Skalp

Skalp for SketchUp 1.0: Getting Started
for SketchUp 2014 / 2015

Please understand that your purchased License will NOT expire.
It is just the BETA and RC builds of Skalp that we need to force an expiry upon in order to make sure you are running a recent version. During BETA and RC, features may undergo changes.
Make sure to read the Release Notes section at the end of this document for more information. Thanks for your understanding.

Skalp for SketchUp 1.0: Getting Started for SketchUp 2014

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Introduction

This document covers the basics to get you started with Skalp,
the next exciting must-have extension to SketchUp 2014.

We hope that you'll like using Skalp and find this document informative.

If there is anything that you feel should be be corrected, please let us know as we are
passionate about providing a great experience.

Enjoy!

About Skalp for SketchUp 1.0

Skalp has been designed and built as an easy to use yet powerful Live Section Tool. It represents the key missing features needed to realize a long standing dream: Create your stunning plans and elevations inside SketchUp.

The Skalp development Team has its roots in architecture and 3D software, but that doesn't mean Skalp is for architects or Pro users only.
SketchUp is being used in so many disciplines nowadays. Which is why we intended Skalp to be as 'generic' as possible. This means we do not want to change or disrupt your specific workflow. We feel Skalp should just try to respect whatever and however you're doing in SketchUp and simply boost your ability to create superb drawings.

As for the future of Skalp, we thank everybody who has purchased, spoken to us or helped us in any way. We plan to continue improving Skalp in many ways whilst keeping an affordable upgrade path. We always welcome new suggestions. If you'd like us to add or change something, by all means feel free to contact us.

Thank You!

The Skalp Team

Contact

To purchase Skalp and/or Skalp Pattern Designer, please visit:

http://www.skalp4sketchup.com

Support questions: support@skalp4sketchup.com

Questions on your purchase: sales@skalp4sketchup.com

Reseller inquiries: reseller@skalp4sketchup.com

Features

Skalp Sections

- Automatic hatch **patterned** cross sections.
- **Live** updates, all model changes are tracked on the fly.
- Use Styles to remap the look in each scene.
- Fully supports **nested** groups and components.
- Supports multiple drawing **scales** in one model.
- Neat user interface filled with relevant features.

Skalp Styles

- The same Section **represented** in multiple ways.
- Each Scene can have its own cross section style.
- Intuitive and powerful mapping **queries**.
- Assign by layer, material, hatching or tagging.
- Patterns adapt to the **drawing scale**.

Skalp Pattern Designer

- Make awesome **tileable** Pattern textures for your Skalp Sections.
- **Texturize** your model in a new creative way.
- Import standard **CAD patterns**.
- Build your own patterns from scratch.
- Supports scales, transparency, colors & line widths.

Skalp Export

- Support for SketchUp Pro's **LayOut:** Persistent updates of Skalp sections in all scenes.
- Export to DXF includes real CAD **hatch patterns**.
- Batch export of scenes to **DXF**.

1. Preparing Skalp

1. System requirements

- SketchUp Make 2014 / 2015 or SketchUp Pro 2014 / 2015
  Both 64-bit and 32-bit supported

- Mac OSX 10.9 or higher + Safari 7 or higher
  OR

- Microsoft Windows Vista, 7, 8 or higher + Internet Explorer 10 or higher

  SketchUp 2014 is not fully supported under windows XP
  http://help.sketchup.com/en/article/36208

  Please do not attempt to run Skalp on earlier SketchUp versions, this will not work and is not supported.

2. Installation Notes

1. We recommend logging into your computer as an administrator before installing Skalp for SketchUp. This will make the installation go more smoothly and ensure that files get installed in the proper places.

2. Select: **Window > Preferences** (Microsoft Windows) or **SketchUp > Preferences** (Mac OS X). The Preferences dialog box is displayed.

3. Click on **Extensions**. The Extensions panel is displayed.

4. Click on the **Install Extension** button. The Open dialog box is displayed.

5. Locate the **Skalp.rbz** file to install.

6. Click on the **Open** button. Skalp should appear in the list of extensions and is ready to be activated.

   More information on installing plugins in SketchUp:
   http://help.sketchup.com/en/article/38583

3.   First Run / Activating Skalp

1.   Skalp needs to be activated upon first run.
     An **internet connection** is needed ONCE for this process to succeed.

Click on one of the
Skalp Toolbar icons.
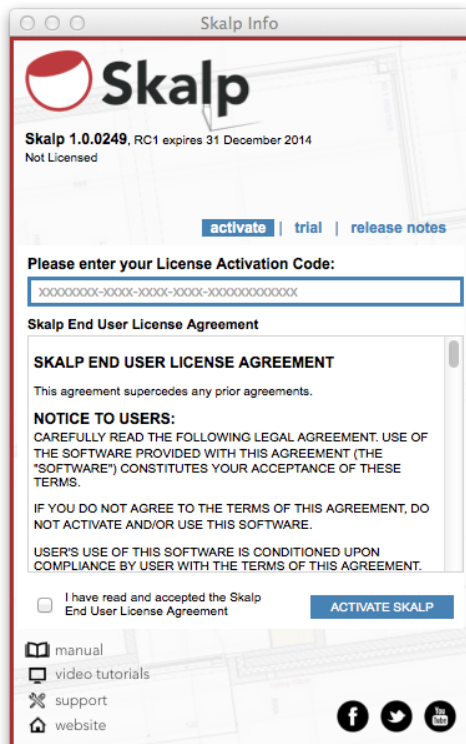
You will be presented with a dialog where you
need to fill in or paste your
license activation code:

xxxxxx-xxxx-xxxx-xxxx-xxxxxxxxxxxx

This code was sent to you via email upon
purchase.

Read the Skalp End User License Agreement
and **Check to Accept**.

click on **Activate Skalp**

2.   Skalp will try a **fully automatic activation**.

1.   In case this doesn't succeed an email is sent to you with your '**Skalp.lic**' license
     file. The license file then needs to be placed manually as follows:

2.   C:\Users\YOUR USERNAME\AppData\Roaming\SketchUp\SketchUp
     20[14/15]\SketchUp\Plugins\Skalp_Skalp\Skalp.lic   (Microsoft Windows)

3.   /Users/YOURNAME/Library/Application Support/SketchUp 20[14/15]/SketchUp/
     Plugins/Skalp_Skalp/Skalp.lic   (Mac OS X)

4.   To navigate to this hidden folder on Mac OS X: Open a new Finder window,
     press and hold the Option (left alt) key on your keyboard, the click **Go** in the
     menu bar
     > Library > Application Support > SketchUp 20[14/15] > SketchUp > Plugins

3.   Skalp is now ready to use.

4.   Updating to a new Skalp version (beta 8)

1. Upon start, Skalp checks to see if a new
    version is available for download.
    If this is the case a dialog will ask you
    wether you wish to update or not.

    *In case your current Skalp version is a BETA
    version, its EXPIRY DATE is also shown.
    We strongly advise you to update Skalp
    before this date passes as you will have to
    manually update otherwise.*

2. If you accept, a second dialog will explain
    the process that is about to happen.
    Skalp will clean your current installation.
    Your 'Skalp.lic' license file and any custom
    hatch patterns will NOT be removed.
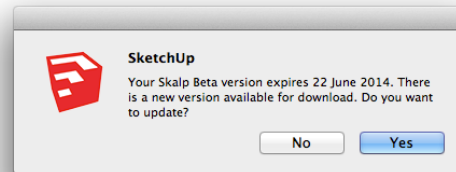
3. After a successful uninstall you will be redirected to the Skalp Product Downloads
    page in your web browser. From there you can always download the latest version.
    After successfully downloading you have to reinstall Skalp as described in the
    Installation Notes.
    MAKE SURE TO CLOSE AND REOPEN SKETCHUP BEFORE REINSTALLING
    SKALP

4. In case your **Skalp BETA or RC has EXPIRED** you need to reinstall Skalp manually.
    Start by uninstalling Skalp:
    - open the Ruby Console from SketchUps menu and enter 'Skalp.uninstall' (without
    the quotes). Hit enter. The Console should now state 'True', indicating Skalp has
    been successfully uninstalled.
    - close and reopen SketchUp and proceed with the Skalp installation as explained
    under 'Installation Notes'.

    You can manually download the latest Skalp version from:
    http://download.skalp4sketchup.com/downloads/latest


Please understand that your purchased License will NOT expire.
It is just the BETA or RC builds of Skalp that we need to force an expiry upon in order to
make sure you are running a recent version. During BETA or RC, features may undergo
changes.
Make sure to read the Release Notes section at the end of this document for more
information. Thanks for your understanding.

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2.   Start Using Skalp

1.   User Interface Overview

Click on the Skalp Icon in the Skalp Toolbar to bring up the main Skalp dialog:
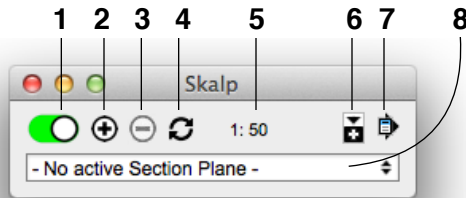
1.   Activate / Deactivate Skalp Sections

This green/red slider button manages the section visibility. It does this by activating/deactivating the SketchUp section and by turning on/off the special purpose Skalp layers.

If you want to 'remember' this setting on the active scene, you have to use '**Save Skalp Settings to Scene**' (7).
When this slider button is RED and you cannot turn it to GREEN, this indicates no Skalp Section is available in the model and you have to create one first (2).

2.   Add a new Skalp Section

Adds a new Skalp enhanced SketchUp section plane to your model.

Once Skalp is running you can either add new sections with Skalps '+' button or using the standard SketchUp 'Section Plane' tool.Both will produce the exact same result.

After placing the section plane, a dialog allows you to **enter a name** and **create a new Scene** to be associated with the Section. The Scene creation is optional. Skalp Sections can be associated to a Scene later from the main Skalp dialog as well. Multiple Scenes can be associated with one and the same Skalp Section. See 'Using Scenes to manage Skalp Section visibility'
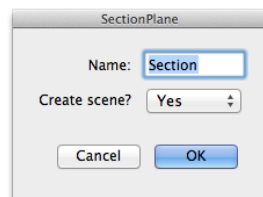
3. Delete a selected Skalp section

    Deletes a Skalp section and removes all Scenes that are associated with the
    selected Skalp section. (see 'Using Scenes to manage Skalp Section visibility' to
    manage Skalp scene association.)
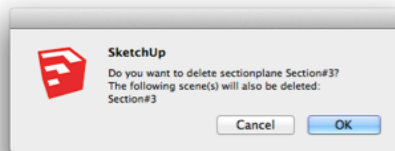
4. Force Update a Skalp section

    Can be used to recalculate a section. Mainly needed when you have turned OFF
    Skalp auto updating from the preferences in the menu. Normally not needed if
    automatic updating is ON.

5. Drawing Scale

    Sets the Scale at which you intend to print the selected Scene. This influences
    the size and resolution of the patterns generated by the Skalp Pattern Designer.

6. Show More

    Opens up the lower part of the dialog to show the 'Skalp Styles' editor.
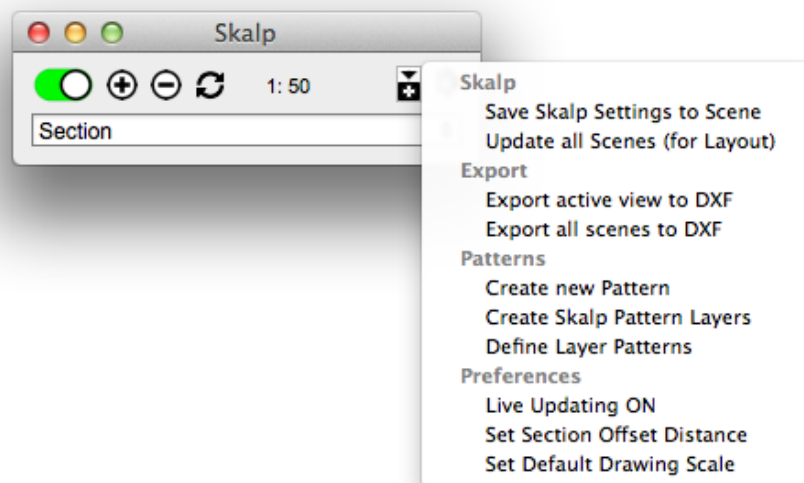   See 'Skalp Styles'

7. Skalp Menu

- Save Skalp Settings to Scene
    Stores the active Skalp Section Plane and its scale settings in the current scene.

