Tip Sheet

ArchiCAD 12
Nic Rogers & Andrew Ecker
CADConsult Limited
September 2009

Making an Interactive Area Schedule

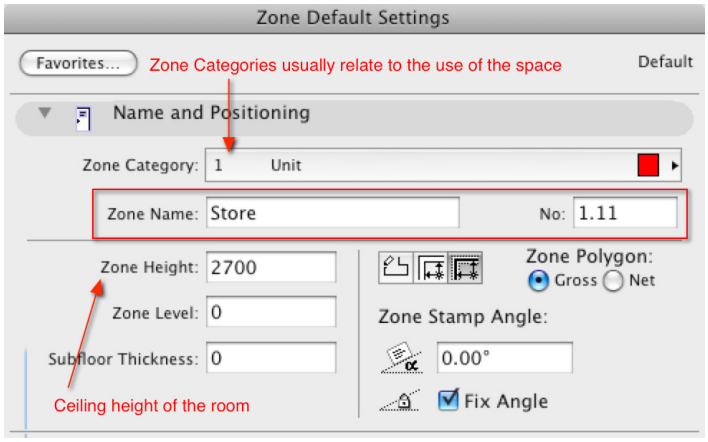
In addition to being a powerful documentation and 3D presentation tool, **ArchiCAD** is very good at **calculating** quantities. Using a combination of the Zone Tool and Interactive Schedules, ArchiCAD can help you dynamically track building areas, volumes, room perimeters, wall areas, count the light fittings in a room, schedule doors, schedule windows and much more.

ArchiCAD's Interactive Schedule function allows you to automatically generate schedules. Unlike simple lists created with the commands of the Document > Schedules and Lists menu, the Interactive Schedule not only displays quantities and other parameters - you can actually edit it. This makes it possible to notice and correct inconsistencies resulting from a data entry error or from the merging of the work of several people on different parts of the same project. For example, the schedule may allow you to detect that all but one of the thirty or forty doors placed in your building have the same height and width. You can then select this door directly from the schedule and check whether there is a reason for this inconsistency. If you find that this was a mistake, then you can correct the setting in the schedule and automatically update the door in all views.

The following simple examples will show the power of combining the **Zone Tool** and **Interactive Schedules** to create an **Area Schedule** that updates as you modify your design and an object quantity list using a basic library chair.

Zone Settings

To leverage the full power of Interactive Schedules, we first need to **place a Zone** in each of the rooms on the **floor plan**. Zones are spatial elements in ArchiCAD. They can be used to identify rooms, wings, functional areas or individual buildings.



To **place a Zone**, go to the floor plan and:

Select the **Zone Tool** from the **ToolBox**.

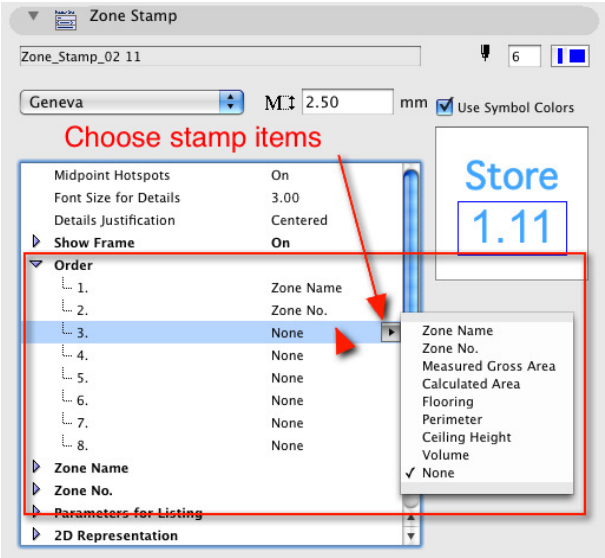
Open the Zone Default Settings by **double clicking** the **Zone Tool** icon in the ToolBox.

Click on the **Zone Category tab**, and choose the description that best describes the use of the room.

