Chapter 4.

Awesome Additions

Put on your sunglasses because …

These ideas are bright! You can add maps, calendars and videos. Want to upload or download images and files? Alpha Anywhere makes it easy and cool.

What you'll find here …

There are a lot of Grid and UX basics tucked into the exercises in this chapter. Don't miss them!

Feature Packs:

In reviewing the Video help for items in this section, you may see notes on Feature Packs. These were optional add-ins available for an extra charge in previous editions of Alpha Five.

Since Alpha Anywhere is now sold on a subscription basis, all previous and future add-ins are provided at no extra charge.

How the material is organized

In addition to the basic Grid, UX and Tabbed UI components that we have already covered, there are additional Components and Grid/UX build-in features that will make your application shine even more brightly. This chapter will highlight some we think are of particular interest, but there are many more to come, so don't end your study here!

MAPS

There are many types of maps that can be added to your applications. Since this feature is based on Google Maps JavaScript API, your mapping opportunities are as broad as your imagination.

VIDEO PLAYER

It's all about videos today. Just as we added images earlier, your can also easily add videos to your desktop, web and mobile apps.

IMAGE GALLERY

We have already covered this beauty. Head back to page 53 for a review.

CALENDAR

You can build a scheduling system for you and your staff with the Calendar component. We will also discuss other calendar options.

FILE & IMAGE UPLOADS AND DOWNLOADS

Like many other things in life, image and file upload/download is easy once you know how. We teach setting them up in Grids, UX and HTML memos.

CHARTS

Simple and complex charts can be added to Grids and UX components, as well as reports and desktop applications. We cover them in another of our books, *Alpha Anywhere Report Writer, Reporting and Charting Made Easy* by Susan Hussey Bush, available at www.libertymanuals.com.

TREE NAVIGATOR

We covered this in Chapter 2. You will find it on page 55 if you need a refresher.

Be sure not to miss. The extra tips and tricks in this chapter. Please do the exercises, even if you do not intend to use the particular feature because you'll learn lots about working with Grid and UX components.

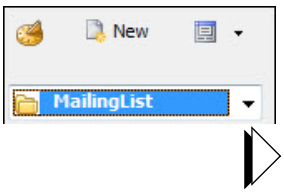
WHO NEEDS THIS?

These exciting features are available for all types of applications, although there are differences in how they work. We'll mark the entire chapter:

- Desktop, Web & Mobile Applications.

But. We will also identify the individual uses as we go along.

Preparation for the lesson



This chapter uses practice components that are found in the *Mailing List* project. If you are continuing from Chapter 3, that project should be open. If not, go to it now.

1. *Web Projects Control Panel:* Choose the **MailingList** project.

2. Go to **Web Projects**.

In some instances, we use DBF tables for convenience in illustrating the lessons. As always, SQL is recommended for web and mobile applications.

Understanding Maps

Alpha Anywhere can connect directly to Google Maps so that you can add them to your application in a large variety of ways. For example, you can show a map for:

- A given customer location based on his/her address.
- All the locations in the current grid.
- One or more locations based on latitude and longitude.
- Driving directions.

In Grids, maps can be shown in a tab or on the same page. The UX component has a map control that is typically called up by means of a button.

We will get you started by showing how to display customer location maps in a Grid (best for web) and a UX (best for mobile). You can then use the videos to expand your map knowledge (references on pages 148 and 152).

- See “Maps: A. Displaying a Google Map in a Grid” on page 140.
- See “Maps: B. Displaying a Map in the UX” on page 149.
- See “Maps: C. Using the Google Maps Component” on page 152.

Maps: A. Displaying a Google Map in a Grid

WHO NEEDS THIS?

- Suitable for Web applications. (Even though this exercise uses a DBF database, SQL is the recommended file type.
- Grids with maps can also be used in Desktop applications.*