- Update all Scenes (for Layout)

  Updates all Skalp Sections in all scenes. Brings all scenes in a consistent state, accessible even when Skalp is unavailable. This is useful for models in Layout or to hand over your model to clients that don't have Skalp.

- Export to DXF

  Saves a 2D DXF file of the Skalp Section into the same directory where your model is saved.

- Export all scenes to DXF

  the same as 'Export to DXF' but for all scenes at once.

- Create new Pattern

  Opens the Pattern Designer Dialog

- Create Skalp Pattern Layers

  Creates a separate layer named 'Skalp Pattern Layer - <pattern name>' for each Skalp Pattern. This method is intended for advanced use of SketchUp's Color By Layer function. See Skalp Styles.

- Define Layer Patterns

  Opens a dialog that allows permanent mapping of Patterns to SketchUp Layers. To use this mapping add a line 'by Layer' to your Skalp Style.This mapping information gets stored directly to the Layers in your active model.
  When you save your model as a template, new models based on this template will inherit this mapping.
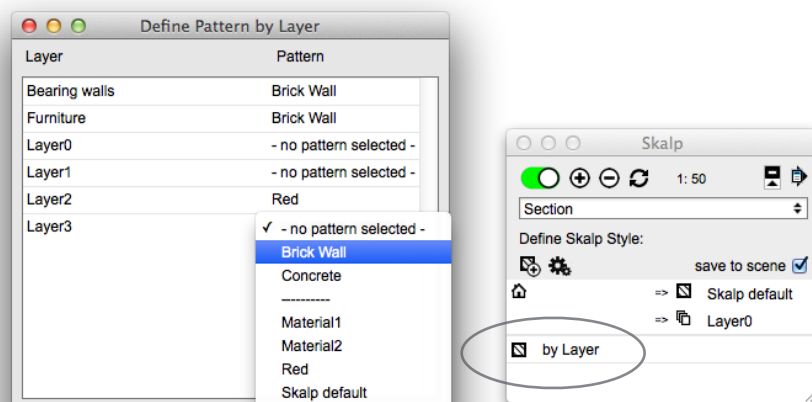
- Preferences, Live Updating ON/OFF

  Toggles Skalp's automatic updating. Leave this ON under most circumstances. This option is intended to turn off Skalp's automatic updating in case it would slow down your workflow too much. (e.g. on really big or complex models.) When this option is turned OFF, you have to 'Force Update' (4) the Skalp Section manually. It is always a good idea to try to find and reduce the source of your model being 'slow' before reverting to switching this option to OFF.

- Preferences, Set Section Offset Distance

Determines the 'depth' distance at which the Skalp section groups are offset from the standard Sketchup section plane. It depends on your model size and your computer's 3D depth resolution how small you can set this offset before you begin to see parts of the Section result getting clipped. (e.g. on a recent macbook pro retina 0.1mm would be ok, on older hardware we recommend at least 1mm).

- Preferences, Set Default Drawing Scale

Stored Drawing Scale (5) preference that Skalp will use when it is loaded next time.

8.   Skalp Sections Drop Down list

Drop down list to directly access all Skalp Sections in this model. Works in two directions: Either select a Skalp section from the list to activate the Section, or select a SectionPlane in the model and use this field to enter or change its name.

Hit 'Enter' to confirm the new name.

After activating or deactivating a section from the list you might want to store this setting onto you active scene by using 'Save Skalp Settings to Scene' from the menu (7).
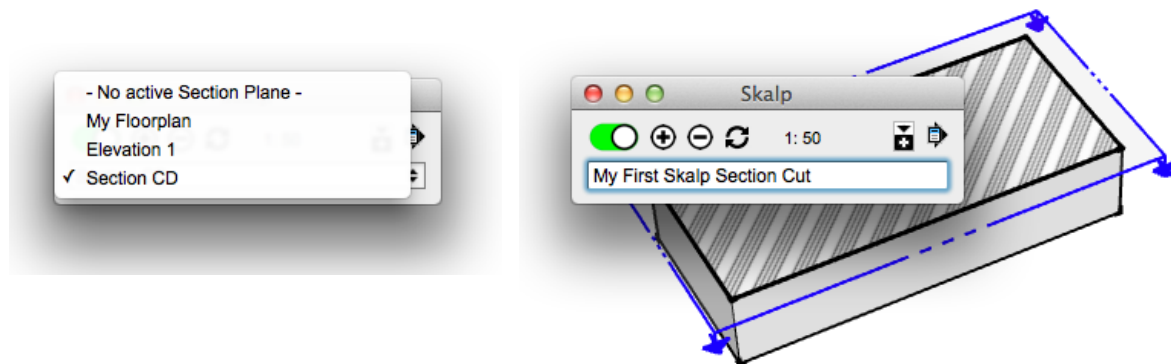
2. Understanding and Using Skalp Sections

A Skalp Section is an 'enhanced' SketchUp section.
It adds **Live updating** and **styled solid Fills.**

What exactly does this mean, and how is this accomplished?

1. Section Fills

In essence, Skalp searches and selects particular sets of faces from the model, intersects them with the section plane and looks for 'closed loops' in the results to fill.

Only closed loops can get filled.

Skalp will track and process your model 'context by context'.
A 'context' is a Group, a Component or simply the Model itself.
So, the process starts by taking your top level context: the model itself.
Next, Groups and Components are taken one at a time.
The resulting 'fills' will be updated and placed into one managed group in your model.

While not necessary, it is good practice to try to create components and groups that are 'manifold', 'solid' objects. These objects will be processed faster and are likely to produce cleaner section results. If a selected object reports a 'Volume' in the entity info dialog, this indicates it is a valid solid object.

Skalp does track nested objects. That is: groups or components inside other groups or components. So organizing your model in smaller nested groups/ components might help getting better section results.

In order to further maximize Skalp's potential and tailor it to you specific workflow you can step it up and have special Patterns and/or hatches mapped onto a Skalp section. This can be done using a wide range of workflows, explained in more detail under 'Styling your Skalp Sections'.

2. Live updating

By default Skalp Sections update automatically when needed. Skalp will track and process all drawing entities in your model. Whenever something changes, Skalp will either directly update or, in some cases wait for the next opportunity to update. For example: If you move something, Skalp will wait for the move tool to end. This is done because SketchUp allows you to specify a distance after a move operation. This behavior would be broken if Skalp would interfere to soon, so it waits until another tool starts.

> *Tip: Pressing the spacebar after, for instance, a move or push pull operation will change the active tool to the selection tool. This will cause Skalp to update.*

To accomplish 'Live' tracking, Skalp depends on a mechanism in SketchUp called 'Observers'. All kind of actions are tracked in this way:

- Adding, Deleting, Changing; basically all model actions.

Whenever entities in the model, in a group or in a component are modified, Skalp will update the section.

- Switching Scenes will update the active Skalp section plane for that scene

- Turning layers ON or OFF will be reflected in the Skalp section.

- Hiding or showing model entities will be reflected in the Skalp section.

- Moving the section plane itself is also tracked.

You can disable automatic updating as a preference from the menu on the main Skalp dialog. Manual 'Force Updates' are then needed. Under normal conditions it is advised to keep auto-updating turned ON.

Special care is needed to update all scenes if you want to use your model in Layout or show the model on a SketchUp version that does not have Skalp installed. See: 'Update all scenes (for Layout)'

3. Using Associated Scenes to manage Skalp Section visibility

Skalp can manage all layer visibility states in each Scene automatically, provided you follow these rules:

1. **Always use the section drop down list** to select and activate/deactivate your desired Skalp section.

2. If you want to have NO active Section in a Scene, switch the green/red slider button to **red**, OR select **- No active Section Plane -** in the main Skalp dialog.

3. CRUCIAL: Use '**Save Skalp Settings to Scene**' from the menu to make sure the Section status is 'remembered' in the current scene. This will also save the scale setting to the scene.The **Skalp section is now associated** to the current scene.
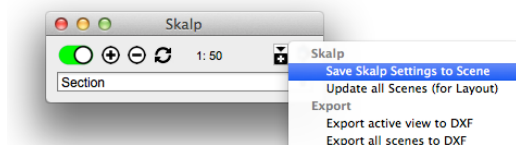

4. Remember: there is no need to touch any of the Skalp Layers, ever.
If you do so anyway, you may get into trouble.

Following these rules, simply switching to another Scene will properly hide or show the appropriate Skalp sections. (There is a known issue on switching scenes where sometimes you have to click twice on a scene in order to get the Skalp update right. We need to fix this.)

Try it out by opening the layer dialog. Switch Scenes and see what is happening to the layers. All Skalp layers are intended to be automatically managed and should not be changed. Doing so may cause unintended behavior, or you may notice that Skalp simply won't allow interference by restoring the layers state.

4. Convert an existing Section Plane to a Skalp Section
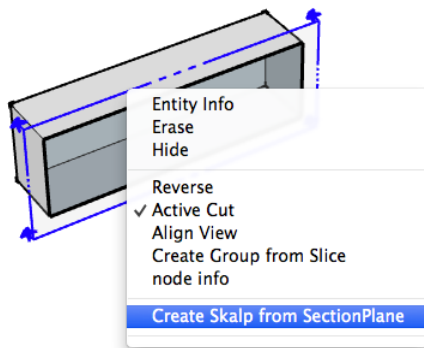
You can convert an existing SketchUp section plane to a Skalp Section by selecting the section plane and then access its context menu by right clicking.

Select '**Create Skalp from SectionPlane**'
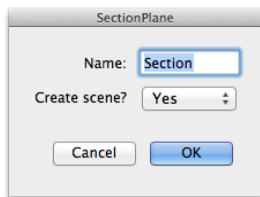
A dialog will ask you to
enter a **name** for the new Skalp section. You can always change the name later on from the main Skalp dialog.

Optionally you can have Skalp **Create a Scene** and associate it with this Section. This association can also be managed from the main Skalp dialog

5. Naming and renaming Skalp sections

All Skalp sections in your model can be given a name. To do so you first have to select the Skalp sections SketchUp SectionPlane in your model.
The drop down list changes into an edit box. Use this field to enter or change its name. Hit 'Enter' to confirm the new name.

On associated scenes the section name will also be propagated: changing the section name will also change scene names.
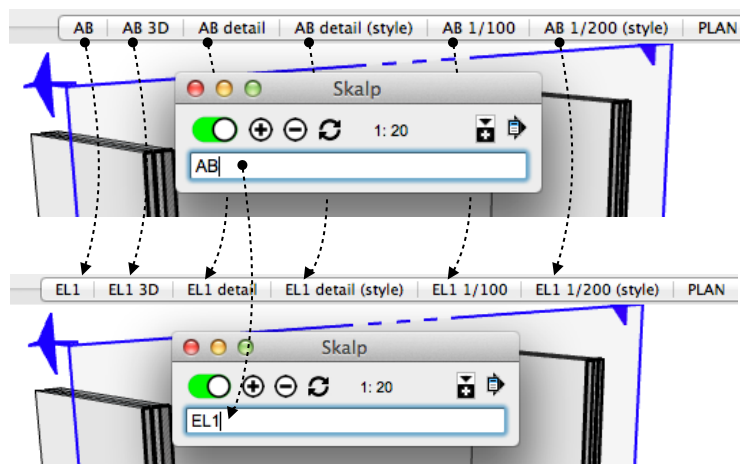
6. Skalp Layers / Skalp section groups

Skalp dynamically creates , manages and uses a set of Layers and Groups. These all serve very specific purposes and are essential to Skalps functionality. We strongly advise you not to change, rename or delete any of these Skalp specific resources ever. Doing so anyway might get you into trouble.
If for some reason you are feeling a need to modify a Skalp layer or Skalp section group, chances are you're actually trying something else that can and needs to be done using another Skalp specific method. Most common scenario's are likely visibility handling and naming issues. See:'Using Associated Scenes to manage Skalp Section visibility' and 'Naming and renaming Skalp sections.'

