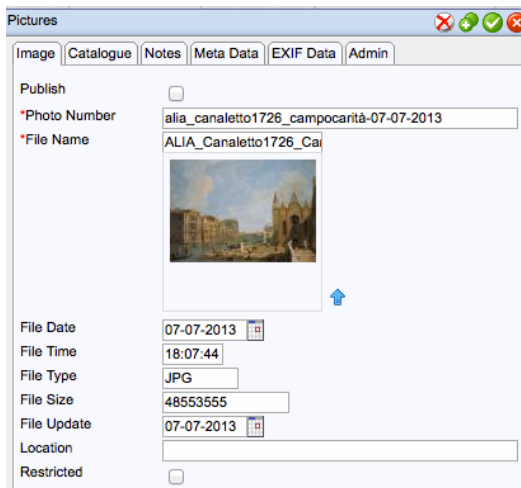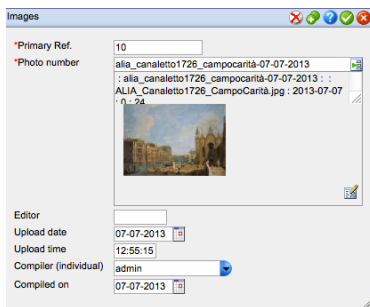

    e. Click the green ✓ button to save changes to your uploaded image file and close the Pictures dialog.

f. The image you uploaded should now appear in the "Lookup: Pictures" dialog box. Double-click on the image thumbnail to select it for association with your monument.
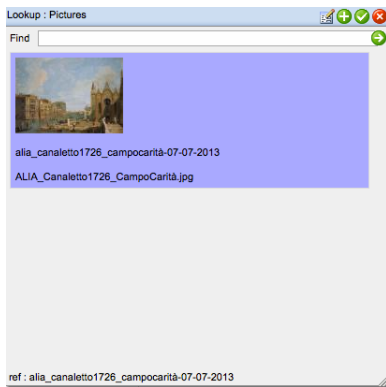
g. Note that the Images dialog box gets populated with information about that image, as well as a thumbnail.

h. Click the green ✅ button to save changes and close the Images dialog. The image is now associated with your monument and should appear in the Images panel. Confirm the link to the images by clicking on the thumbnails. The full-sized image should show in a new tab in your browser.
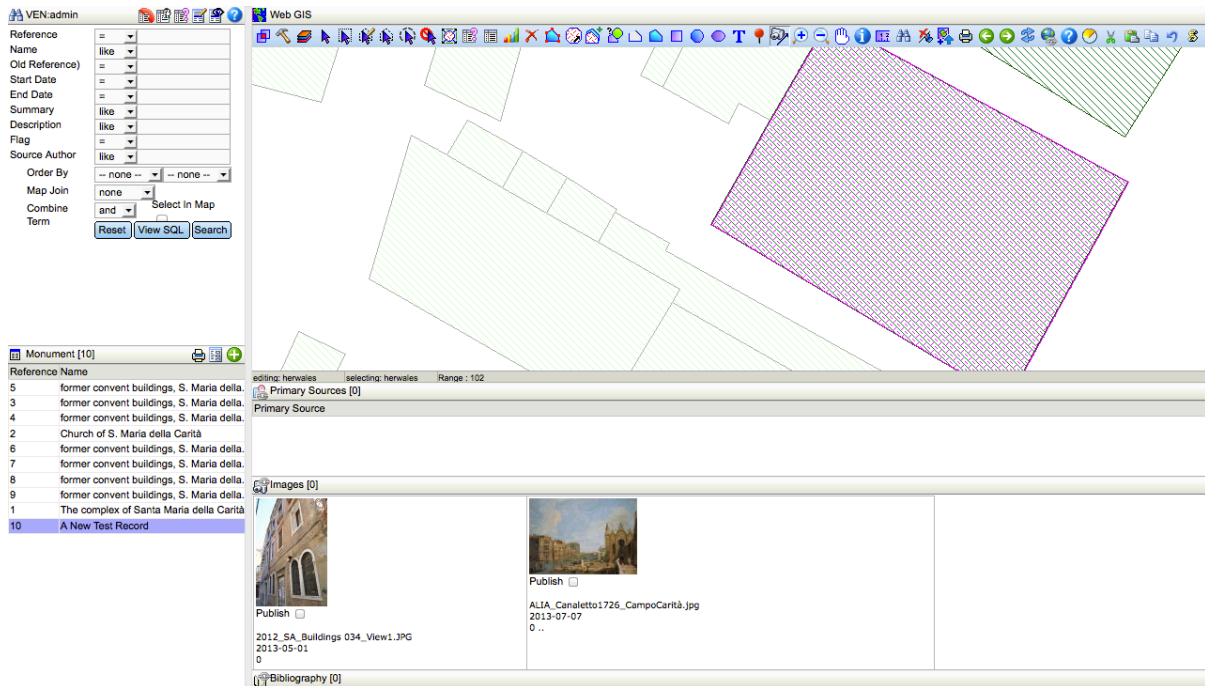
Associating Sources (Primary & Secondary) with a Monument