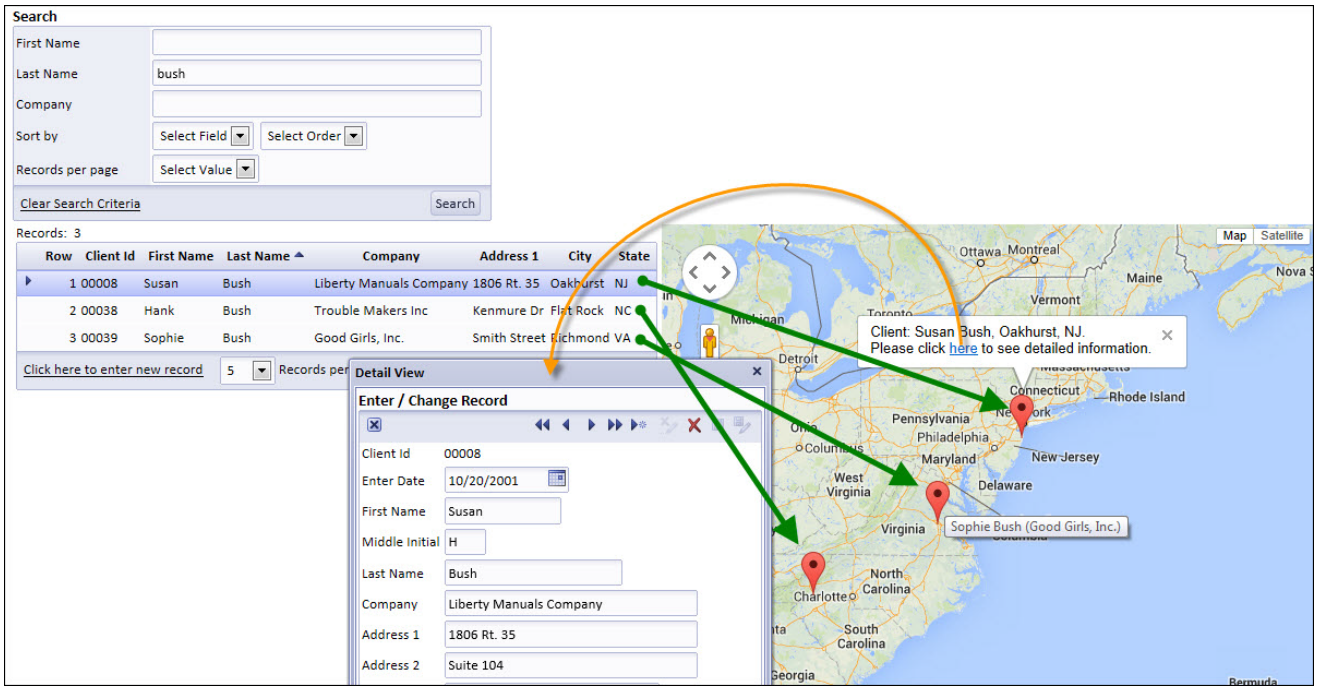
VIDEO! SEE P. 148

There is a complete series of videos on Maps that you may want to watch before doing the exercises.

This lesson will show how to add a map with *Markers* that display customer locations. We will also add a *Title* that appears when the user hovers over the

*. Desktop applications have additional methods for displaying maps.

marker (like bubble help) and an *Info Box* (with a link to the Detail View) that opens when the user clicks on the marker.*



We have prepared a practice grid for you. It is based on the *Pop-up Fade* component that we created in Chapter 2. We simply saved it under a new name, removed some fields from the Search part and modified the Grid columns.

- In a Grid, maps are defined in Grid > Properties.

1. *Web Projects Control Panel > Web Projects:* Open the **MapClient_Practice** component in **Design** mode.
2. Save it as **MyMapClient**.
3. Go to **Grid > Properties**.
4. Click Search Properties (top right of Grid). Enter: **Map**. Choose:
   - **Has Alternate Views (Alternate Views (includes Google Map and Chart))**.
5. Click **Find Property**.
   - *Has Alternate Views*: Yes.
   - *Alternate Views definition*: Click the button.

ALTERNATE VIEWS (INCLUDES GOOGLE MAP AND CHART)