Now go ahead and specify the **Zone Number**, a **Zone Name** and a **Zone Height**. These parameters are going to become the Room Number, Room Name and Ceiling height in your schedule.

Rather than use the Text Tool, we are going to use the **Zone Stamp** for **Room Names**. You can define the content of the **Zone Stamp** in the **Zone Default Settings**.

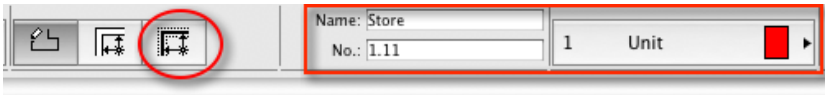
Go to the **Zone Stamp dialoge box** (see right) and select the items you wish to display in the Zone Stamp. Usually, you will only want to display the **Zone Name** and **Zone Number**.
Click **OK.**



Note: ArchiCAD has a number of default Zone Categories. These can be changed in **Options > Element Attributes > Zone Categories**. Categories are used to define different construction types or functional areas.

Place the Zone

To place the zone, choose the third placement method from the **InfoBox**. This will automatically place a Zone to the Reference Lines of the Walls of a Room.

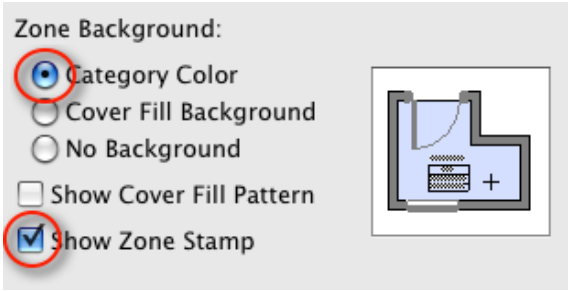


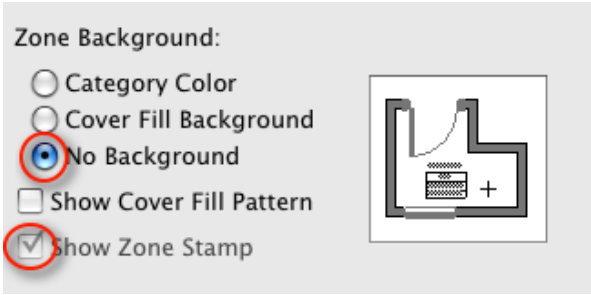
Click inside a **Room.** The hammer icon will appear. **Click** the floor plan to place the **Zone Stamp**. If the hammer does not appear, or you get a warning message, tap the **ESC** key and check that all the walls surrounding the room are properly joined and try again.

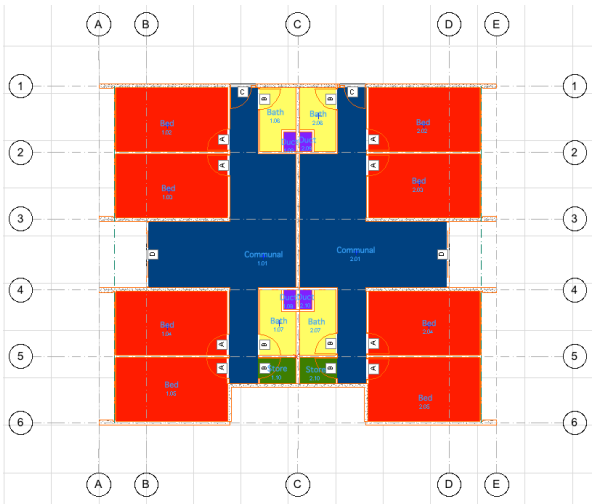
Now repeat the process for the remaining rooms. After you have placed the first Zone, you can use the **InfoBox** to **update Zone Names** and **Categories**.