[NOTE: As was discussed at the VV meeting in June, the Sources function of the database needs to be reviewed, particularly the relationship between primary and secondary (bibliographic) sources.]

In the current version of the database system, sources are divided into primary and secondary sources. **Primary sources** are broadly categorized as *non-published original sources* such as letter, maps or communications that are located in archives. **Secondary sources** are *published accounts and are formatted as a standard bibliography*.

Associating an Existing Primary Source with a Monument

1. In the left-hand Monuments panel, click on a monument for which you want to associate a primary source.
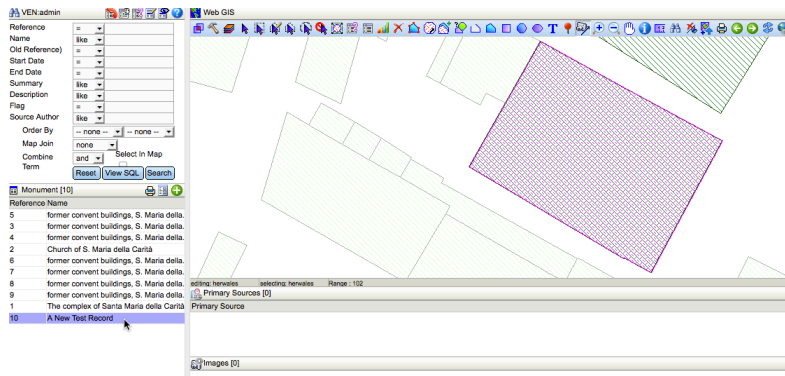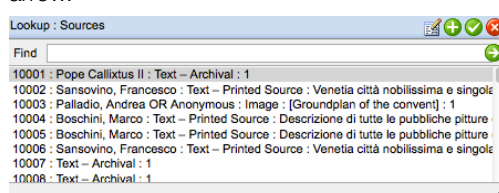

2. Below the webGIS panel, find the Primary Sources panel and click on the panel's ⊕ button to associate a primary source with the selected monument.

3. The Primary Sources dialog box will appear. It will be pre-populated with a Parent Reference number that corresponds to the Reference number of the monument you will be associating the source with.
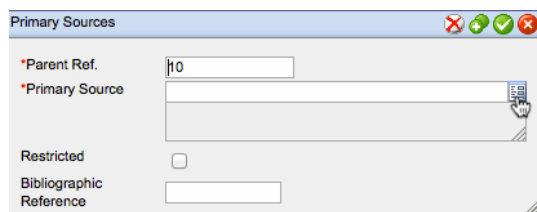
4. Click on the "lookup sources" 🖳 icon to open the "Lookup: Sources" dialog box.
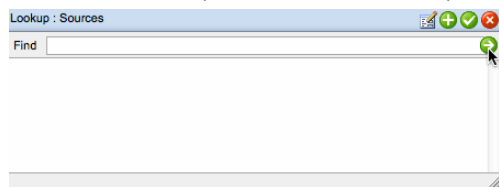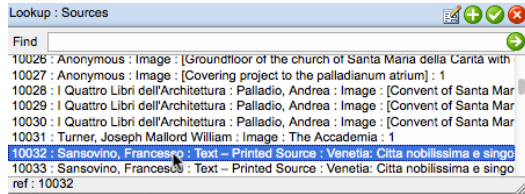