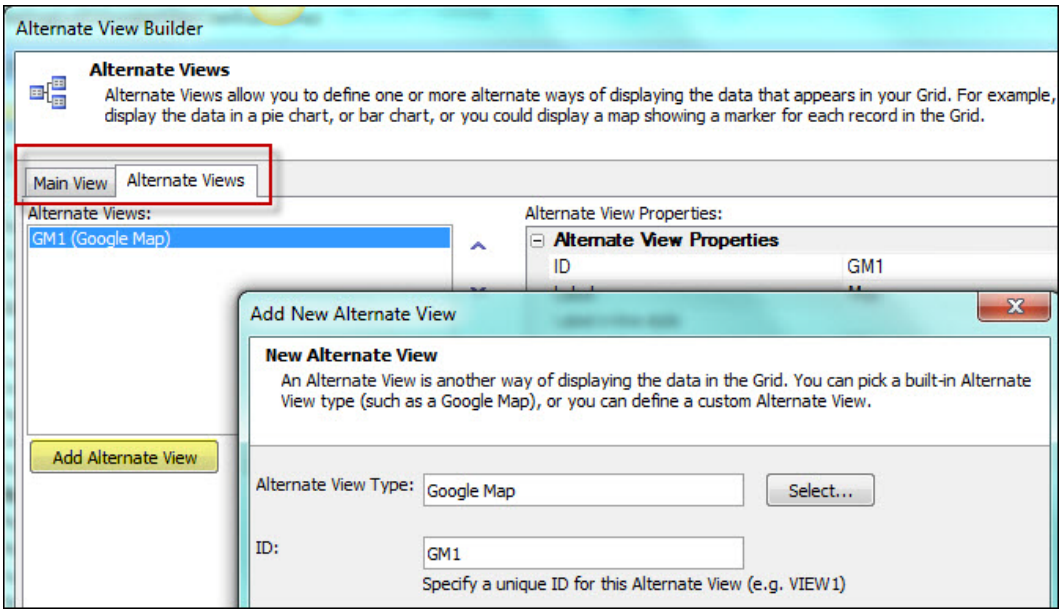
*. Notes on the illustration. Sophie and Hank Bush are my Springer Spaniels. Sophie has passed on to doggie heaven (yes, there definitely is such a place) and was a very sweet and very good girl. Hank is still with us, providing laughs every day and getting into trouble more times than not. SHB

Understanding Alternate Views

Maps can be accessed by a tab, accordion* or button. They can also be displayed adjacent to the grid. Generally, there will be a Search part so that the user can select the desired record. You can even remove the Grid part from view and show just the Search part and the map.

There can be multiple alternate views, consisting of maps, charts or other elements as may become available down the road.†

6. Click **Add Alternate View**.
    a. *Alternate View Type*: Choose **Google Map**.
    b. *ID:* Enter **GM1**. (Click OK)



DESIGN TABS

Notice that there are two tabs (red box above).

- *Main View* governs the display of the Grid page.
- *Alternate Views* shows the properties of the map, chart, etc.

- First, we will display the map in a tab. We will come back later to display it next to the grid.

7. Click the **Main View** tab.
    a. *Mode:* Choose **Selectable**.
    b. *View selector type:* Choose **Tabs**.
    c. *Tab position*: Choose **Top**.
    d. *Label:* **Grid view**. (Click OK)

*. Accordions display components and other information in bands. See “Changing the tabs to accordions” on page 407.

†. Currently, there are three Alternate View types, Google Maps, Charts and Custom. Others are planned and will be added as they are ready. The Alternate View method creates only Pie or Bar Single Series type charts. The Chart Control for the UX, on the other hand, can build very sophisticated charts. Reports can also have many types.

e. *Show Main View:* **Yes**

f. *Initial view:* Choose **Main**.

g. *Has freeform template:* **No**.

8. Click the **Alternate Views** tab and look over its properties. Note that the following can be defined (just a few of the many options):
   - Security groups.*
   - Map type can be Hybrid, Road map, Satellite or Terrain.
   - Google Maps Premier is available for those who subscribe to it.
   - The height and width can be defined. It can be centered and scale and the zoom factor defined.
9. *Alternate View Properties > Label:* Enter **Map**.

Defining the Marker

The marker is the icon that shows the location on the map. The default style is at left, but it can take on any other form that you designate.

- The first thing we need to do is be sure the marker is turned on.

10. *Google Map Properties > Place markers on map:* **Yes**.

- Next, we will select the type.

MARKER TYPES

There are three types:

- **Address:** Use an expression to define address fields (street address, city, state, etc.).
- **Location:** Define by Latitude & Longitude.
- **Auto:** If your database has street address and/or latitude/longitude, Alpha Anywhere will choose Lat/Long when available and Street when it is not.

GOOGLE QUERY LIMIT

Google translates the *Address* to geo codes (latitude/longitude) in order to display the marker. There is no limit to the number of records you can display if your records contain lat/long field, but there is a limit to the number of addresses that it codes at one time. This governs the number of records that the grid can display at one time. We'll see how this works shortly.

11. *Marker Properties > Type:* Choose **Address**.