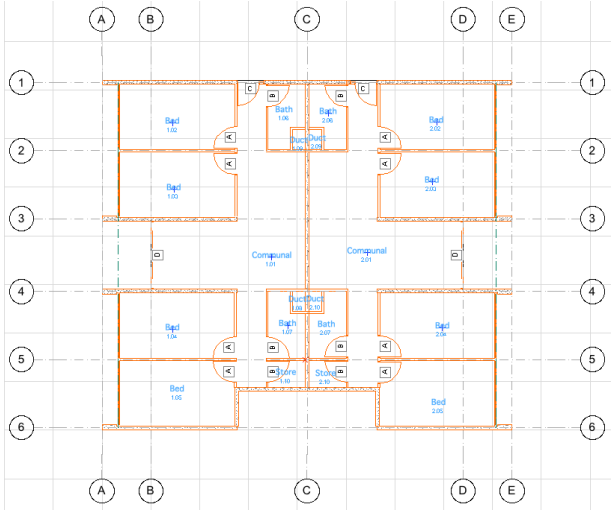
Zone display on the Floor Plan

Once you have placed the Zones on the Floor Plan, you can control the display of the Zone Category Color in **Document>Set Model Options>Display Options > Options for Fills and Zones**.

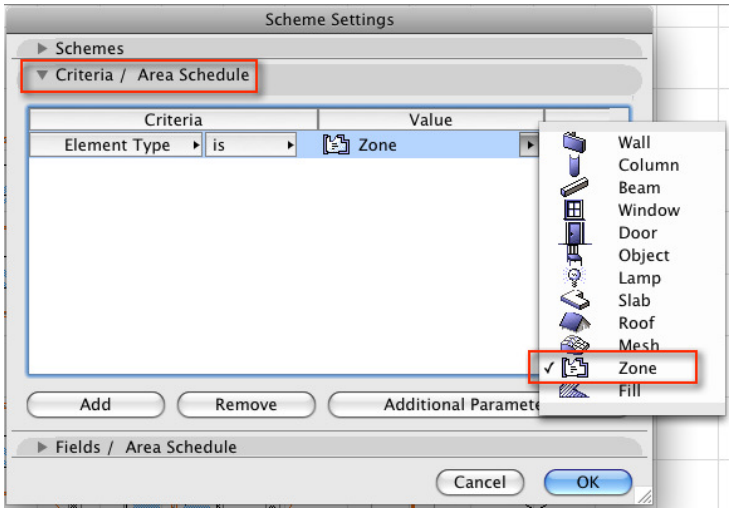








Set up an Interactive Schedule



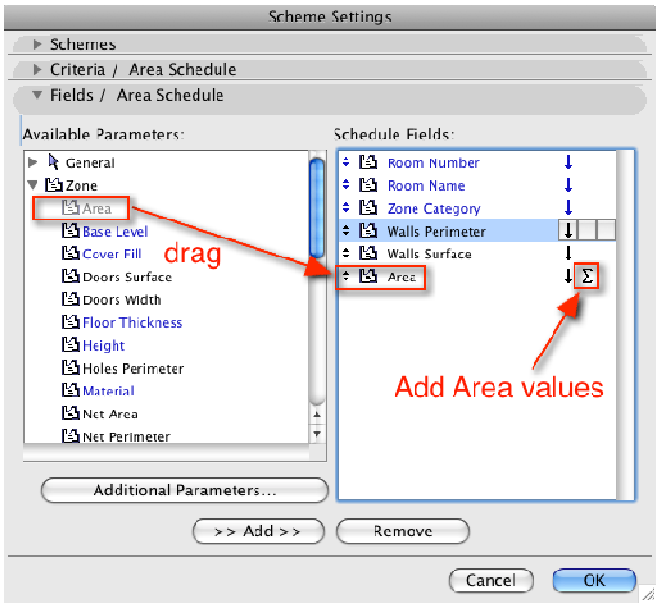
Now you have mapped out all of the areas of your building with the Zone Tool go to **Navigator > Project Map > Schedules**.

Right click on **Element** and choose **Scheme Settings**.

Click on the **New Scheme** button. Give the scheme an ID number and name it **Area Schedule**. Click **OK**.

The Scheme Setting dialoge will now open. **Select Area Schedule** from the list.

