

Manual och hjälp

Ett kraftfullt verktyg för
design av fasader
med skivor i ArchiCAD



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Introduction

Why Smart Facade Tool (SFT)?

The step from 2D- to intelligent 3D modelling (Building Information Modeling, BIM) gives us new opportunities and demands of intelligent tools.

Swisspearl has answered this demand by developing an intelligent tool for 3D facadeboards design.

Compatibility

Smart Facade Tool is compatible with Archicad and works both in Windows and Macintosh environment (Intel and PPC). When installing to your system choose the right Archicad version and the right operating system.



Installation

Quit ArchiCAD before installing.

Smart Facade Tool consists two parts;

- a Add On, Smart Facade Tool
- a library, Smart Facade Library.

Install the Add On

Copy the Smart Facade Tool Add Ons Folder to the ArchiCAD Add Ons folder on your computer.



Install the library

Smart Facade Library is installed by copying it to preferred place, preferably to your Standard Library on the server.



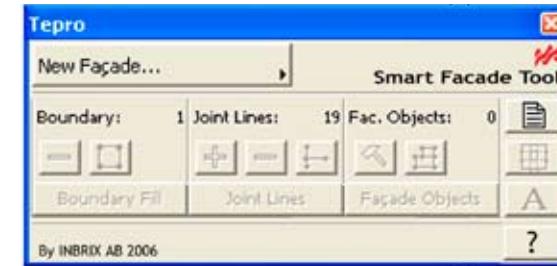
Start

Activate Smart Facade Library

To be able to work with Smart Facade Tool in a specific project the library must be activated via the Library Manager.

Start the program

Start Smart Facade Tool via the Tools Menu. This activates the program palette.



Prepare the model

Layer Combination

Activate a Layer Combination for facades where you can hide and show layers.

Layer for Facade objects

Create a new layer for facade boards. For example - The swedish standard CADlager SB11: "A-42B---M- Fasadskivor".

See to that this layer is shown in the Layer Combination you use.

The facade also has to be drawn on the lowest floorplan in the model to get the right height.

Activate layer for the Object Tool

Activate the created layer for the Object Tool.

The Concept

Supporting the design process

You start with a 3D modell or a 2D drawing. In a few simple steps you can create 3D facade board models to be used in a facade or in 3D views.

You can step by step design and redesign your facade.

Board cutting data is created automatically.

If you export a txt file and send this to your local distributor you can easily and fast get a cost analysis and feedback of your design.

This is how the Smart Facade Tool works.

The system has built in rules based on following parts:
The Boundary, Openings and Joint Lines.

Boundary - must be defined

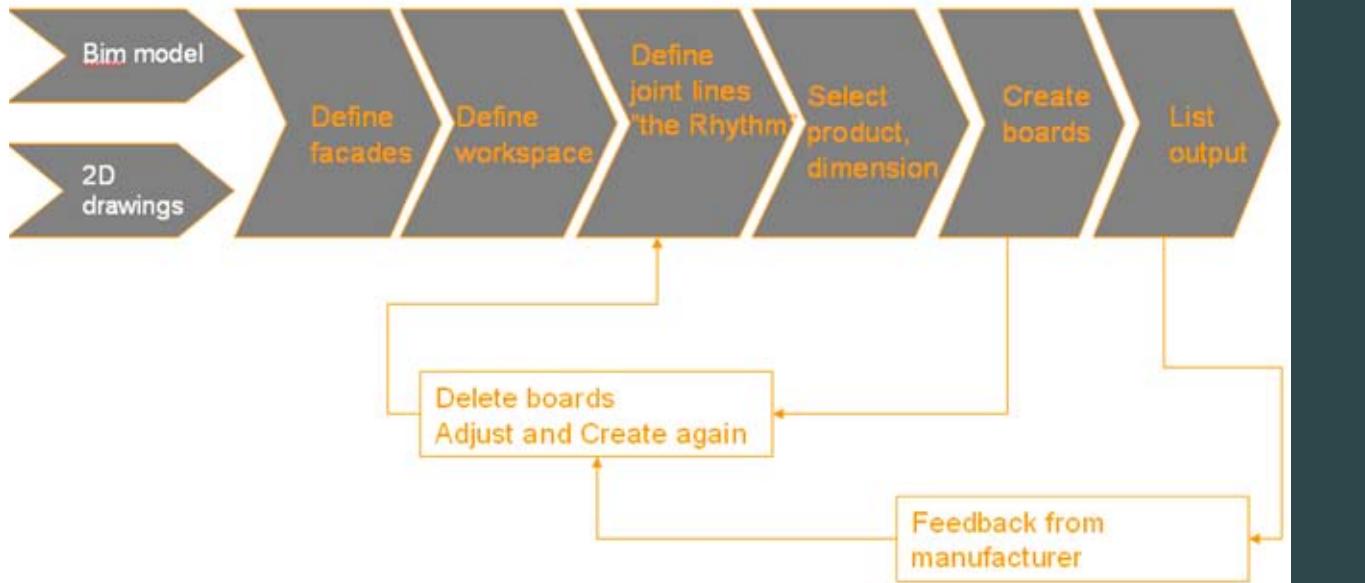
A hatch define the workspace and is created using the hatch tool.