Purely as a reference, here is an overview:

Layers Skalp uses:

- 'Skalp Live section'
  This is the layer on which the 'Skalp active view' group is placed. It is turned on/ or off using the red/green slider or by selecting either -No active Section Plane- or a Skalp section from the drop down list. Its visibility status should NOT be changed manually from the layer dialog.

- 'SectionPlane: <Skalp section name>'
  A Skalp section uses a standard SketchUp SectionPlane object. These parts of Skalp sections are placed on their own layers.

- 'Scene: <scene name>'
  This is where the 'Skalp scene view' section groups are placed. These groups and layers are where Skalp puts its 'persistent' version of the calculated section groups when using 'Update All Scenes (for Layout).


Groups Skalp uses:

- 'Skalp active view'
  The group in which Skalp continuously places and updates its section fills. This group is normally locked by Skalp. If you unlock it and try to delete it, it is instantly readied to the model.

- 'Skalp scene view'
  Similar groups containing section fills: one such group for each scene + Skalp section pair. Only shown in Layout or when using the model in a context where Skalp doesn't run. Normally you never see these groups inside SketchUp and as long as you haven't run 'Update all Scenes (for Layout) these groups might not even exist in your model. What you see in SketchUp is the 'Skalp scene view' group.

3.   Styling your Skalp sections

1.   Introduction to Section Styling

Filling a section is one thing, creating real good looking plans is another.

With Skalp Styles you can step it up.
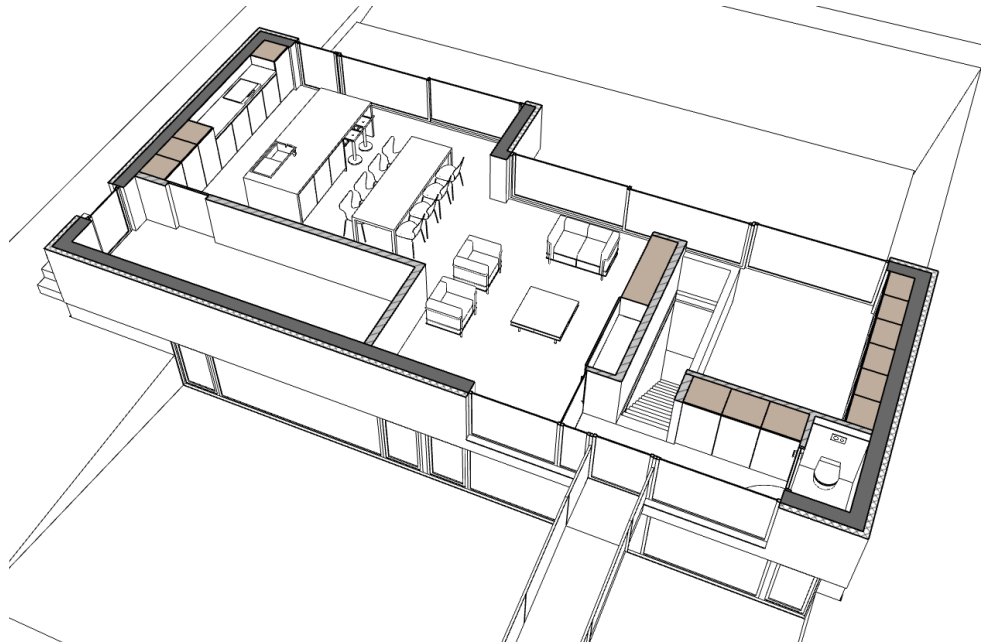
A Skalp Style is similar to a Sketchup style as it is kind of a recipe to determine the look of a Skalp section.

You can opt to go for some real easy basic scenario's or you can dig in deeper and tailor a style exactly to your needs.

Some examples:
Suppose you need a floor plan at 1:48 with multiple nice hatchings and colors. You can set this up using a Skalp Style, store it on a Scene and have that Scene referenced in Layout.
Now, what if you want to print the same plan on a smaller scale with a simplified preliminary look? Instead of creating a new Section cut you can now simply duplicate the original Scene and directly start tweaking its Skalp Style. The section cut itself will still be live and shared across both scenes.

Maybe you need a construction detail with nice hatchings but then adapted to a larger printing scale?

And so on...

This is what Skalp Styling is all about.

Since all SketchUp users have their own way of working, Skalp offers several workflows to adapt and be tailored to your use-case. Practical examples are given in a range from very easy and basic use cases, up to more advanced scenario's. But first let us look at the Skalp Styles user interface.

2. Skalp Styles: User Interface

- The white lower part of the Skalp dialog is where the Skalp Styles are configured and edited. You can open this part with the 'show more' icon.

- A skalp Style can be stored on a Scene by checking **'save to scene'**.

- The complete Style 'recipe' is processed line by line, top to bottom.

a Skalp Style, here shown in 'edit' mode.
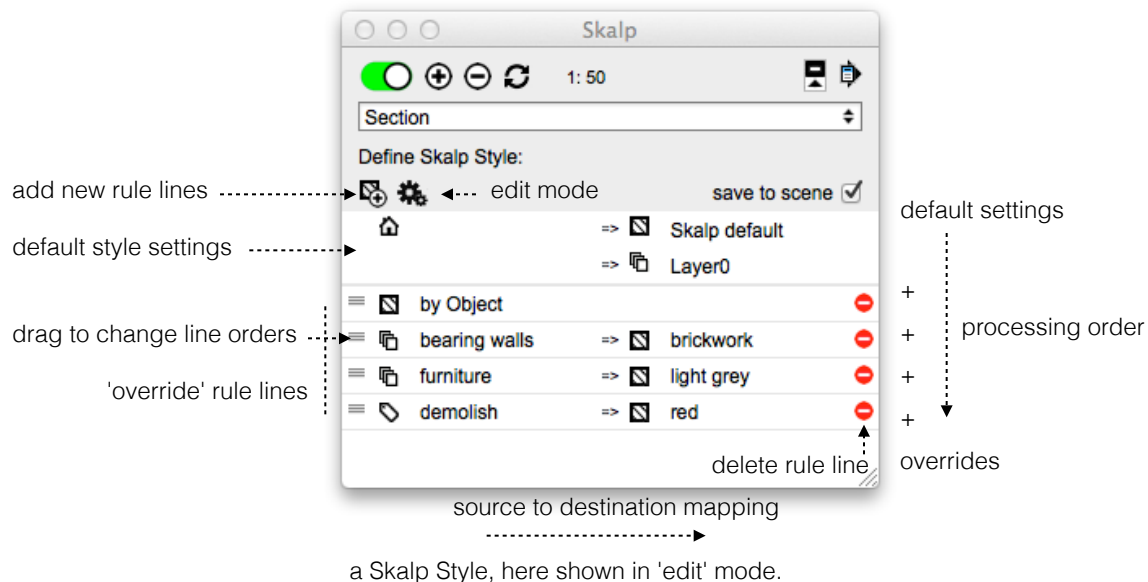
- The upper two lines represent the default 'home' Section style settings. First A Skalp Style will look at **the entire model** and map the Section cut of all elements to a pattern or texture as set here. A destination Layer can also be set. These settings are always applied, but optional lower rules may still override them.

- Each new line below the default settings zone represents an 'override rule'.
  Add lines using the small 'pattern+' icon
  Lower lines can override higher lines as they are processed last.
  In 'edit' mode, line orders can be changed by dragging them up and down, or lines can be deleted.

- The left side of each rule tells Skalp what to take as input criteria.
  The right side can, for some rules, determine a specific section mapping.

- All style ruling values can be changed by clicking on them (known issue: sometimes you need to click twice to access a list). The small icons can be clicked on as well, allowing you to change their functions.
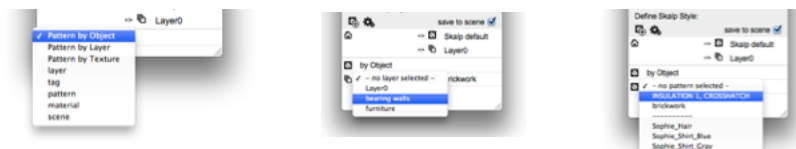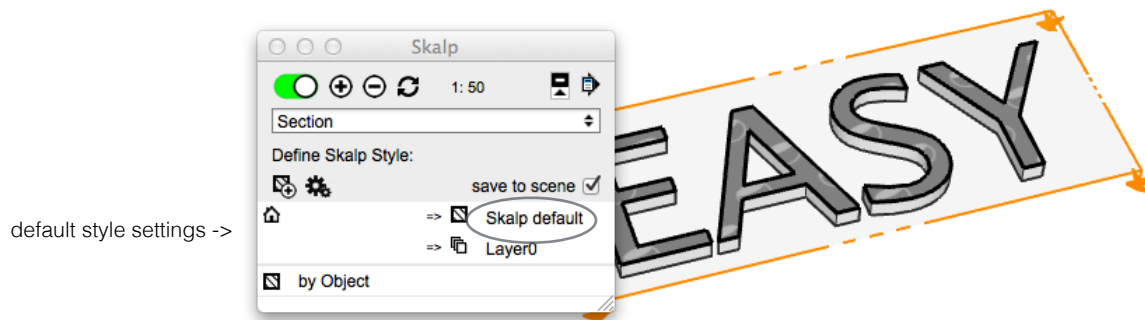

So far for theory, now let's see how this works in practice and what you can do with all this.

3. Styling Workflows adapted to your use case

Ranging from the most easy options up to some more advanced use cases: here are some examples to get you going.

1. Default Style Settings: one section material (easy)

default style settings ->

When you start using Skalp, you may have noticed your section got filled with the default Skalp Pattern. The reason lays in the default Pattern Style settings. You can change this by clicking on 'Skalp default' as shown:
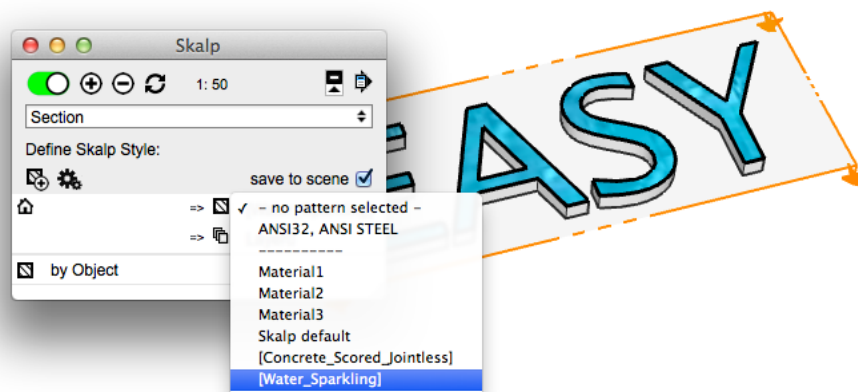
You may notice your material list will be different. Please see the 'Pattern Designer' section on how to add and manage these Patterns and Materials. What you need to know for now is that beneath the dashed line you see a list of all standard SketchUp textures in your current model. You manage these with SketchUp's material dialog. Above the line is reserved room for the special Skalp Patterns, to be created with the Skalp Pattern Designer.

You can also change the default destination 'Layer0' to another layer. This will place the contents of the section group result on another layer.

Be default a line 'by Object' is included in this style. This will be explained in a separate scenario. Since nothing is attached to the groups or components in this example, the 'by Object' line can simply be ignored or removed if you like.

2. Styling: Pattern 'by Object' + Assigning Patterns to Objects

This is represents the default workflow.

The default style setting will first map everything in the section to the 'Skalp default' pattern on Layer0.
Then the '**by Object**' rule kicks in and overrides this for all objects that have Patterns setting attached to them.