Expand the criteria tab and set the **Element Type** to be **Zone.**



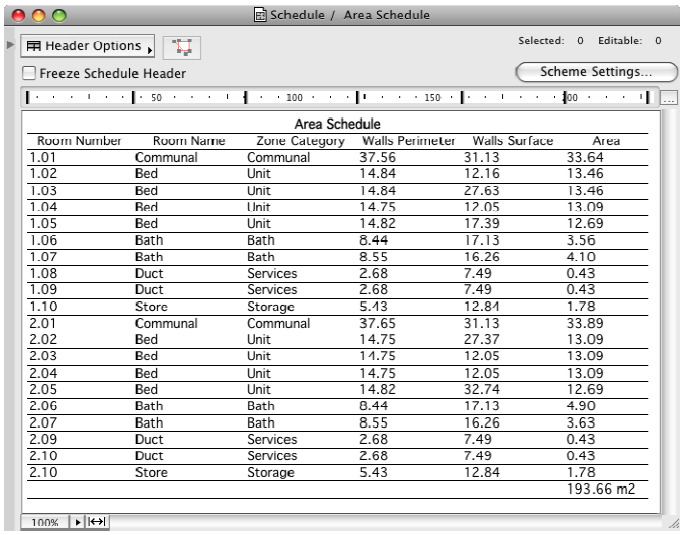
ArchiCAD will now make all the **General Element parameters** and all the **Zone Element parameters** available for scheduling.

Open the **Fields** tab in the **Scheme Settings**.

Expand the **General and Zone tabs** in the **Available Parameters** box. **Drag the parameters** you wish to include in your schedule into the Schedule Field box.

Blue parameters are **interactive**. This means they can be changed in the Interactive Schedule and the change will alter the ArchiCAD model.

The parameter at the **top** of the **Schedule Fields** list will become the **first column** of the **Area Schedule**. You can shuffle any parameters position in the list.



Room Number	Room Name	Zone Category	Walls Perimeter	Walls Surface	Area
1.01	Communal	Communal	37.56	31.13	33.64
1.02	Bed	Unit	14.84	12.16	13.46
1.03	Bed	Unit	14.84	27.63	13.46
1.04	Bed	Unit	14.75	12.05	13.09
1.05	Bed	Unit	14.82	17.39	12.69
1.06	Bath	Bath	8.44	17.13	3.56
1.07	Bath	Bath	8.55	16.26	4.10
1.08	Duct	Services	2.68	7.49	0.43
1.09	Duct	Services	2.68	7.49	0.43
1.10	Store	Storage	5.43	12.84	1.78
2.01	Communal	Communal	37.65	31.13	33.89
2.02	Bed	Unit	14.75	27.37	13.09
2.03	Bed	Unit	14.75	12.05	13.09
2.04	Bed	Unit	14.75	12.05	13.09
2.05	Bed	Unit	14.82	32.74	12.69
2.06	Bath	Bath	8.44	17.13	4.90
2.07	Bath	Bath	8.55	16.26	3.63
2.09	Duct	Services	2.68	7.49	0.43
2.10	Duct	Services	2.68	7.49	0.43
2.10	Store	Storage	5.43	12.84	1.78
					193.66 m2

In this example, we use the **SUM** function [**Σ**], to add all of the Zone Areas. (There is also a **COUNT** function [**Σ1**] and a **GROUP** function [flag icon])

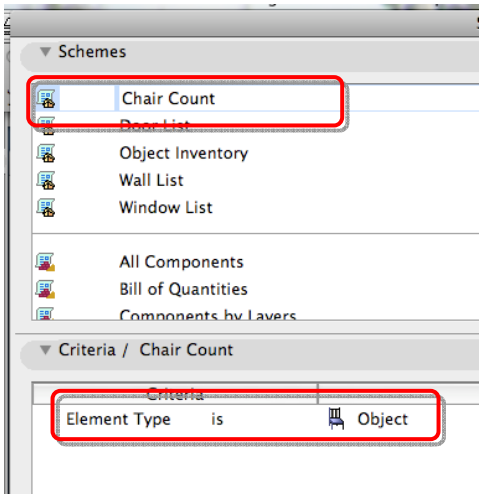
When you are satisfied with the number and order of your schedule parameters, click **OK.**