Openings (doors and windows) - works only on 3D models

Smart Facade Tool recognize openings in the 3D model and automatically leave those spaces open.

Joint lines

Lines guiding the positioning of joints (edges) and thereby the rhythm in the facade. In a 3D model Joint Lines can be placed automatically and then edited. You can also add more lines manually. When working within a 2D Façade drawing jointlines are drawn with the line tool and added as jointlines using the tool.



Smart Facade Tool Palette

① New Facade....

Create / admin / edit / delete

② Boundary

Define workspace

③ Joint Lines

Guidelines to control the rhythm of the board sizes and placements

Add

Delete

Mark

④ Fac. Objects (Facade Objects)

Board Object

Settings

Create

Mark

⑤ Export to Precut.

File which can be analyzed by

Cutting program

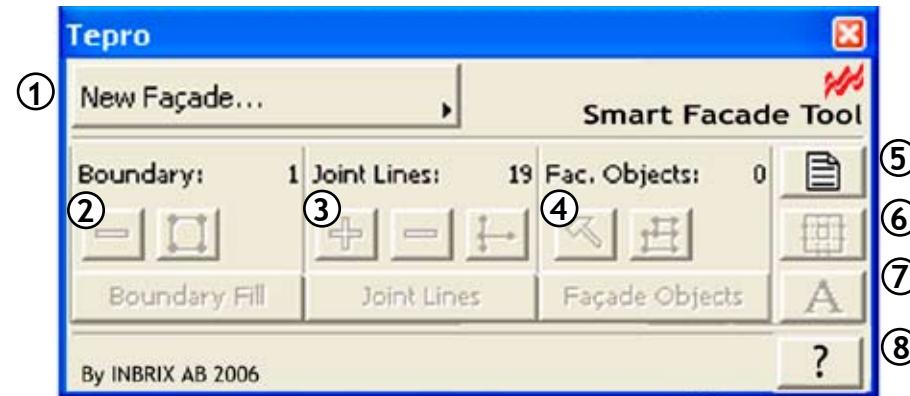
⑥ Automatic Joint Line Placer

Create jointlines automatically from openings in the 3Dmodell.

⑦ Littera - Text settings

Option to hide/show text id on the boards and to set text size.

⑧ Link to this Manual/Help.



Step by Step - 1/5

Create a facade

(Same technique as creating Section/Elevation in ArchiCAD)