ADDRESS EXPRESSION

Next, we will identify the fields that hold the address.

12. *Marker Properties > Address expression:* Click the **button**.

a. *Type*: Choose **Expression**.

b. Click Insert field and choose **Address1** to enter the following: tbl.data("ADDRESS_1")

c. Press the **plus sign** (+).

d. Click Insert field and choose **City.** Add another **plus sign.**

*. Security groups are discussed in Chapter 6.

e. Click Insert field and choose **State.**

The completed expression should read:

```
tbl.data("ADDRESS_1")+tbl.data("CITY")+tbl.data("STATE")
```

f. Click OK.

TITLE (BUBBLE HELP) EXPRESSION

The Title Expression defines the message that appears when the mouse hovers over the marker (behaves like bubble help).

This expression is a combination of fields and text. Expressions are detailed in Chapter 8; for now, just type it in as directed.

13. *Marker Properties > Title Expression:* Click the **button**.

a. *Type:* **Expression**.

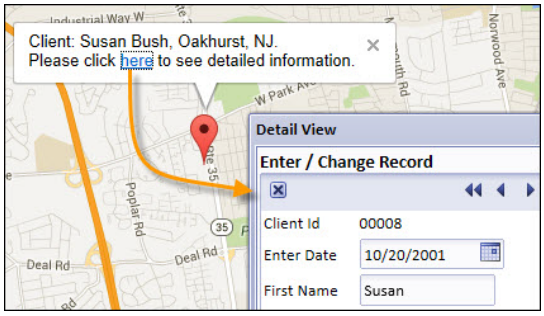
b. Enter the following, using Insert fields to get the field names as above.

- Be sure to enter a space between the first pair of quotes and before the first parenthesis (red).

```
tbl.data("FIRST_NAME")+" "+tbl.data("LAST_NAME")+ " ("+tbl.data("COMPANY")+")"
```

c. Click OK.

INFO BOX EXPRESSION



The Info Box appears when the user clicks on the marker. Ours will use a *Template* with HTML to define a link to the Detail View part.

14. *Marker Properties > Info box expression:* Click the **button**.

a. *Type:* Choose **Template**.

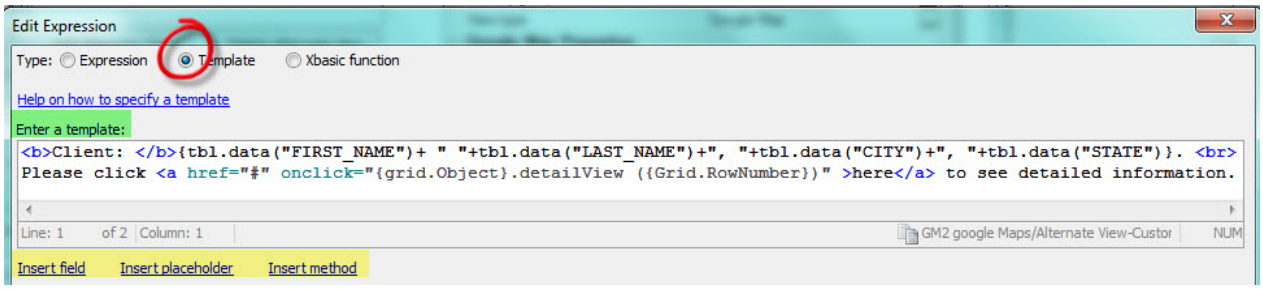
- Don't miss this step! The expression will not work if *Expression* is selected.

b. Enter the following, using the Insert Field, Placeholder and Method helpers.*

```
<b>Client: </b>{tbl.data("FIRST_NAME")+ " "+tbl.data("LAST_NAME")+",
    "+tbl.data("CITY")+", "+tbl.data("STATE")}. <br>
Please click <a href="#" onclick="{grid.Object}.detailView ({Grid.RowNumber})
```

*. This code is explained in Video #GM2.Google Maps/Alternate View-Customizing the Marker Title and Info Box.

" >here to see detailed information.



c. Click OK.

ANIMATION

We'll give the marker a personality that will announce its arrival on the map.