Each object can have its own Pattern attached.
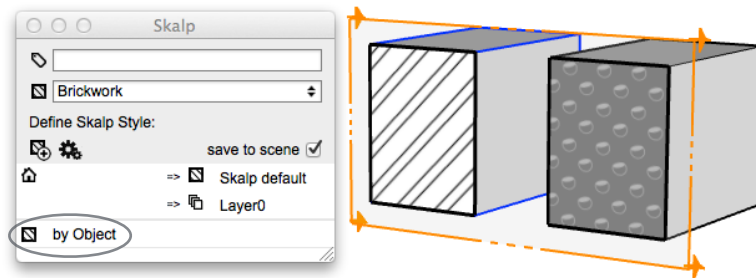
In this example the block on the left is selected and has been assigned a 'Brickwork' pattern. The block on the right has nothing attached to it and so it will be affected by the default style settings.

Assign Section Patterns or Textures to objects as follows:

When one or more **groups or components are selected**, the main **Skalp dialog changes** to allow you to assign either a 'tag' or a 'material'. Let's skip tag for now.
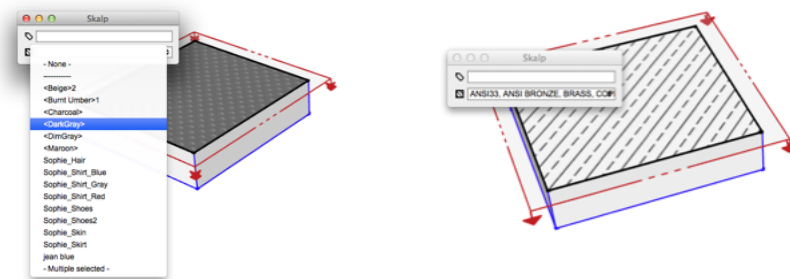
Open up the lower drop down list ('material') to bring up a list of all the materials currently available in this model for assignment. Notice how the list is divided in an upper and a lower part, divided by a dashed line. The lower part shows all your normal SketchUp materials. The upper part is reserved for Skalp Patterns, made with the Skalp Pattern Designer. Pick a pattern name from the list.

As an alternative, Patterns can also be attached to groups / components in the current SketchUp selection set directly from inside the Pattern Designer dialog. Select some objects and the click on the small 'Pattern icon to the left of the pattern selector to assign the material.
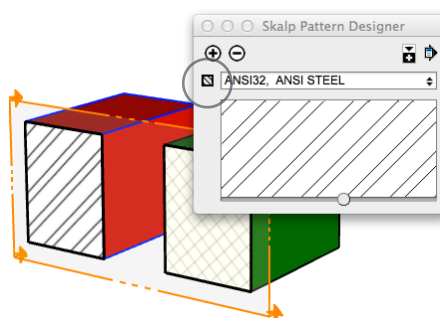
3. Styling: Pattern 'by Layer' + Assigning Patterns to Layers

If you organize your models mainly on layer standards, this is the preferred Skalp workflow.

The default style setting will first map everything in the section to the Skalp default pattern on Layer0.
Then the 'by Layer' rule kicks in and overrides this for all layers that have a Pattern setting attached to them.

Each layer can have its own Pattern defined.
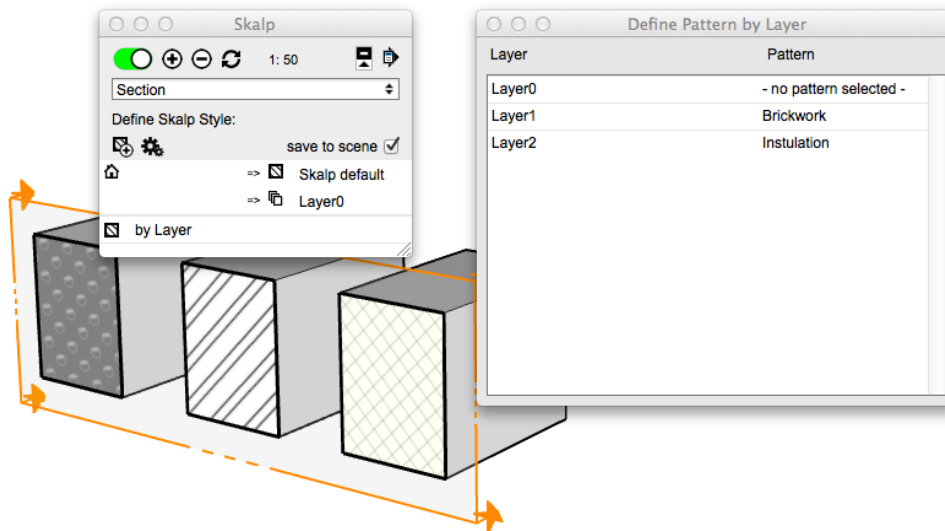
In this example the block on the left is placed on Layer0. Since Layer0 has -no pattern selected-, the default style settings apply. The middle block resides on Layer1 which has 'Brickwork' attached. The block on the right is placed on Layer2 and therefore inherits the 'Insulation' setting.

Assign Patterns to Layers as follows:

From the Skalp menu choose '**Define Layer Patterns**' to open the 'Define Pattern by Layer dialog'. The dialog will list all your model layers. Permanently assign a Skalp Pattern or Texture to a layer by clicking in its Pattern column and choose one from the list. Remember the upper part of the list represents the Skalp Patterns you have added to the model before, the lower part represents all Sketchup textures/colors currently present in your active model.

Skalp stores these assignments as meta data directly on the sketchup layers themselves. This also implicates you can choose to pre-define a set of layers with meaningful Patterns attached to them and then use sketchUp's 'Save As Template' to incorporate this Skalp Styling method into your office standard.

4. Styling: Pattern 'by Texture'

A simple 'solid' material technique. The section cut will look the same as the material that is painted onto the group or component.

The default style setting will first map everything in the section: in the example shown this would be the 'Skalp default' pattern and placed on Layer0.
Then the 'by Texture' rule kicks in and overrides this for all groups or components that have a Color, Texture or Skalp Pattern 'painted' on them.

Each group or component can have its own texture or Pattern painted on it using the standard SketchUp paint bucket tool.
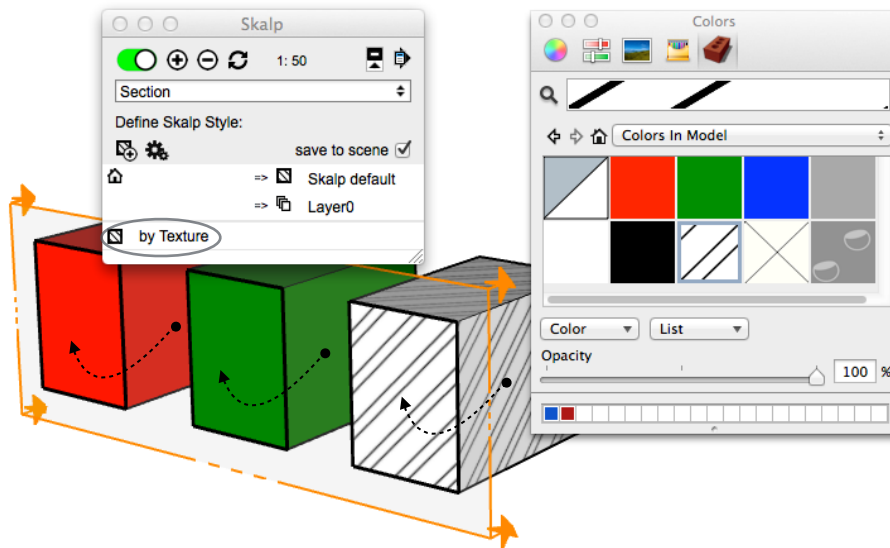
In this example the block on the left is painted red. The middle group is painted green and .the component on the right has a Skalp pattern panted on it.
Note that Skalp will only look at textures painted onto the group or component itself.
Materials painted on faces inside groups or components will be ignored.

5. Styling 'Skalp Pattern Layer' + SketchUp 'Color by Layer' (advanced use)

An advanced method to have your entire model represented in white, while still using Skalp Pattern Textures in the Section itself. This can be used to create really professional plans and elevations.
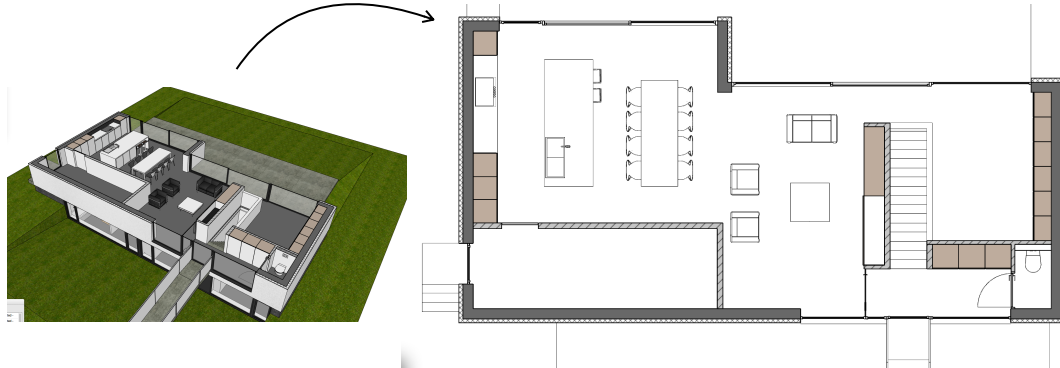
This method uses special **Skalp generated Pattern layers** in combination with SketchUp's '**Hidden Line**' and '**Color by Layer**' function.

Setting this up Step by step:

1. Create a Skalp Section, and properly associate it with a Scene. Use 'save Skalp settings to Scene' if necessary. Check your scene.

2. Organize your model and Skalp Style according to any of the previously explained methods using , Pattern 'by Object', 'by Layer', 'by Texture'. You may use Override Rules, or configure the Skalp Style any way you like but **make sure the end result maps all cutting results into Skalp Patterns.** We are now going to take these Patterned section results, and have them placed on separate dedicated layers.

3. Tweak your Skalp style so that it uses '**Skalp Pattern Layer**' as the default section destination layer.
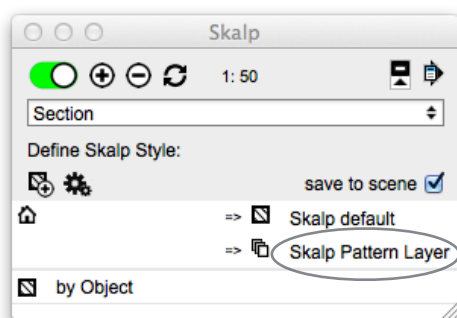
This is a special modus that actually does more than placing the section results on one special layer. Using this setting Skalp will auto create (on the fly) several new and dedicated layers as needed, one for each Skalp Pattern used in the section result. These layers will be named:
'Skalp Pattern Layer - <skalp pattern name>'

4. Optionally, instead of relying on the automatic Pattern layer creation, you might want to pre-create all these layers at once in advance to simplify setting up your office standard. To do so: Create the special Skalp Pattern Layers from the menu: '**Create Skalp Pattern Layers**'

5. Next: **manually assign a Skalp Pattern texture to each layer** in the the SketchUp layer dialog. One by one click on the 'Color' samples next to each layer. This will bring up the following:
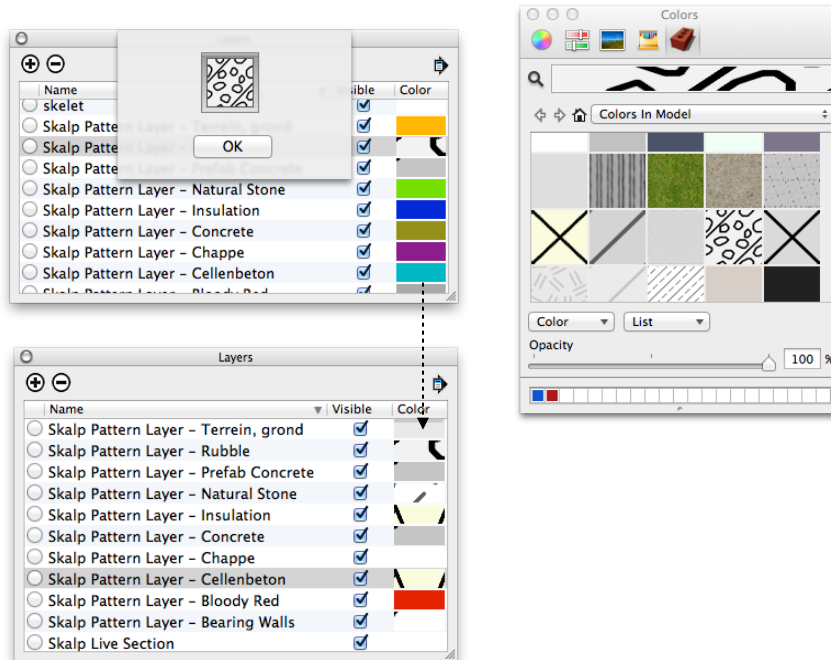
Assign a desired Skalp Patterns to each such 'Color' field by picking a Skalp Pattern from the SketchUp 'Colors' dialog. (You can only pick those Skalp Patterns that you created before using the Skalp Pattern Designer). Repeat the process for each Skalp Pattern Layer.