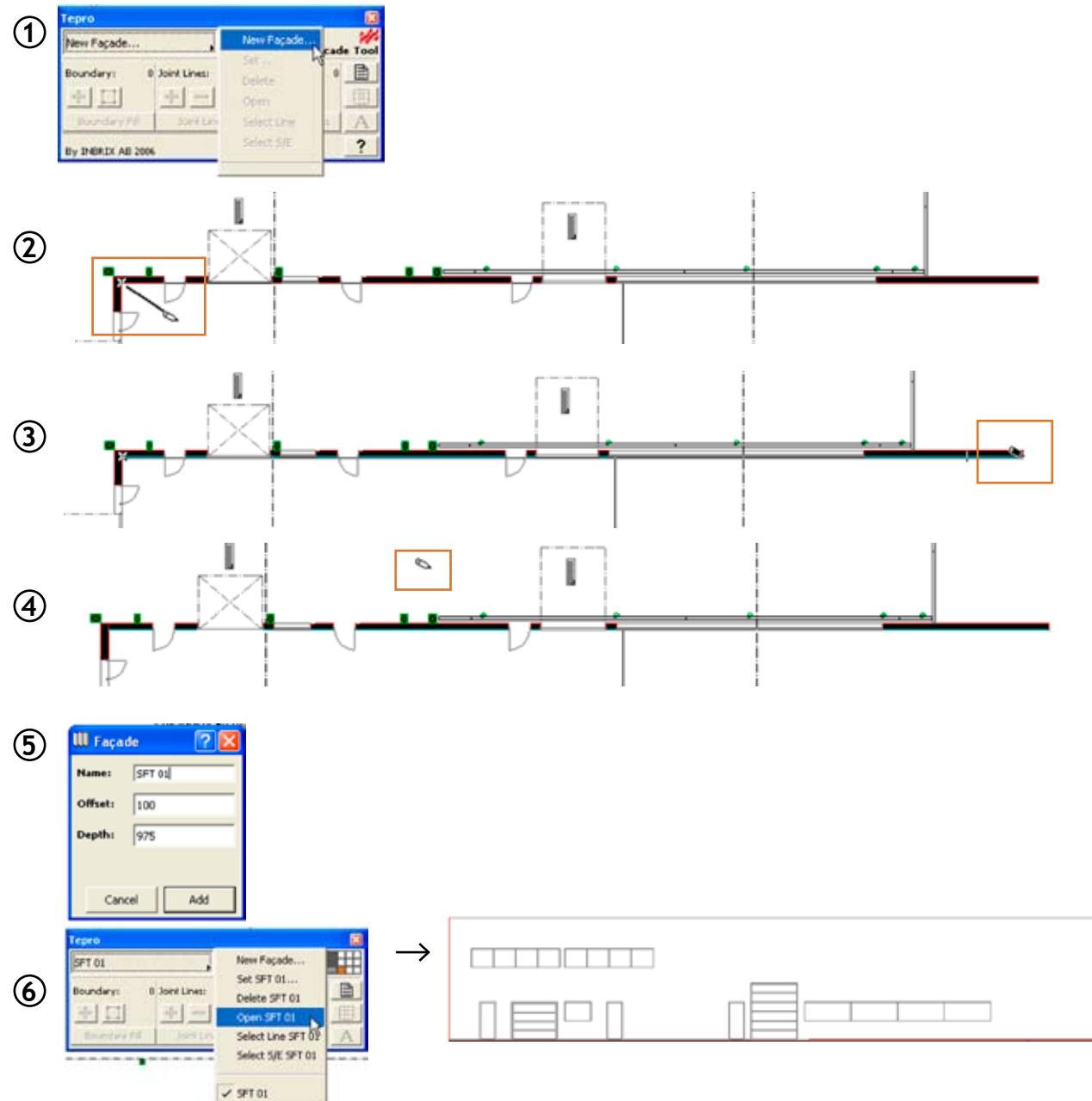
Observe ! You have to draw the facade on the lowest story.

- ① Choose New Facade....
- ② Click at the Facade starting point
- ③ Click at the Facade ending point
- ④ Click in the looking direction for the Facade
- ⑤ Name the Facade
- ⑥ Open the Facade

When 2D facade:

If you start with a 2D facade drawing use Copy & Paste command to get drawing attributes (your 2D facade lines) into the ArchiCAD facade window.

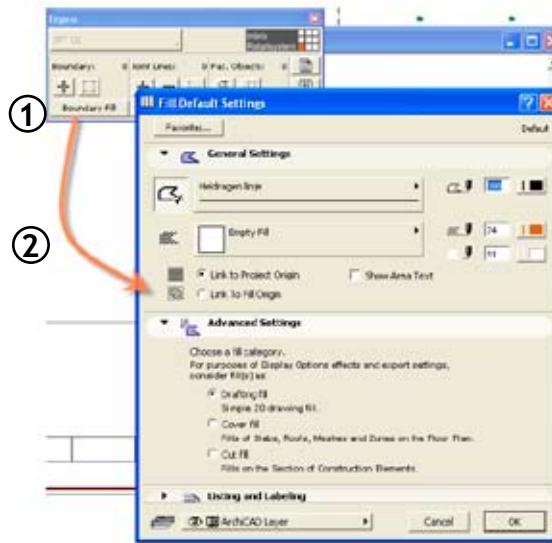
As the tool places the boards in the position of the wall in 3D, you have to place the 2D facade in the right place in the new created facade window. If you place 3D columns in the corners of the 2D you then can get the exact position in the facade window.



