SpaceClaim Connect Beta
User's Guide
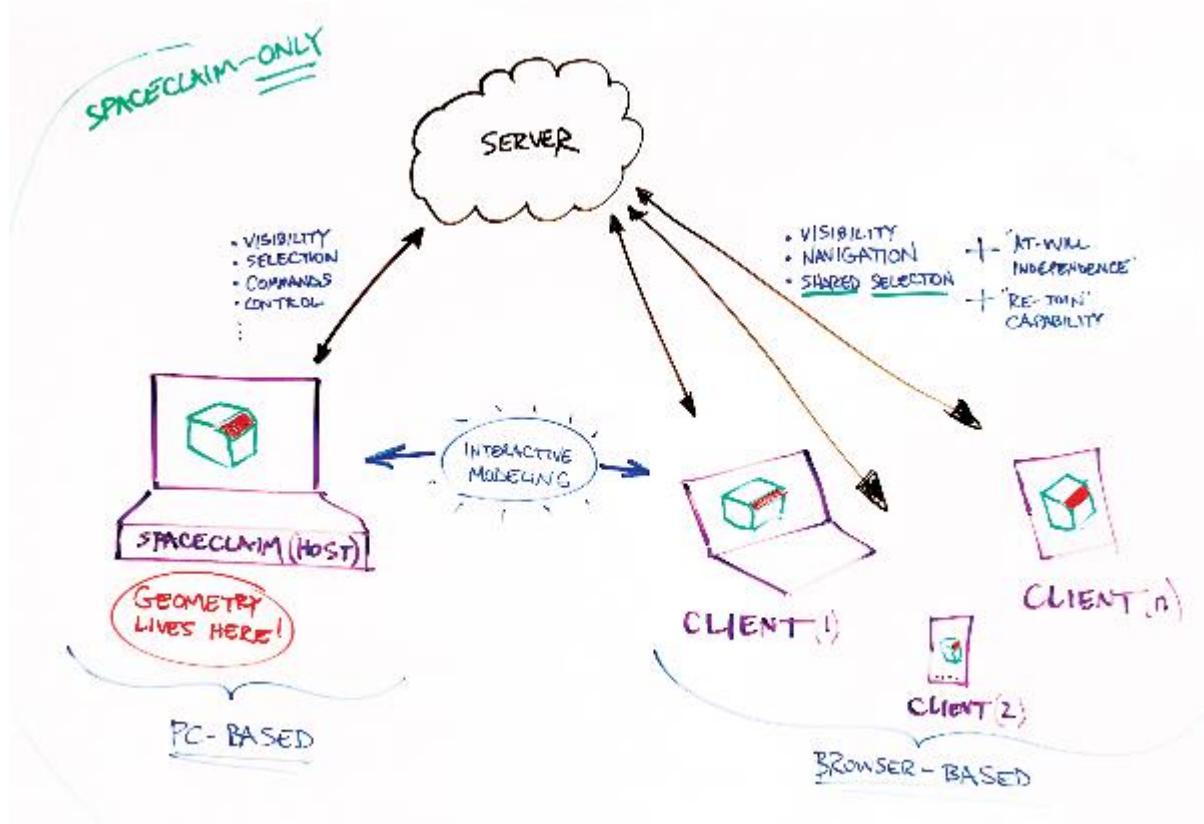
SPACECLAIM
CORPORATION

Contents

Introduction

SpaceClaim Connect *securely* links a Host SpaceClaim session with other interested parties over the internet. Models opened in the Host session can be viewed, manipulated, measured, and marked-up by everyone connected.

To begin a shared session, the Host connects to the server. Secure invitations are then sent out for Guests to connect to the server from their Client machines.

Models used in the session reside on the Host PC and are opened in the Host SpaceClaim session.

SpaceClaim Connect then distributes graphics information from the Host session to the Clients. In other words, each Client sees graphics *from* the active model in the Host 's SpaceClaim session.

The Host controls the session by:

- Model selection – only the Host can add models to the session
- Choosing the active model
- Inviting and Un-inviting guests
- Monitoring participant status
- When necessary, suspending client navigation for the group

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SpaceClaim Connect provides enough graphics information for Clients to work *independently* with the model and perform the following actions.

- View navigation
- Selection
- Making measurements
- Taking view Snapshots

Hosting a SpaceClaim Connect Session

As the Host, you initiate and control the shared session.

Models used in the session reside on your PC. You control which models are in session and which is the active model.