5. You can search for an existing primary source by entering a keyword in the "Find" field to filter the results. Or if you wish to see all of the primary sources already in the database, leave the box empty and click the green ➡ arrow.
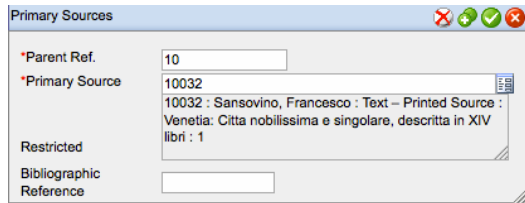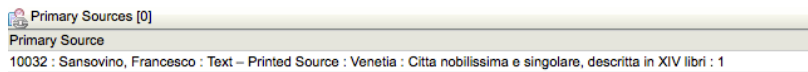
6. Double-click on a primary source select it (it will turn blue).

7. Note that the Primary Sources dialog box is populated with information about that source.


8. Click the green ✅ button to save the primary source association. You should now see the primary source associated with the monument in the Primary Sources panel whenever that monument is made active.
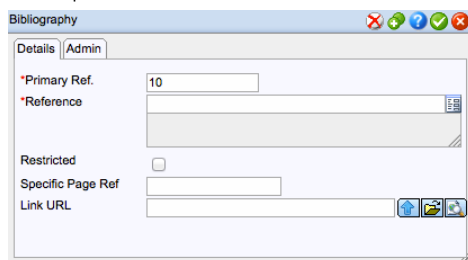

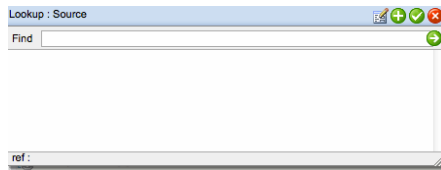**Associating an Existing Secondary (Bibliographic) Source with a Monument**

1. In the left-hand Monuments panel, click on a monument for which you want to associate a secondary/ bibliographic source.
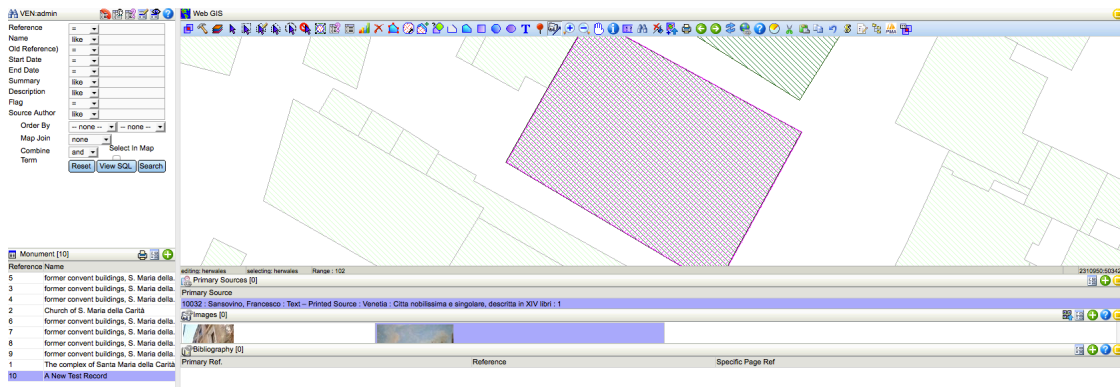
2. Below the webGIS panel, find the Bibliography panel and click on the panel's ➕ button to associate a secondary/bibliographic source with the selected monument.

3. The Bibliography dialog box will appear. It will be pre-populated with a Parent Reference number that corresponds to the Reference number of the monument you will be associating the secondary source with.
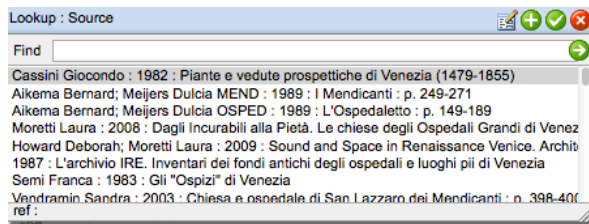
4. Click on the "lookup source" ▦ icon to open the "Lookup: Source" dialog box.