Step by Step - 2/5

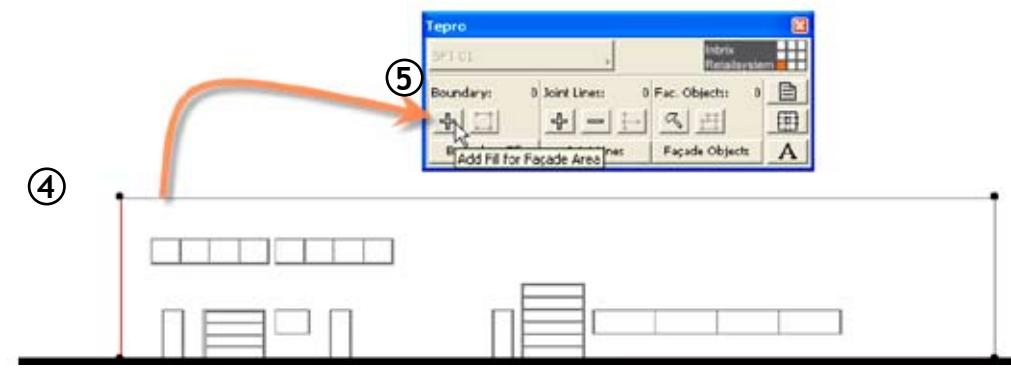
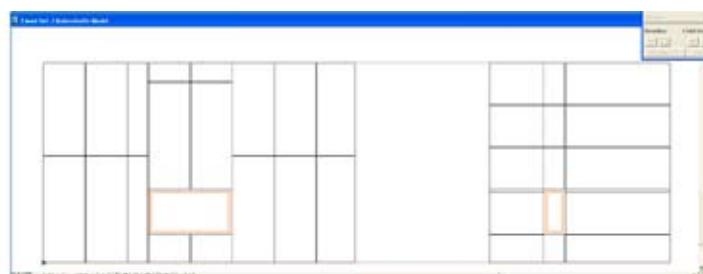
Create the Boundary

- ① Click on “Boundary fill” button
- ② Choose hatch and other settings
- ③ Draw a hatch to define the work space.
- ④ Mark the hatch
- ⑤ Press + under Boundary in the palette to add workspace.



Obs!

If you want standing and lying boards on the same facade you need to define 2 facades. See example below.



Step by Step - 3/5

Create the Joint lines.

With this feature you create guidelines to define the basic rules for boards size and rhythm .

① Start by choosing line type and line colour via the button “Joint Lines”

Tip! Dashed and light red.

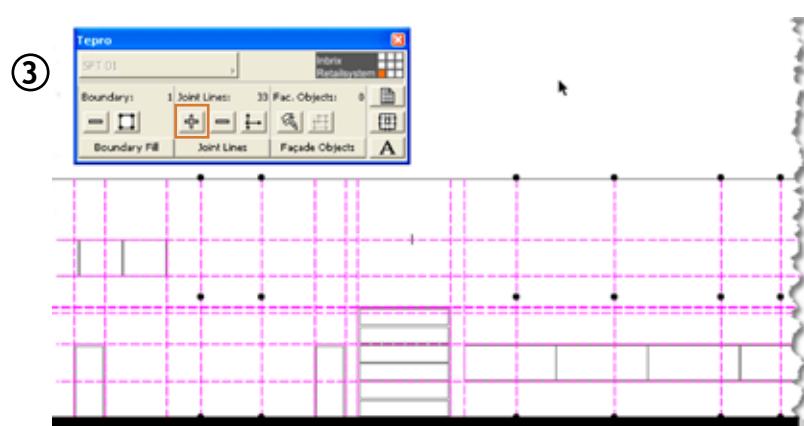
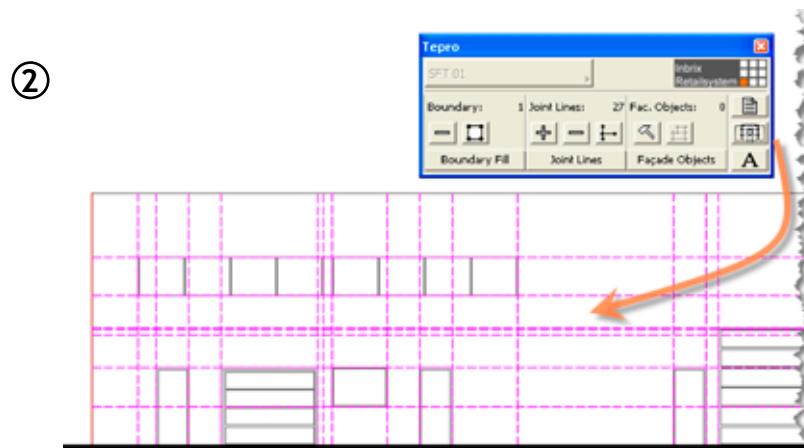
② Create lines for the joints of the boards.