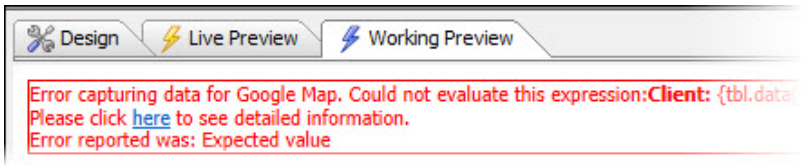
15. *Marker Properties* > *Animation:* Choose **Bounce**.
16. Click **OK** to close the *Alternate View Builder.*
17. Go to **Working Preview.**

Understanding the error messages

There are two error messages that you are likely to come across.

EXPRESSION ERROR

The first comes from Alpha Anywhere. The cause is an inability to compute the Address, Title or Info Box expression. Reading the expression will identify the culprit.



Our experience showed it most often happened when we forgot to select *Template* for the Info Box (step a on page 144). If that happens to you, return to the setting and adjust as follows:

a. **Copy** the expression to the clipboard.

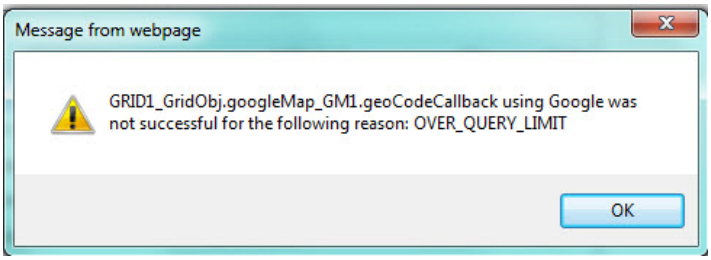
b. Select **Template**.

c. **Paste** the expression from the clipboard.

- If you do not copy and paste, you will have to re-enter the expression because switching from one type to another deletes the expression.

WEB PAGE ERROR

The following Message from webpage error occurs because more records (grid rows) were loaded than Google can Geo Code at one time (see "Google Query Limit" on page 143).



This Grid has been defined to display 12 rows when it opens. Definitely too many for Google to handle. Fortunately, this is easy enough to fix.

Just keep in mind, however, that if you want to load a lot of records at the same time, your database will need Latitude and Longitude for each record and the Marker Type should be set to Location (see "Marker Types" on page 143).

18. Return to Design mode.

Defining the number of records to load

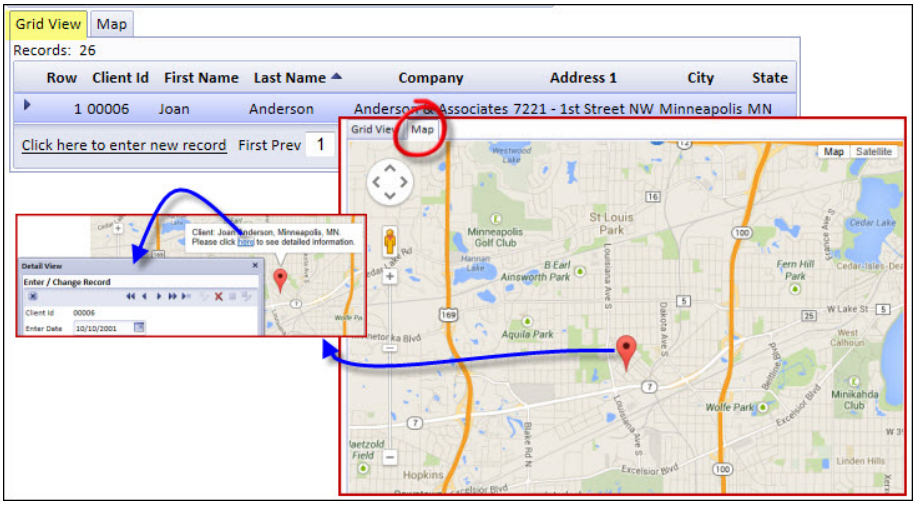
In order to satisfy the Google limit, we will open the component with one record.* A query might bring up more records, however, so we will also change the next setting to show all the query results. This can always be changed in the Search settings, if necessary.

19. Go to **Grid > Properties**.

LAYOUT OPTIONS

- *Rows of Data:* Enter **1**.
- *Rows of data when Search active:* Change to **0**.
  - Read the tips window at bottom of the screen to see how this works.

20. Go to **Working Preview**.



- The grid is displayed with one record.

21. Click the **Map tab** to see the map for this client address.

22. *Search part:* **Last Name = Bush**. (Click Search)

- Three records are displayed in the Grid.

23. Click the **Map tab** again to see the markers.

24. **Hover** the cursor over a marker to see the name and company.