> *Unfortunately, SketchUp's ruby API provides us no method to automate this process at this time. As a result Skalp's Scaling features also cannot be automated in this particular workflow either. You would have to reassign the scaled Patterns to there respective layers to use different scaling styles in this mode.*

6. Now set SketchUp to use '**Hidden Line**'. The entire model will now be shown in white.
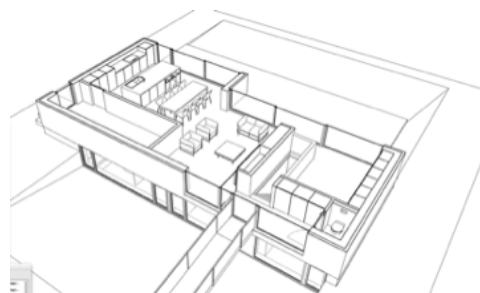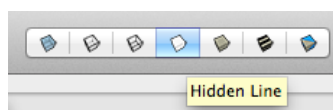
7. Activate Sketchup's '**Color By Layer**' function from the layer dialog.
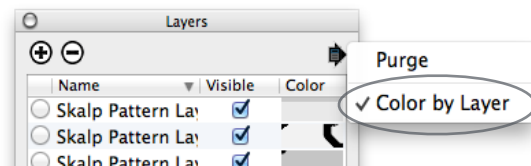
This is the heart of the trick: **Hidden Line** will show the entire model in white with one special exception: **Textures assigned to layers** will still be shown when using **Color by Layer**.

> *Notice that while <u>pure Colors</u> assigned to layers do get blanked out when setting 'Hidden Line', <u>textures</u> on the other hand 'escape' under the whitening radar. We consider this a rather unknown SketchUp 'feature'. You might even consider this a strange exception, but in this case it provides exactly the functionality needed.*

8. Now you should see the Skalp Section including its Skalp Patterns in a white model context:
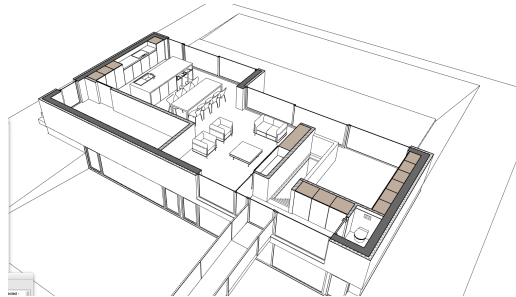
Nearly finished now, just some final steps:

9. Save or **update your Sketchup style**.

10. Choose your projection mode (e.g. align viewport perpendicular to the section and use Parallel Projection)
Finally **update your scene** to use this style and view settings
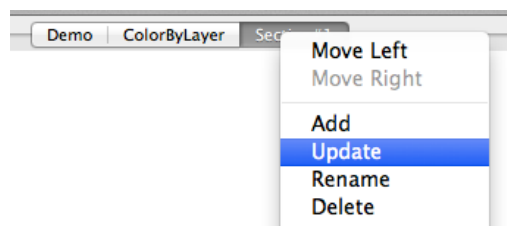
11. If you want to use this Plan / Scene in Layout make sure to always use '**Update all Scenes (for Layout)**' from the menu before updating your referenced model in Layout.

> *The method described above is not easy. You need to know certain details and quirks about SketchUp styles, layers etc. Depending on your SketchUp experience you may need extra practice to get this up and running. We use this method in our architectural practice every day to create our plans, which is exactly the reason why we implemented this into Skalp. We are always looking for improvements so your feedback is welcome.*

6. Style Overrides (refining styles)

Once you know how to set up and use your preferred basic Skalp Style scenario's, you can start refining these even further with Style overrides.

You can add several style overrides, and combine them into a customized Skalp Style. You can use overrides in combination with just the default style settings or even add these as extra rule lines on top of any of the above described scenario's.

Style overrides thus provide an extremely powerful method to define style 'exceptions'. You can remap just about any combination you like.
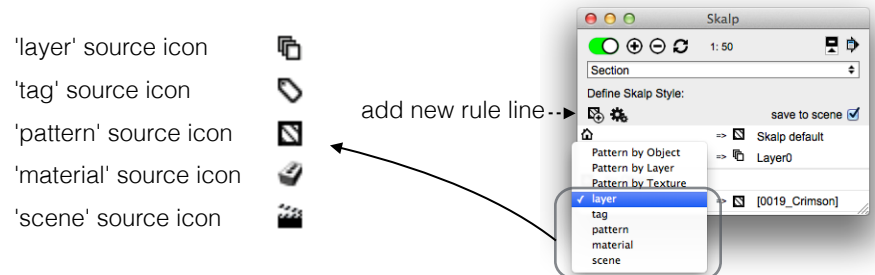Some examples:
Remap a pattern to another pattern, Leave a pattern as is, but place it on a specific layer. Colorize some tagged elements in the section, ...
The combinations are endless: up to you to decide and use as needed.
Let's see how this works:

To use overrides in general:

- **Add a style rule line**

- **Set the 'source'**: click on its left most icon to set its source type to either 'layer', 'tag', 'pattern', 'material' or 'scene'.

'layer' source icon

'tag' source icon

'pattern' source icon

'material' source icon

'scene' source icon

add new rule line

- Just to the right of the chosen source type icon, select the specific source you wish to remap.
  This can be a **layer**, a **tag**, a **pattern** / SketchUp material or a **scene**, depending on the chosen source type.
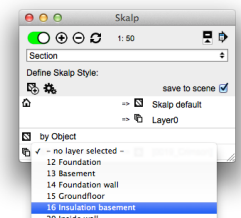
select a layer
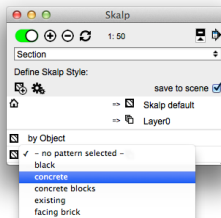
select a pattern or texture

select a scene

In case of a **tag**, you need to type in the desired tags to look for. If you want to remap several tag's at once, separate them by commas.

- **Set the 'destination'**: Choose the destination mapping type by clicking the second icon on the line. This can be set either to remap to a pattern or to another layer. (pattern is called 'hatch' here in Skalp version 1.0.0090)

'pattern' destination icon

'layer' destination icon
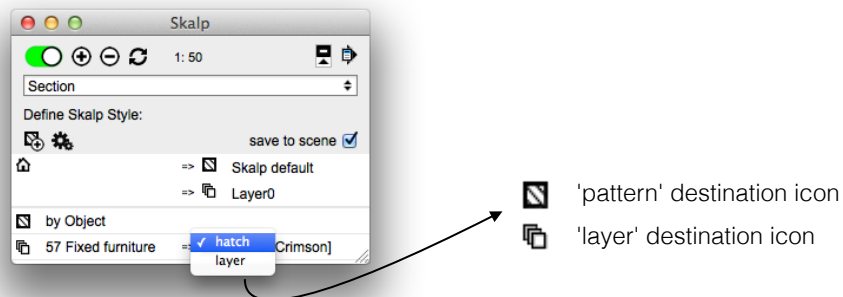
- Finally select the specific remapping destination: either a Pattern, Texture or a layer depending on the chosen destination mapping type.
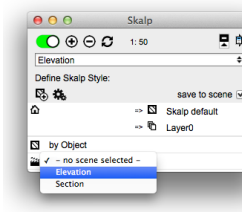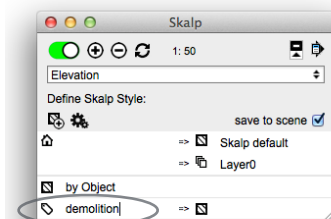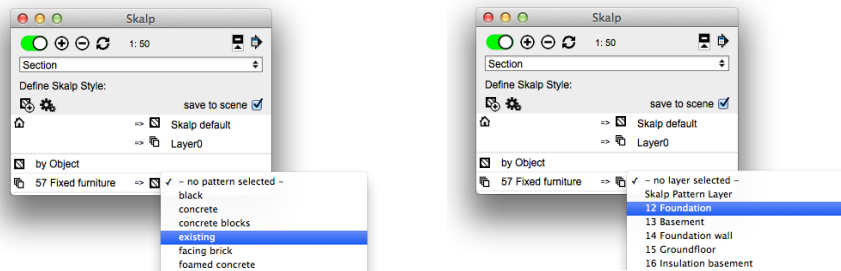

1. layer

   Re-maps a specific layer to either a pattern or another layer.
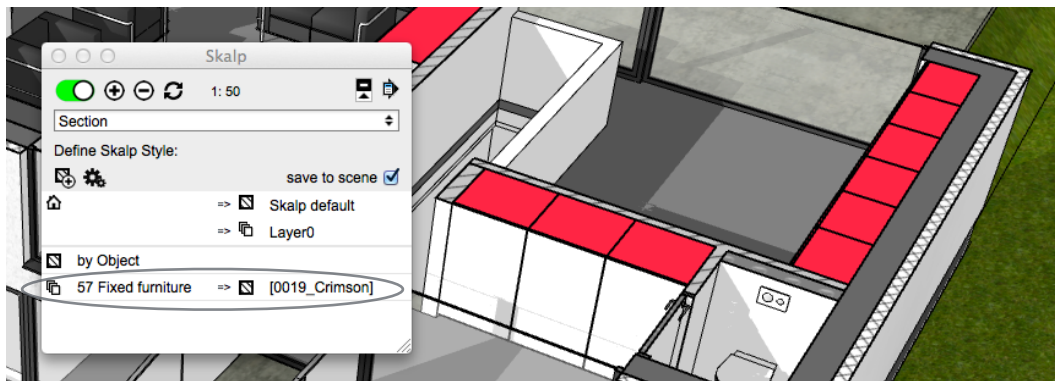
Here the fixed furniture consists of groups placed on layer '57 Fixed furniture'. The override rule maps this to a SketchUp color '[0019_Crimson]' The rest of the section uses the 'by Object' method.

This works similar as the 'by Layer' method but instead of picking up the mapping directly from the 'Define Pattern by Layer' settings, this method stores individual layer mappings into the Skalp style itself.
As an example: this could be used to override office standards based on layers without any need to change the standard layer assignments themselves.

2. tag

A powerfull way to pick up 'tagged' objects in your model and style them.

An example: You have a model with a Skalp section completely styled and patterned. If you need a copy of the same plan showing just a few elements accentuated in red, you can use tags to do so quickly without disturbing all your other scenes. To assign the tags, select some elements and enter the tags into to the tag field on the main Skalp dialog. If you want to assign several different tags at once, use commas to separate them.

3. pattern

Remap a specific pattern to a layer or another pattern. Same principle as described above under 'tag'. Picks up a pattern that is attached to a group or component and remaps it.