A good method is the “Automatic Joint Line Placer” which places Joint Lines automatically on the Facade. The lines then can be edited by drag a copy and multiply. Use ArchiCAD standard functions .

This function only works with a 3D model.

③ If you choose to draw more lines these must be marked and added with the + in the palette.

This is the main command to create Joints in the 2D facade option.



Step by Step - 4/5

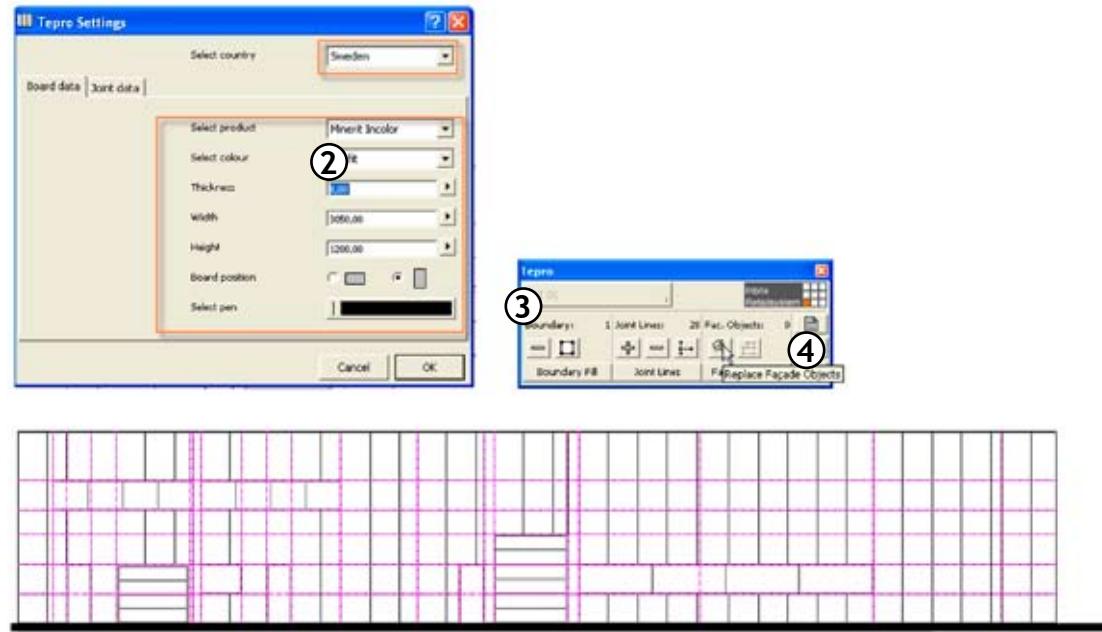
Create the Boards

With this function you create Facade Boards based on the settings of the Boundary and Joint Lines.

- ① Press the button Facade Objects
- ② Choose which product and colour you want on the Facade.
- ③ Choose the prioritized direction.
- ④ Press on the hammer. The Facade Boards are placed on the facade.

Obs !

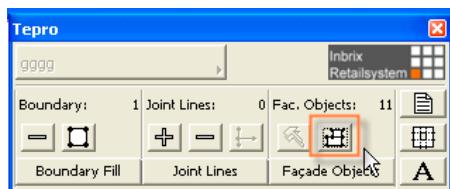
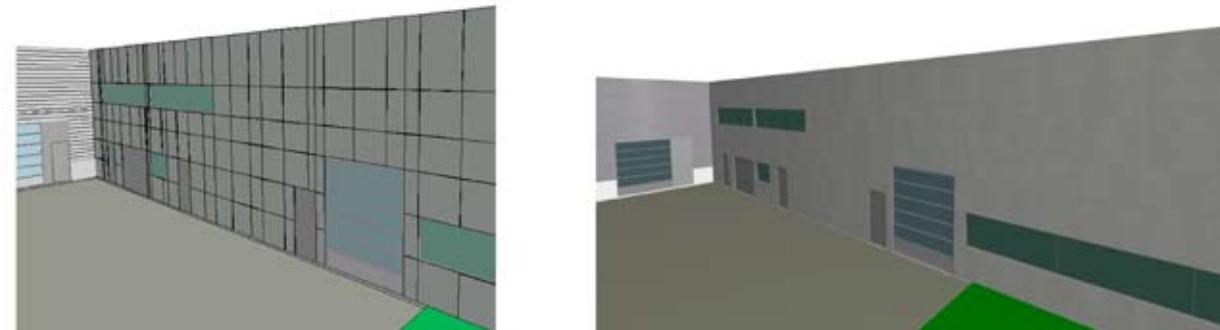
In a 2D facade you get boards also in the window/door position.