5. You can search for an existing secondary source by entering a keyword in the "Find" field to filter the results. Or if you wish to see all of the secondary/bibliographic sources already in the database, leave the box empty and click the green ➡ arrow.

6. Double-click on a secondary source select it (it will momentarily turn blue and return you to the Bibliography dialog box).
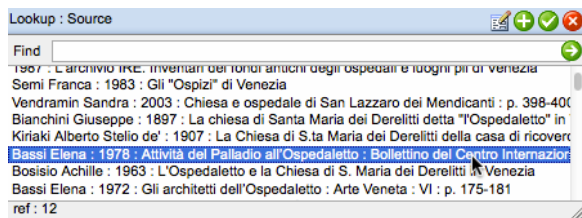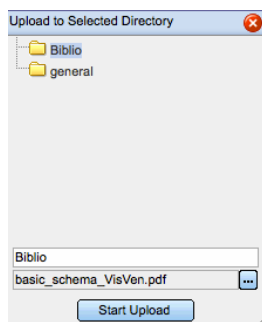

7. Note that the Bibliography dialog box is populated with information about that source.
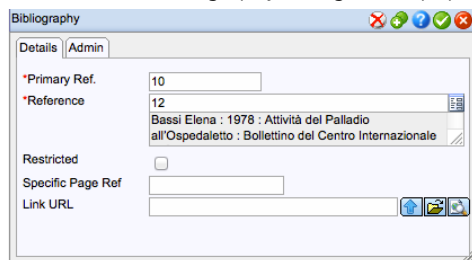
8. You can add specific page numbers that refer to this monument in the Specific Page Ref field.

9. You can also upload a PDF of the bibliographic document by clicking on the blue Upload File icon.

    a. This will open up the "Upload to Selected Directory" dialog box. Select the "Biblio" directory and then click on the ⋯ icon to find the file on your computer.

b. Click on the "Start Upload" button to upload the file. This may take several seconds - be patient.

c. Note that the Bibliography dialog box now contains reference to the uploaded PDF.
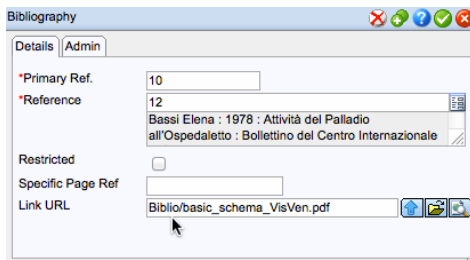
10. Finally, click the green ⊘ button to save the secondary/bibliographic source association. You should now see the secondary source associated with the monument in the Bibliography panel whenever that monument is made active.
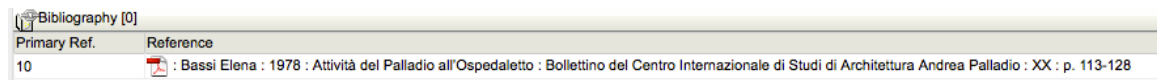

Note that if you uploaded a PDF, the PDF icon for the entry will open up the PDF document in a new browser tab.

Adding a New Secondary / Bibliographic Source to the Database and Associating a Monument