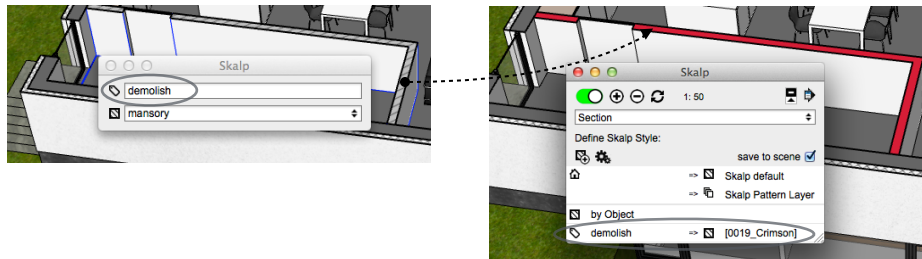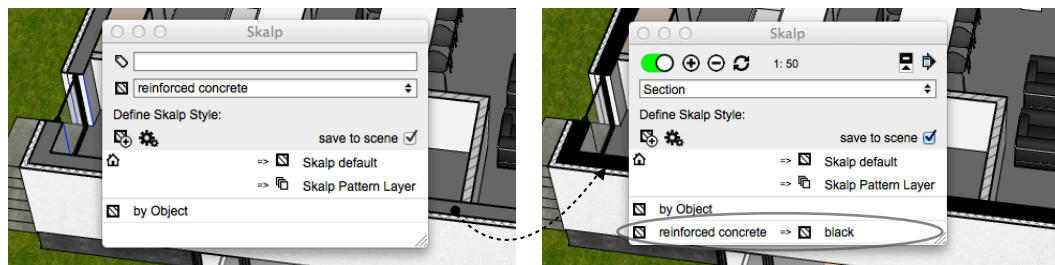*Here a group has a pattern 'reinforced concrete' attached to it. Using a style override this gets picked up and remapped to 'black'.*
Tip: When you are using Skalp's automatic Pattern Scaling feature, all Skalp Materials will be adjusted to the scale set on the scene. However on some extreme scale settings (large or small) you might want to use this technique to override some particular autoscaled materials and have them represented as another pattern or texture. In the example shown under 'Scaling Skalp sections', the left most section shown at 1:100 uses this kind of override rule to remap some patterns to a solid grey appearance.

4. material

   Pick up a specific SketchUp material, attached to a group or component, and remap this to another pattern or texture. This works the nearly same as the 'by Texture' method, but defined for individual textures only.
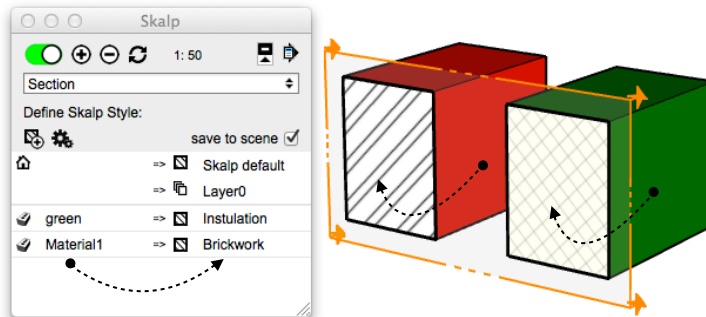
   Here two SketchUp materials ('green' & 'Matrial1') that are 'painted' onto groups are mapped to Skalp Patterns 'Insulation' and 'Brickwork' respectively.

5. scene

   Instead of storing complete Skalp Styles on each Scene you can use this to just reference to a Skalp style stored on another scene. As such this will make your scene inherit a complete Skalp style from another Scene. The behavior is dynamic, allowing you to centralize your Skalp styles on a few scenes and reference them as needed on new Scenes. Changing the original referenced source Style will propagate its behavior to the Scene using it as a reference.

4. Copying Skalp styles

   Skalp Styles can be copied from one scene to another. The behavior is very similar to copying scene properties in SketchUp.

   Suppose you have a scene 'Ground floor' with a Skalp style stored on it that you want to copy over to another scene 'Elevation'.

   > *Tip: Before proceeding with copying a Skalp style, you might want to check 'Style overrides : 5. scene' as this explains referencing a Style, eliminating the need to hard copy a Style in some cases.*

   On the 'Ground floor' scene this is what your 'source' Skalp style might look:
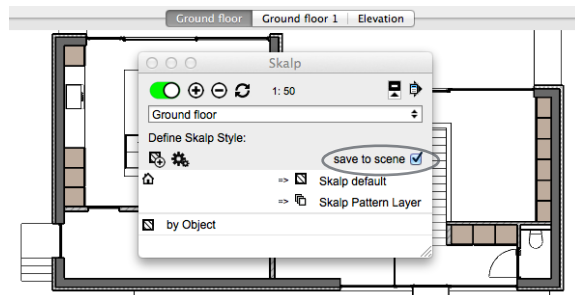
   Notice 'save to scene' has been checked. This Skalp style is thus stored in the 'Ground floor' scene.

Switch to the scene you want to copy your Skalp style to: the 'Elevation' scene in this example.
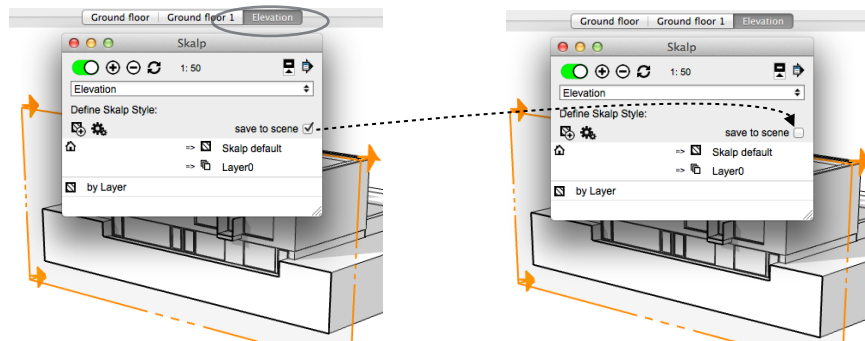
The 'Elevation' scene already has another Skalp style stored, but that is not what you want. So check 'off' its 'save to scene' setting. This will clear the stored Skalp style from the 'Elevation' scene.

If you **switch back to the 'Ground floor'** now, Skalp will look up its stored Skalp style there. Switching back again to 'Elevation', the style from 'Ground floor' remains active since no style is stored here any more.
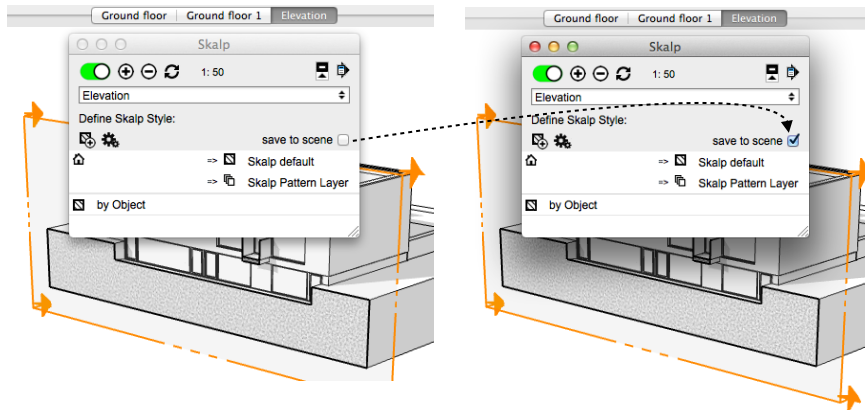
All you have to do now is check 'save to scene' on the 'Elevation' scene again and you are done copying the Skalp style.
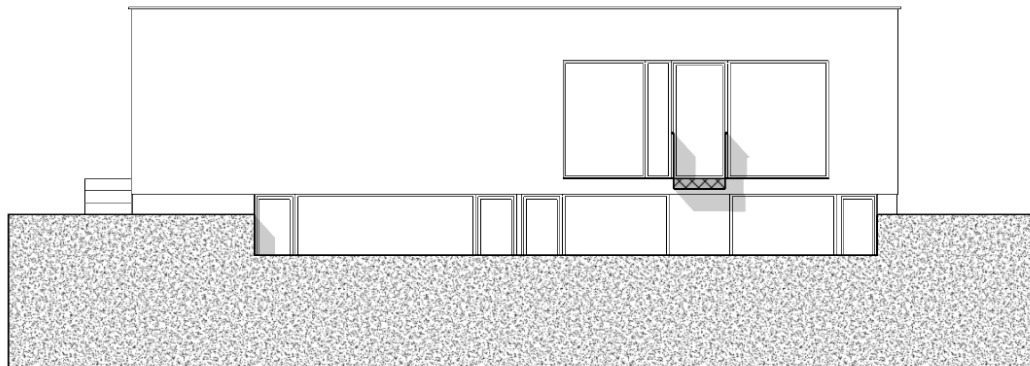
To finish up you could align your viewport, switch over to parallel projection, toggle off the SketchUp section display, adjust the shadows and update the 'Elevation' scene. Nice!

4. Scaling and printing your Skalp sections

1. Introduction to Section Scaling

A styled Skalp Section offers the key missing link in printing SketchUp based construction documents. On real professional plans all patterns, hatches and their line widths also need to be **tuned and tailored to your actual print size**.

This tedious task is what Skalp scales can automate for you: adapting Skalp materials to specific print scales: making sure they always look correctly scaled with sharp lines on your printouts. This is what scaled sections might look like:
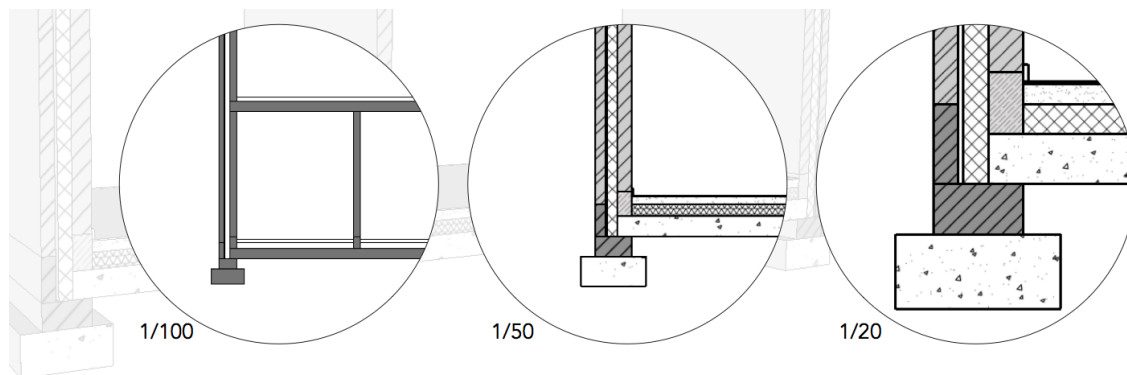
An example: The same Skalp section is represented at 3 different scales. The ones at 1/50 and 1/20 share the exact same Skalp style. They only differ in their scale settings. For each scale used on one or more scenes in the model, all needed Skalp patterns are automatically adjusted and parametrically maintained. The section at 1/100 uses a tweaked Skalp style to override some patterns to a solid grey representation. (see Style Overrides) Note that this example is actually a single screenshot directly taken from a Layout session. The same one model has 3 scenes referenced. See 'printing from Layout'

Some things you need to now about Skalp scales:

1. A Skalp **scale is a property of a scene**.
    As such you can set and change the scale value by clicking on the denominator number on the main Skalp dialog. If you are using imperial units you could type in '48' to set a scale 1:48 for example.
    Just like the active Skalp section setting, if you want your scale to be 'remembered' on this scene, you need to store this onto your active scene using '**save Skalp Settings to Scene**' from the menu.
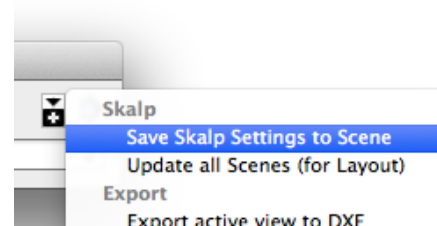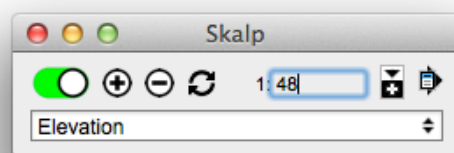
2. **Only Skalp Patterns**, created with the Pattern Designer will be influenced be the scale setting.