Now you are able to generate the new Area Schedule:

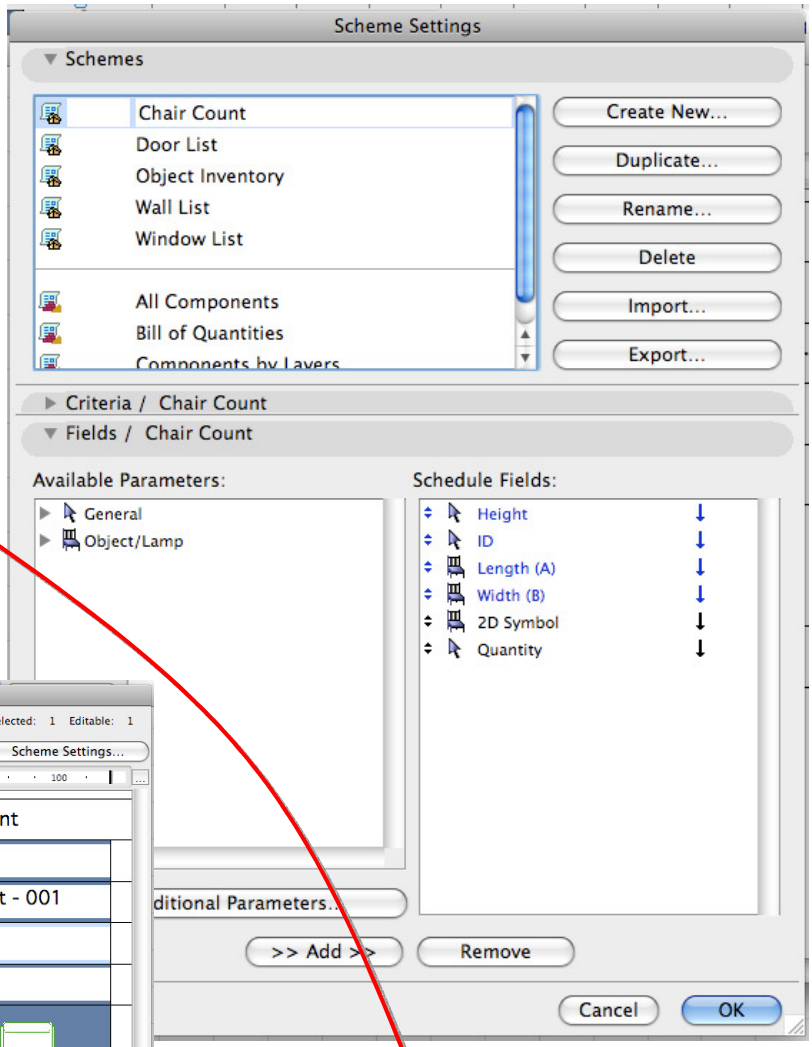
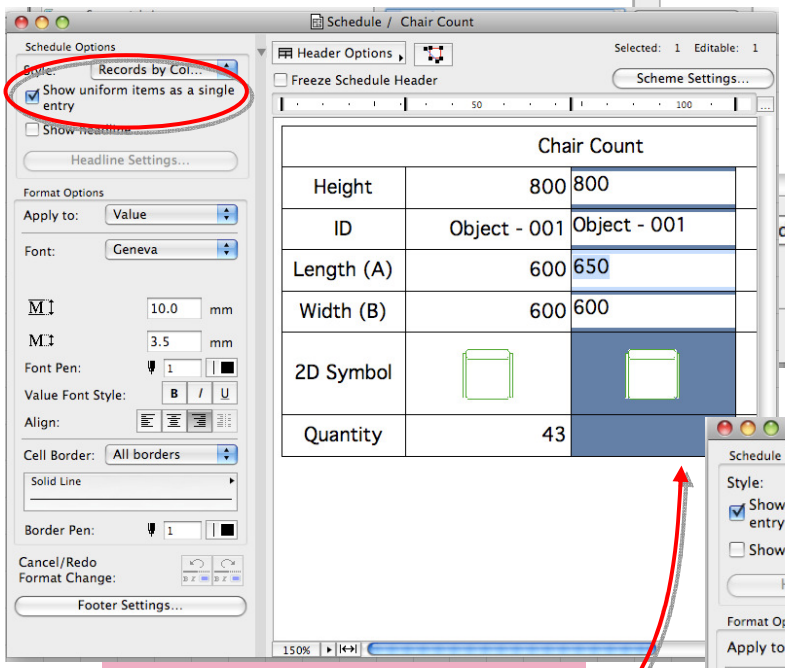
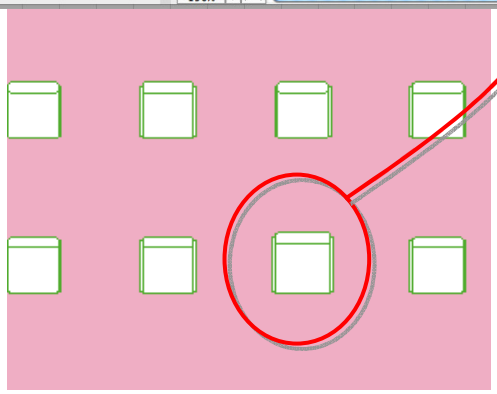
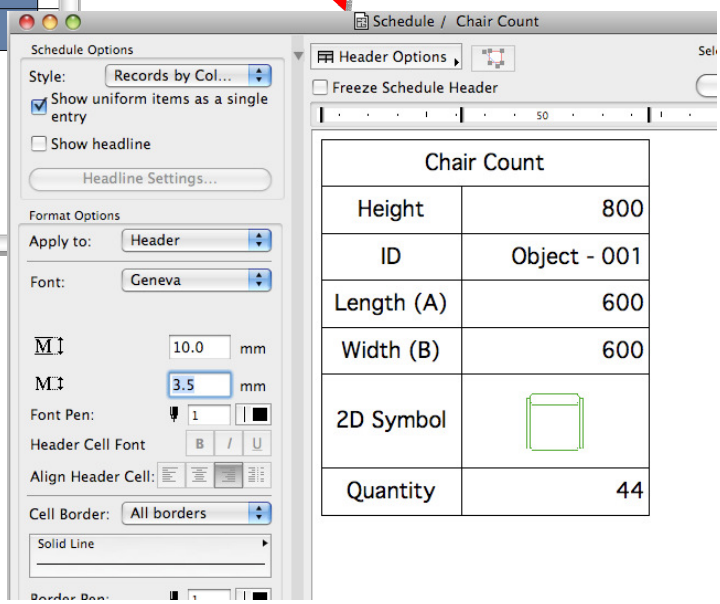
Go to **Navigator > Project Map > Schedules > Elements** and double click Area Schedule.

Use the **format sidebar** on the left hand side of the Schedule window to refine the presentation of your schedule.

Finally, go to **Navigator > Project Map > Schedules > Element** and **right click** on **Area Schedule.**
Choose **Save View** to save the file to your View Map.



Using the above procedure we can also schedule objects like chairs. As mentioned at the beginning of this Tip Sheet, the schedules could be used to isolate a rogue seat within a project. Following the images below we can create a new Schedule, this one is called **Chair Count**. Select the Object element type instead of Zone as above, then in the Fields / Area Schedule set the variables you wish to tally.



Double clicking the Chair Count Schedule shows the example with 2 chair types, one marginally larger than the other. Thankfully as the dimensions in this case are interactive a quick edit of the 650 x 650 chair to 600 x 600 will cause the Schedule to now only list one chair type once re-opened.