1. In the left-hand Monuments panel, click on a monument for which you want to associate a new secondary/ bibliographic source.
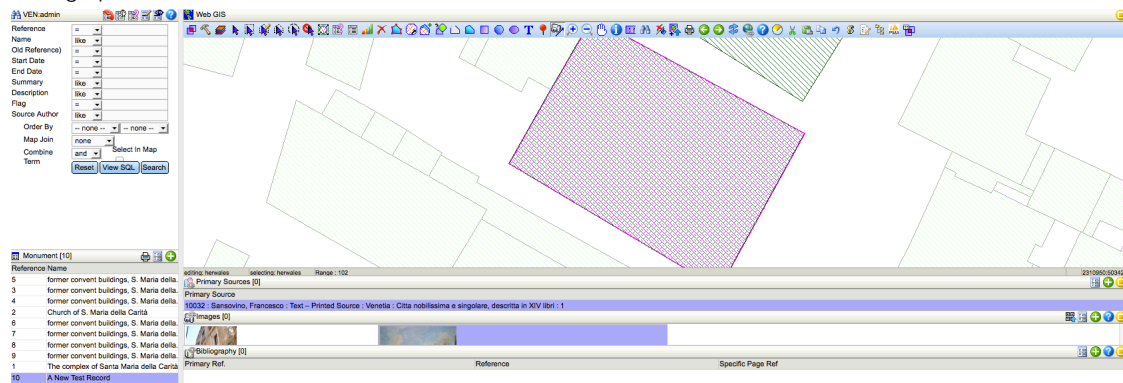

2. Below the webGIS panel, find the Bibliography panel and click on the panel's ⊕ button to associate a new secondary/bibliographic source with the selected monument.

3. The Bibliography dialog box will appear. It will be pre-populated with a Primary Reference number that corresponds to the Reference number of the monument you will be associating the new secondary source with.
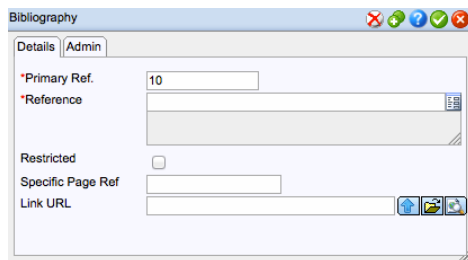
4. Click on the "lookup source" 📇 icon to open the "Lookup: Source" dialog box.
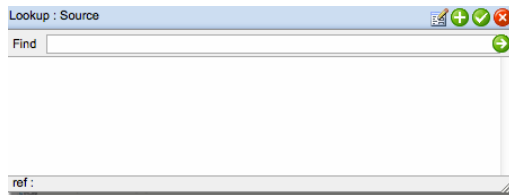
5. In the "Lookup: Source" dialog box that appears, find and click on the green ➕ button. This will load the Source dialog box where you can enter relevant information about the new secondary/bibliographic source:

Note that you can upload a file to the "Source Link" section of the form.

6. Click on the green ✅ button to save the new secondary source to the database. It should now appear as the only option in the "Lookup: Source" dialog box.
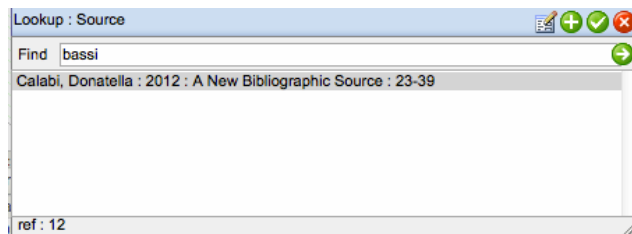
Double-click on the new secondary source select it. It will turn blue and then return you to the "Bibliography" dialog box.

7. Note that the Bibliography dialog box is now populated with information about the newly-created secondary source. Click on the green ✅ button to save the secondary source association.

8. You should now see the secondary source associated with the monument in the Bibliography panel whenever that monument is made active.

Associating Historic Events with a Monument

Historic events are defined from source material and are equivalent to the "Transformation" section of the existing FilemakerPro database. In the new system, these events can also be attached to monuments.

Associating an Existing Historic Event with a Monument

Follow these steps to associate an existing (already in the database) event with a monument.

1. In the left-hand Monuments panel, click on a monument for which you want to associate an Historic Event.


2. Below the webGIS panel, find the Historic Event panel and click on the panel's ⊕ button to associate an historic event with the selected monument.
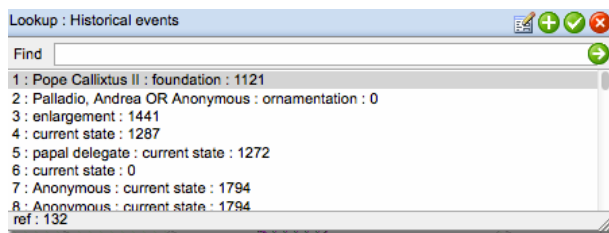
3. The Historic Event dialog box will appear. It will be pre-populated with a Monument Reference number that corresponds to the Reference number of the monument you will be associating the historic event with.
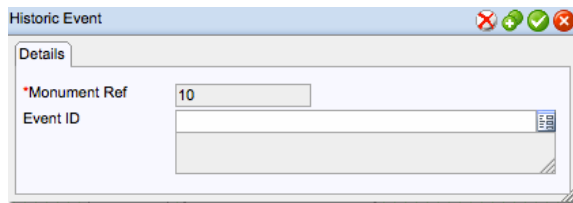