3. Using scales, **multiple scaled textures** are generated **for the same Skalp Pattern**.
   This is normal and by design. We advise you to leave these untouched. If you delete such a material anyway, Skalp will recreate it upon updating the section.

   In the example shown below, the model has **several scenes with Skalp sections** using **different scales**.
   Skalp has added **separate tileable materials** to your model to support these scales.
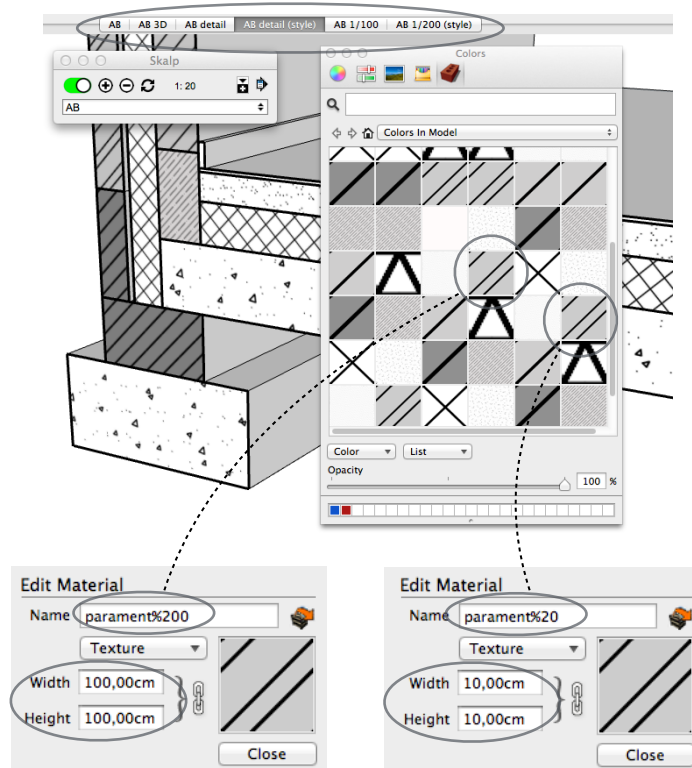
*While the added textures look identical in the 'Colors' window, a closer inspection shows they are actually **different in placement size**. Apart form the %xx part showing their scale, they share the same name. A pattern intended for a smaller print scale will be placed in the model at a larger size.*
In this example 'parament%200' is a material to be printed at 1:200.
Placed in the model it will measure 100cm. Once printed at 1:200 it will measure 0.5cm (100cm / 200)

The fact that for scales extra variants of a material are needed also explains why typing in new scale on the Skalp dialog might take some extra time, adding them to your model. Once a texture is created for a certain scale, it is stored in the model and will be reused whenever possible. If you have many Skalp sections with different scales in your model, modifying a Skalp pattern might take more time as well, as all scaled variants of same pattern need to be processed.

2. Scaled printing essentials

Suppose your model is created at a scale 1:1, "real size". When you are going to print at say a scale 1:20 this action is going to reduce everything by a factor 20. This also means its textures are going to get scaled down during printing. Now suppose we want a texture that is 2cm wide on paper, printed at a scale 1:20. How large would the texture need to be in your model? Remember: printing will reduce textures by a factor of 20. That would result in 2cm/20 => 1mm on paper, which is NOT what we need.
So to correct and compensate for this effect Skalp will place such a texture scaled exactly 20 times larger inside a Skalp section defined at 1:20. If you would measure the tile size of the texture in your model you would find it to be 40cm. This is correct since printing this at 1:20 you would get 2cm on paper as expected. (40cm/20)

Printing a model at a certain scale can either be done right from inside SketchUp or from a referenced view of your model inside Layout.
SketchUp printing is essentially limited to printing out scenes while the Layout option offers an impressive range of superb annotation features.

3. Scaled printing from inside SketchUp
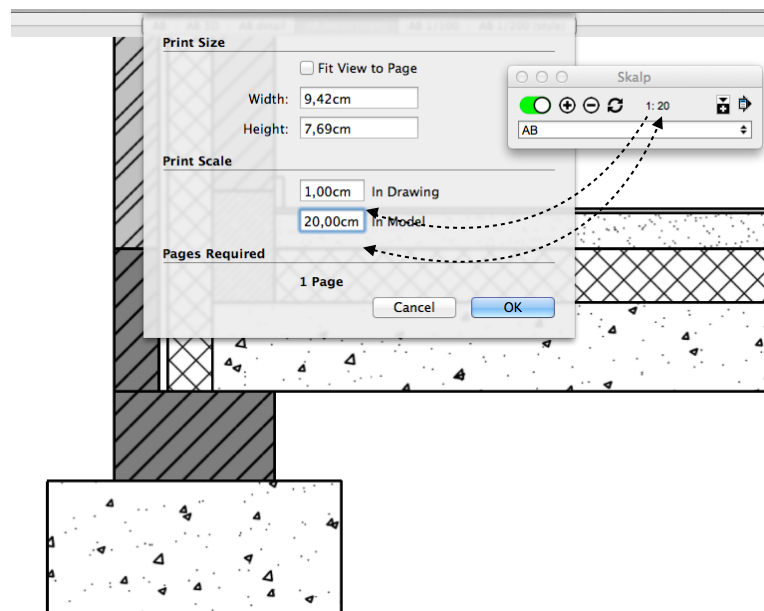
To print a Skalp section as intended with sharp lines, its scale,set on the Skalp dialog, must match the Print Scale setting in SketchUp. Access and set the Sketchup Print Scale from the 'File > Document Setup...' panel. You may need to uncheck 'Fit View to Page'.

Printing in SketchUp will print either your active screen view or what you have stored in your scene if you print a range of pages at once.

When a Print scale is set, zooming will influence the paper size needed to fit your content.

4. Scaled printing from Layout

In Layout, always make sure you select a matching scene from the list of available scenes.

Next, match the view scale on you referenced SketchUp viewport the scale on the Skalp section in SketchUp.

Check 'Preserve Scale on resize.

Match SketchUp Scene and Scale setting in Layout
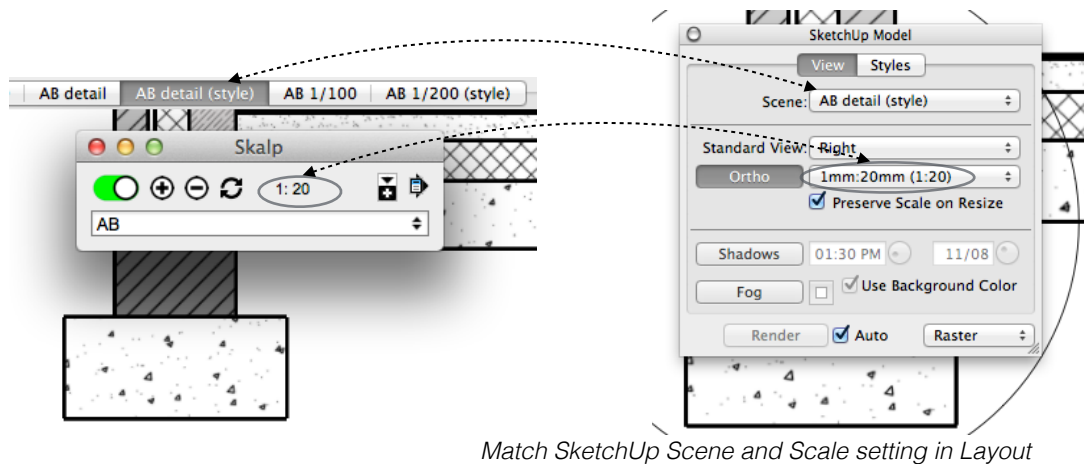
The principle showed above assumes prior knowledge on how to properly reference your model and scale a scene viewport in Layout.

When correctly configured, a Skalp material will always print razor sharp lines in Layout. (optimized to print at 300dpi, which is the same resolution Layout uses when its Rendering Resolution Output Quality is set to 'High''.
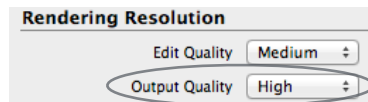
5.   Exchanging Skalp models with others

1. Update all scenes for Layout / Pass your model to Non Skalp
   SketchUp users

- If you want to pass your model to other SketchUp users that don't have Skalp, you need to create a static version of the model that has all sections in all scenes set up with the correct layer visibility states.

- When you reference your SketchUp model in a Layout file *(Layout is available only with SketchUp Pro)*, the same static version of your model is needed to keep all all scenes containing Skalp sections up to date inside Layout.
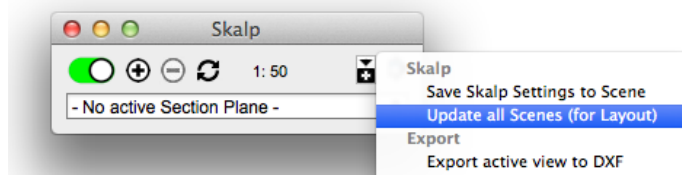
- It is extremely easy to use: just click '**Update all Scenes (for Layout)**' in the Skalp menu. This will bring all scenes in a consistent state and save your model. Update your model reference in Layout and you should be done: all your scenes containing Skalp Sections are up to date.

   Some technical explanation on what happens behind the scenes here:
   Scenes in SketchUp do not actually store a complete static state of the model, but rather store a sort of a recipe on how to change the active viewport. When the active viewport changes, lots of things change such as layer and entity visibility states, camera position etc... For Skalp in order to update, lots of calculations need to be done when a scene changes. However these calculation cannot actively run inside Layout. Layout does not provide the necessary extensibility infrastructure for Skalp to run. So 'Update all Scenes (for Layout)' works around this issue by putting a special (normally hidden) Section group in each Scene especially for Layout and SketchUp instances without Skalp installed.

2. Export to DXF

   Sorry, this section is currently under construction.

3.   Start Using Pattern Designer

1.   User Interface Overview

Click on the Brick Wall like Toolbar Icon in the Skalp Toolbar
to bring up the main Skalp Pattern Designer dialog:

1 2   **3 4**
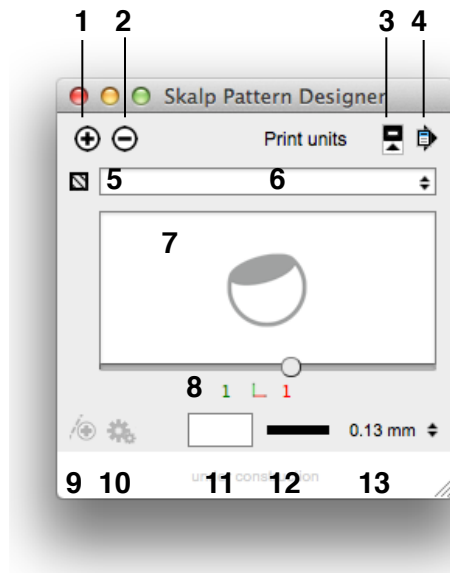
1. Adds the currently selected Pattern to the
SketchUp material dialog. This also prepares the
Pattern to be assigned as a Skalp Section
material.

2. Deletes the material form SketchUp material
dialog.

Pattern Scale

3. Brings up more options to customize the
patterns attributes.

4. Menu: manage import and export of Pattern
files.

5. Assignment Icon: assigns the selected pattern to the groups / components in the
current SketchUp selection set.

6. Pattern selector, also allows you to rename the pattern to a custom name.

7. Pattern preview windows with slider to zoom the pattern. Attention: the zooming has
no influence on the actual pattern scale, use 8 and 9 to set its size.
8. Calibrate the pattern size by changing of the length of the red X and/ or green Y
gauges. Click on these numbers to edit its values. Use small values to start with (e.g.
0.3) to start with, as too large numbers will force skalp to create very large png textures
which may be very slow.