25. **Click** a marker to open the **Info Box** (inset) and then click here to open the Detail View.

- Next, we will look at alternate ways to view the Alternate Views, how to remove the Grid from view and place the map on the same page.

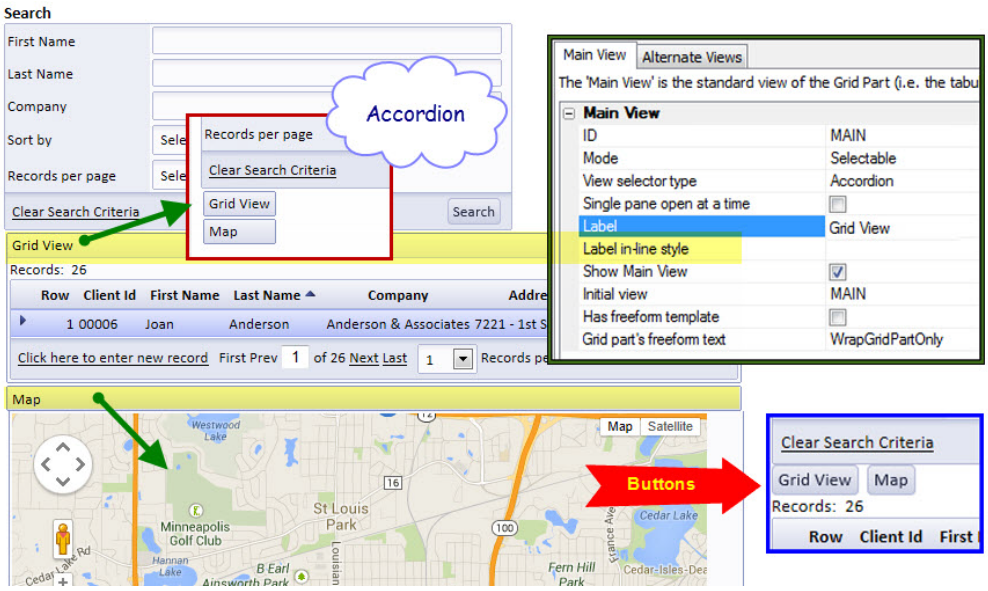
26. Return to **Design** mode.

*. We tested with five records and that also worked. This may take some experimenting if you need to load more.

27. *Grid Properties > Alternate Views (includes Google Map and Chart) > Alternate Views definition:* Click the **button**.

Using Accordions or Buttons to open the map

You can also display the map with Accordions or Buttons. Here's how they look and where you can find the settings. Feel free to test them out, if you like.



a. Click the **Main View** tab.

b. *Mode:* **Selectable**.

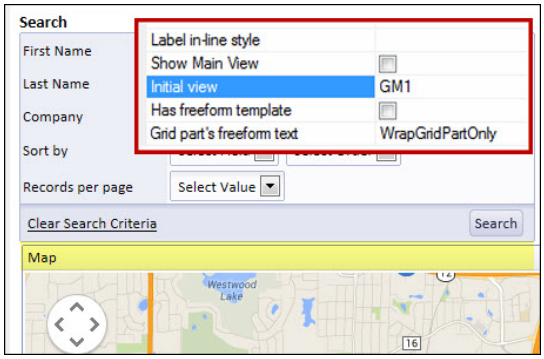
c. *View selector type:* **Accordion** or **Buttons**.

d. *Has freeform template:* **No**.

- Accordions appear in bands above and below the Grid (yellow). Buttons appear between the Search part and Grid.
- Alternate views are opened by clicking the accordion band or button.

- You might want to begin with only the Search part showing. Here's how that is done.

Removing the Grid from view



The Grid display can be suppressed, showing only the Search part and the map (or other alternate view). Tabs, accordions or buttons will display, but have no function unless there is more than one alternate view. Here are the settings. Feel free to test them out, if you like.

a. Continue at the **Main View** tab.

b. Choose one of the above *selector types*.

c. *Show Main View*: **No**.

d. *Initial view:* Select **GM1** (the ID for the map).

• See also "Grid display" on page 148.

- Next, we will show how to place the grid on the same page as the Grid.

Placing the map on the Grid page

We will modify the Main Page settings in order to place the map in a "Freeform" area. This is an area outside the Grid that can be used in many ways, as we will see in upcoming chapters.

28. Click the **Main View** tab.