4. Click on the "lookup Historical Event" 🖳 icon to open the "Lookup: Historical events" dialog box.
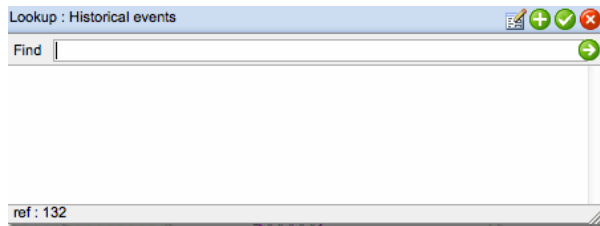
5. You can search for an existing historical event by entering a keyword in the "Find" field to filter the results. Or if you wish to see all of the historical events already in the database, leave the box empty and click the green ➡ arrow.

6. Double-click on the desired historical event to select it (it will momentarily turn blue and return you to the Historic Event dialog box).
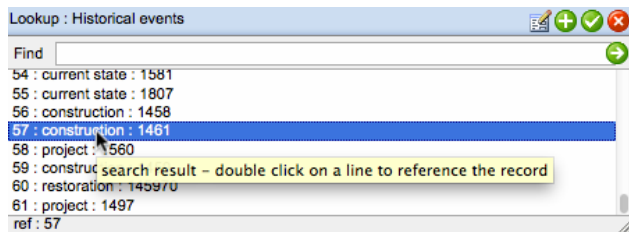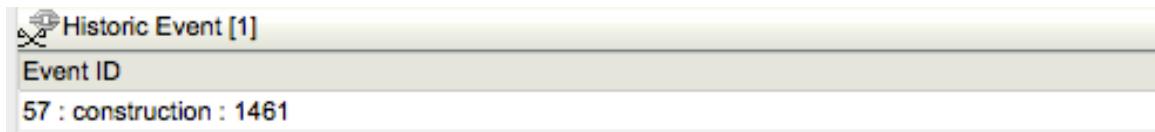

7. Note that the Historic Event dialog box is now populated with information about the selected Historic Event. Click on the green ✔ button to save the historic event's association with the monument.
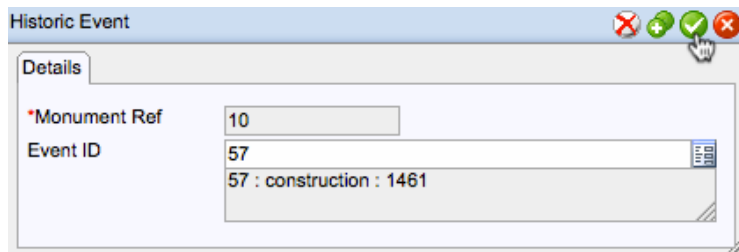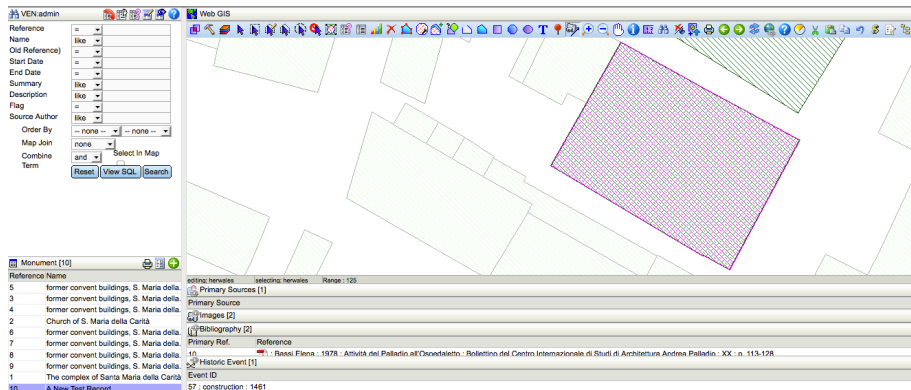
8. The Historic Event is now associated with the monument and will appear in the Historic Event pane whenever that monument is selected / made active.