9. and 10. *pattern editing features under construction.*

11. Pattern Background color. Click to open color picker.

12. Pattern Line color. Click to open color picker.

13. Determine Pattern Line Width. This will change the pattern line width in the
generated pattern texture. (line widths are not yet shown in the preview window.)

You can also check our Youtube channel:
Basic tutorial on how to create and assign a Skalp section cut material.
http://youtu.be/BYuzuTranIM

2. What exactly is a Skalp material?

A Skalp material is a unique kind of SketchUp texture. Its main use case is to drastically enhance the fills used in Skalp sections. Its key properties are:

- auto created tileable png texture. Used as a texture it is 'seamless'.

- based off a vectorial definition: autocad pattern files

- supports line colors, line widths and background colors including transparency

- editable (fully parametric)

- scaleable: auto adapts to different Skalp section scales while preserving sharp and exact line widths on printouts.

- can be exported to dxf as real vectorial information.

- In a Skalp section they offer a drastical enhancement over standard material textures

- Alternatively it can also be used as a quick and fun way to texturize your SketchUp model.

Key elements in the Skalp material concept you need to understand:

1. A Skalp material is created and/or modified using the Pattern Designer.

2. As input sources it uses a vectorial recipe, supplemented with extra information: scaling/size data, a line color, a background color and a line width.

3. The vectorial recipe uses the standard autocad pattern file syntax. Essentially these are just text files storing one or more 'pattern definitions'. Each such 'pattern' consist of a number of text lines In a pattern definition the first line always starts with a '*' followed by a name and an optional description. This is then followed by a series of lines with comma separated numbers representing how a hatch pattern looks.
It is a relatively simple vectorial data format. You can get these pattern files from several online sources and directly import them into Skalps Pattern Designer.

   A detailed description of the *.pat format will be added to this manual later. The format is well documented on the internet. Look for *.pat file format. Once you understand the syntax, you could also create/edit your own custom pattern files.

4. As output a tileable SketchUp texture is added to your model. Once created you can see this texture in the SketchUp Colors dialog.

5. The entire recipe (pattern definition, as well as its size, colors and line widths) is stored onto the created SketchUp texture as meta data. This is what makes them 'parametric': the ability to edit any part of the recipe later on using the Pattern Designer.

3. Creating and using Skalp Pattern Textures

A Skalp material is a kind of SketchUp material. This means that just like any other material in Sketchup it needs to be available in your model before you can start using it.

So, you need to prepare and add Skalp materials to your model or template at least once. In short, this process consist of loading a vectorial pattern definition, assigning correct sizes, choosing colors and a proper line width and than tell the Pattern Designer to create and add the resulting tillable png texture and its complete recipe to your model as a Skalp material.

Preparing a Skalp Material, step by step:

1. **Load a 'pattern definition'** by selecting it's name in the the lower part (below the line) of the drop down list.

   Notice the list is dived in an upper and a lower part, separated by a dashed line. The lower part represents a list of bare autocad pattern definitions as read from all '*.pat' files in your SketchUp plugin directory under Skalp/Resources/hatchpats. These bare definitions are not added to the model and as a consequence cannot be fully used yet. The upper part of the list (above the line) might be empty at first, but this is were fully created Skalp materials will show once available in your model.

2. Once an autocad pattern definition is read a graphical preview is shown. You can now **change its name** if you like.
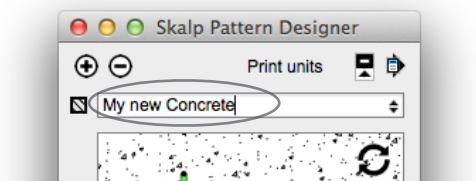
3. **Define the pattern size**.

   Autocad pattern files are unit-less. That means they do not have a scale. Inside SketchUp you need them to show up at a well defined size, so in order to use them, you have to 'calibrate' them. To do so,first click on the 'Show more' button to open up the dialog.
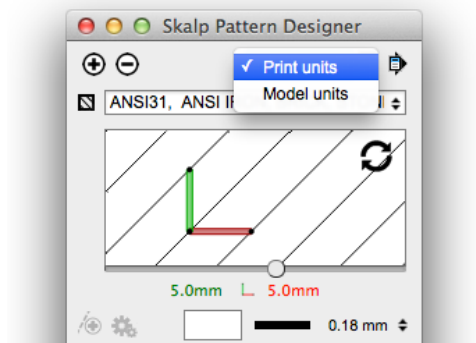
A Skalp material can be given a size in either **Print units or Model units**. For use in Skalp sections, most likely you would want this set on Print units.

When set to '**Print units**' the sizes given to the gauges will represent the **actual lengths as printed on paper with respect to the scale** set on the Skalp section.
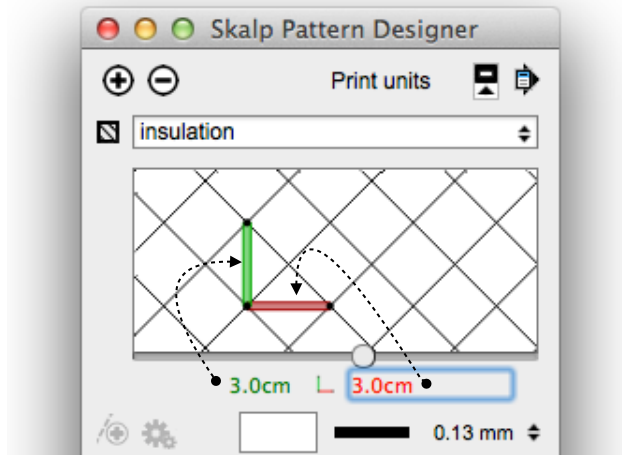
Change the numbers shown directly below the preview. These red and green numbers represent the length of the red and green 'gauges' shown on the preview. The idea here is that you assign a certain length to either the red or the green gauge. You can type in a number and a unit. e.g. 0.3cm, 2mm or 3/4". This will change the scale at which the pattern will be created. In case you would enter a value that is too large Skalp will refuse to create the texture and rather ask you to enter a smaller size.

You can use the 'slider' below the preview to zoom. *This currently has no influence on the actual pattern size, but this implementation will probably change during Skalps beta program.*

You should know a Skalp material will always be created to be printed at the scale set on the Skalp section in your scene. Its line width and resolution (pixels per inch) are calculated and optimized in function of this print.

Most '.pat' files are created in either inches or cm, but there is no way to know that for sure. That information simply isn't available in the file format itself. The numbers in a pattern file might even represent foot or mm, the point is no unit definition is available in a *.pat file, therefore, you need to tell the new Skalp material how big you want its pattern definition to show.*

Tip: You can do the preparation process once in advance for all Skalp materials you would like to use. You could then store your model including these customized Skalp materials as a SketchUp template. New models based of that template would then always contain your prefered set of Skalp material.

Tip: Since a prepared Skalp material is actually a SketchUp texture with added meta data, you can also copy it over from one model to another in the same ways as you would do with regular SketchUp textures. As an example: you could draw a rectangle, paint a Skalp material onto it using the bucket tool and then copy the painted face over to another SketchUp model. All other regular SketchUp workflows to manage and copy textures should work as well.The meta-data will get carried over in this way, so these copied Skalp materials would be then be perfectly available for use in the new model.

Once a complete Skalp material is created, the original pattern file is no longer used or needed. The pattern file was used just once as a seed.Its content, the entire recipe, is changed and stored as meta data onto the texture itself and will get read and used from there directly, as needed. This also means there is no need to propagate autocad pattern files to different computers if you are setting up an office standard. Skalp materials can be distributed in exactly the same fashions as you would do with regular SketchUp textures.

4. Using Skalp materials as textures in your model

When your pattern is set to 'model units, the sizes given to the gauges will match your actual model units 1:1

Patterns generated using model units will not react to scale changes. They are intended to texturize your model. As an example you might for instance think of an actual brick pattern at 1:1 shown on an elevation.

Sorry, this section is currently under construction.

4.   Frequently asked Questions

Q. After putting in a Section, I cannot hide the Section Cut. When in an Elevation, Skalp does not allow me to turn off layers when I do not need it to be shown. How do I HIDE a section cut or how can I have a Scene WITHOUT a section Cut?

A. See 'Using Scenes to manage Skalp Section visibility'

Q. Can I install Skalp on my second computer?

A. Yes! You can install Skalp on 2 computers! (with limitations)

As stated in the End User License Agreement: "*You may use the SOFTWARE on one computer at any time. You may copy and register the SOFTWARE on up to two computers. (e.g. your primary workstation + a laptop or a secondary computer)*"

So please go ahead and activate Skalp on both of your computers. You may copy over the Skalp.rbz, but you cannot copy the Skalp.lic from one computer over to another. That needs to be created from our server whilst having an internet connection during the activation. You can use your activation code on 2 machines. also in case you would reïnstall or loose the Skalp.lic file, simply reïnstall Skalp en and reactivate it with your License Activation Code.

Q. When I select one or more groups or components, I open up the lower drop down list ('material'): in the lower part I can see all my normal SketchUp materials, but in the upper part I don't see Skalp Patterns.

A. You have to create and add the patterns you would like to use from the pattern designer dialog. (But maybe you did, hang on...) The material should show up in the upper part of the Skalp dialog. However there is a known issue that this list does not get updated when elements in the model are selected during the creation of the pattern. Try to deselect everything and then re-open the drop down list.

5.   Trouble Shooting

Problem: I never got my license key, auto activate did not work for me.

Answer: Please contact support@skalp4sketchup and provide as much as you can from the following checklist:

1: Your name, or any information we can use to look up your record in our database.

2: Did receive your license activation code and the skalp.rbz download link in the mail?

3: Are you on Windows or on OSX? Which version? If under virtualization (e.g. Parallels, Vmware,...) mention that also.

3: What kind of behavior are you seeing exactly? Do you get to see the Skalp toolbar icons? If so, could you open sketchUp's ruby console and then click on a skalp icon. Do you get an error message on the console? If so, send us that.

4: If you see Skalps icon, then you most likely also see a Skalp menu item in SketchUp under 'plugins'. Copy me the info you get for 'Info from support' there.

5: In case you are on windows: from the windows 'start' search field type 'cmd' <enter> Type 'ipconfig /all' <enter> and send us a copy of that also.

Problem: My version has expired, now what?

Answer: You need to install a new beta version. Latest Skalp versions can always be found at:

download.skalp4sketchup.com/downloads/latest

Restart SketchUp before re-installing Skalp.

We understand these beta expiry dates can cause some discomfort, but we need to ensure you are running a recent version with the latest fixes and changes. We will revise the expiry dates as Skalp's development proceeds and remove any expiry once the beta ends. Normally, at startup, Skalp will inform you if a new version is available. This mechanism currently can not run once your version reaches its expiry date. We advise you to install each update once it becomes available.

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Disclaimer / Additions to the End User License Agreement:

1. Before using this product you have to acknowledge the following: Some posted product features may be missing, unstable or not fully implemented yet. See 'Known Issues' below. Make sure you also read and accept the Skalp End User Agreement (EULA) before using this product.

2. If you bought Skalp, then your **license is PERMANENT**. A right to use all **1.x.x** versions of Skalp is granted to you. It is CRUCIAL that you keep your License Activation Code in a safe place, as this might be needed to reactivate future updates of the product. Your license activation code comes in the form xxxxxx-xxxx-xxxx-xxxx-xxxxxxxxxxxx
    You can find it in the mail you received upon purchasing Skalp from our web store.

3. On Skalp BETA releases following temporary limitations apply: A BETA product is hard coded to EXPIRE. Please note that this does NOT invalidate your license. You will be notified before the expiry date to update the product to a newer version. Upon final release the product will no longer expire.

4. If you are unable to agree to any of the above conditions, for whatever reason, please contact us at sales@skalp4sketchup.com. If we are unable to provide you with an adequate solution, you must refrain from using the software. In such case we can offer you a refund. If you have further questions and/ or suggestions please send these to support@skalp4sketchup.com

Release Notes

This section in the manual is now deprecated. The release notes have moved to:

-   The Skalp Info dialog. (Plugins > Skalp > Info dialog)

-   The 'download' page on skalp4sketchup.com