Step by Step - 5/5

Redesign

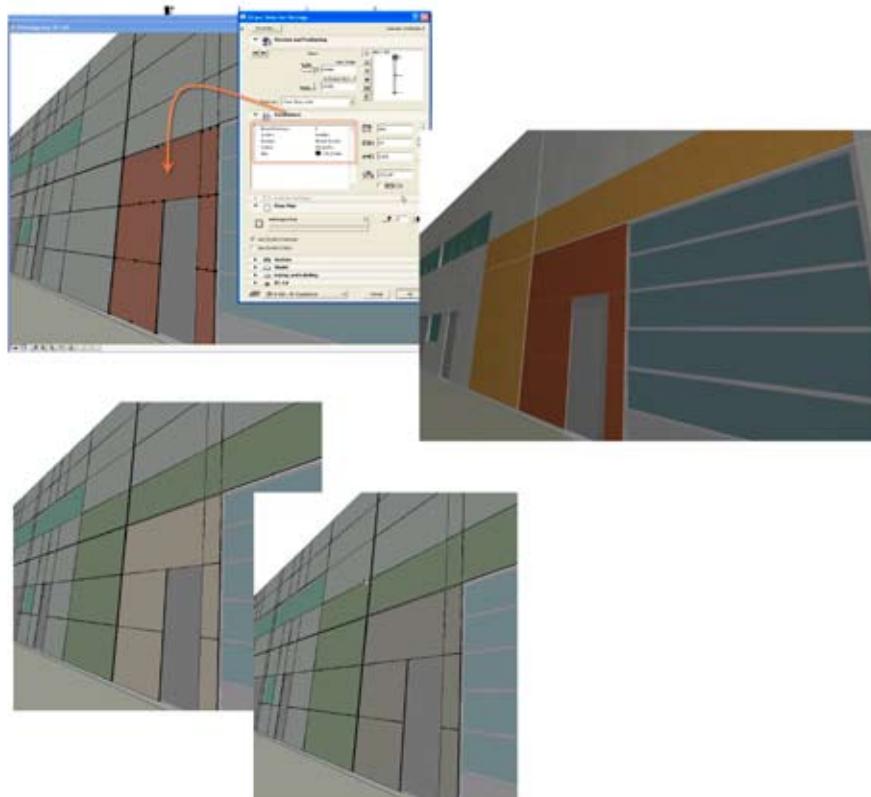
In a fast way you can erase all the boards and redesign joints and then place boards again.



Edit shape and colour of single boards.

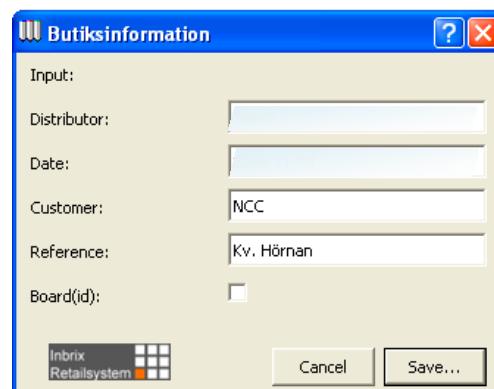
Mark the boards in 3D window and open the object tool settings to edit colour etc.

When you have a sloped roof mark the board to be cut along the roof edge and use the normal ArchiCAD function Trim to Roof.



File to Manufacturer for analysis

Using the “Export to..” feature and a encoded text file is created. The file can only be read with a specific application. This file contains all board data needed for price estimation and production/ cutting of the boards.



Underconstruction

This Smart Facade Tool doesn't include any considerations of the underconstruction. See recommendations in our installation manuals and system drawings on our homepage.

Also read and accept the legal disclaimer on the web-page.