Adding a New Historic Event to the Database and Associating a Monument

If the historic event you wish to record is not yet in the database, follow these steps to create a new historic event and associate it with a monument.

1. In the left-hand Monuments panel, click on a monument for which you want to associate an Historic Event.


2. Below the webGIS panel, find the Historic Event panel and click on the panel's ⊕ button to associate a new historic event with the selected monument.

3. The Historic Event dialog box will appear. It will be pre-populated with a Monument Reference number that corresponds to the Reference number of the monument you will be associating the new historic event with.
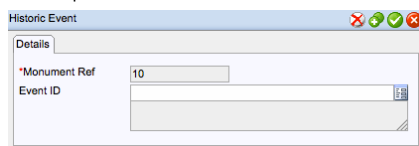
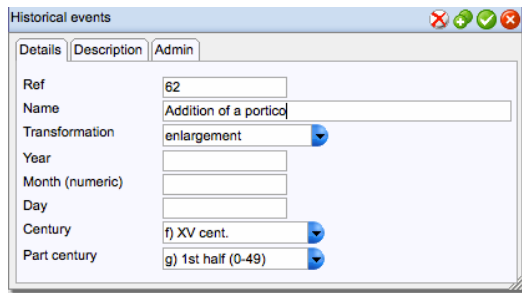4. Click on the "lookup Historical Event" 🗐 icon to open the "Lookup: Historical events" dialog box.
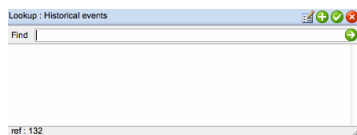
5. In the "Lookup: Historical Events" dialog box that appears, find and click on the green ⊕ button. This will load the Historical Events dialog box where you can enter relevant information about the new historical event:
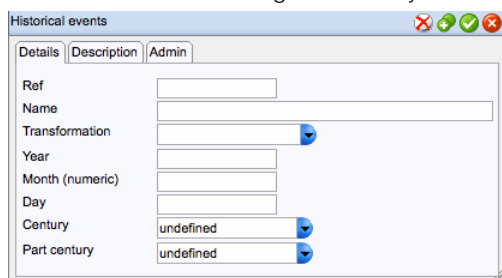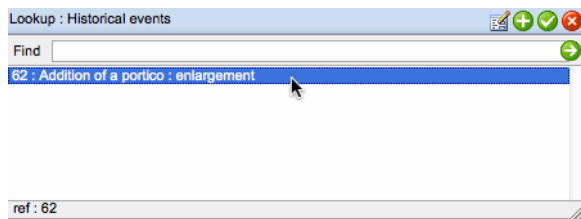
6. When you have entered information about the new historic event, click on the green ✅ button to save it to the database.

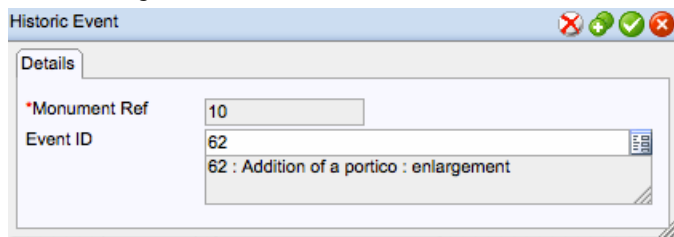7. The event you just created should now be the only event displayed in the "Lookup : Historical Events" dialog box. Double-click on it to select and associate it with the monument.

8. Note that the Historic Event dialog box is now populated with information about the selected Historic Event. Click on the green ✅ button to save the new historic event's association with the monument.

9. The new Historic Event is now associated with the monument and will appear in the Historic Event pane whenever that monument is selected / made active.