You also have tools for the following:

- Inviting and un-inviting Guests
- Managing when guests can navigate the model
    o Helps to focus the attention of the group during key points of the session
- Monitoring the Guest list
    o Names
    o Actions – Navigating, Markup, etc.
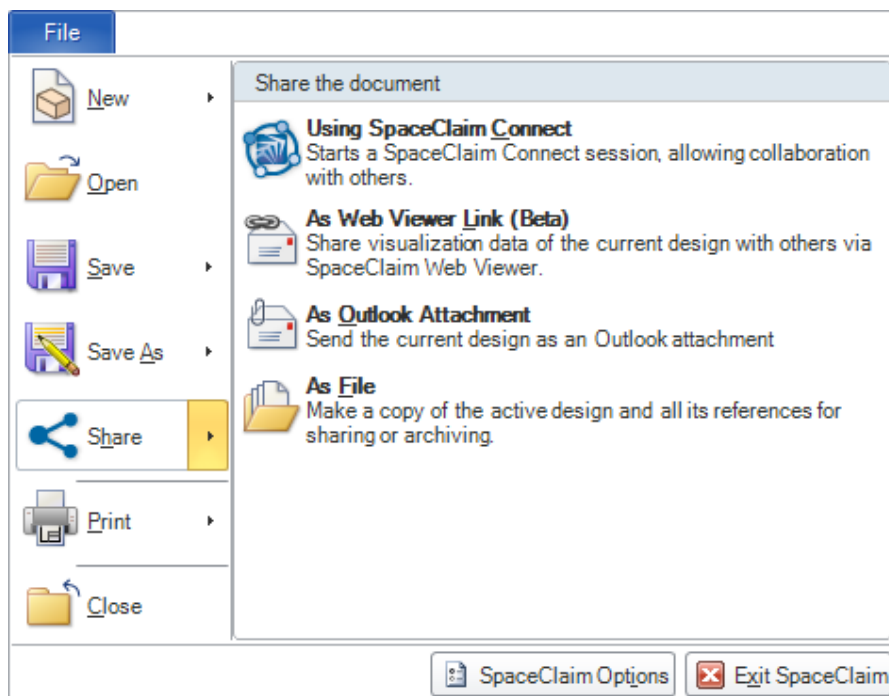   o Graphics status – Has their graphics caught up to the Host

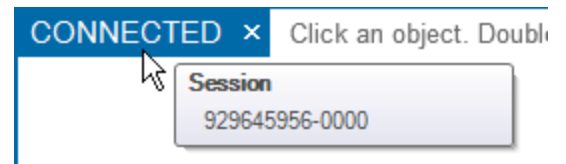The session is conducted through a server, which you can choose.
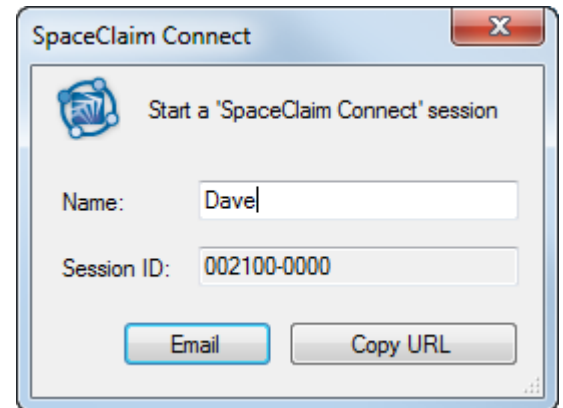
In SpaceClaim Options, the **Connect** panel allows you to specify the Server address.

You connect to the server through the **Share** menu in SpaceClaim.

To start a SpaceClaim Connect session

1. Open the **File** menu

2. Click the **Share** button

3. Click **Using SpaceClaim Connect**

4. The SpaceClaim Connect dialog opens

5. Enter a Host name to enable the invitation buttons

6. **Email**

   - Opens a message window for composing an email invitation

   - A link for joining the session is embedded in the message contents

   - Send the invitation to as many guests as you need

7. **Copy URL**

   - Copies the session link to the clipboard

8. Once an invitation type has been chosen the session begins

   - The SpaceClaim graphics window is given a blue border

   - Session status is displayed in the upper left corner of the graphics window

   - Hovering over the session status will display the session ID

Managing the participants

As the Host, you control who is invited to the session.

Use the Invite button to invite guests.

As guests join the session, their names are added to the Participant list in the Connect panel.

Action can be:

- Blank – Client is not performing any action

- **Navigating** – Client is changing the model view
    - o Dynamically spin, pan, zoom
    - o Choosing a standard view
    - o Choosing a zoom level

- **Marking** – Client is using the Pen tool to draw on the model

- **Paused** – Client has paused their session

Graphics is a traffic light:

- **Green** – Client graphics have finished loading and caught up to the current view on the Host

- **Red** – Client graphics are loading
    - o While Red on the Host, the Client will see a progress bar

Managing Client navigation

By default, all guests can independently navigate the model, i.e. perform view operations.

- Spin, Pan, Zoom
- Choosing standard views (Top, Front, etc.)

To make it easier for you to control the session, Host navigation takes precedence over that of the Clients.

Also, updates from the Host are pushed to the Clients with a forced pause to their navigation.

At times, in order to focus the attention of the group, you can shut off all Client navigation with the **Block Guest Navigation** command in the ribbon.

While Client navigation is blocked, the command button shows a Lock icon.

When you change your active window on the Host machine, the Client's view also changes.

Selecting

Selection is shared both ways, Host-to-Client and Client-to-Host, across multiple client sessions.

- Single, Double and Triple-click
- Ctrl-selection
- Alt-selection

Selection Modes are not available on the Client.

- Box
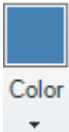- Lasso
- Polygon
- Paint
- Using Boundary

When Selection Modes are used on the Host, the results are shared with the Client.
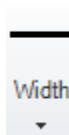
Markup

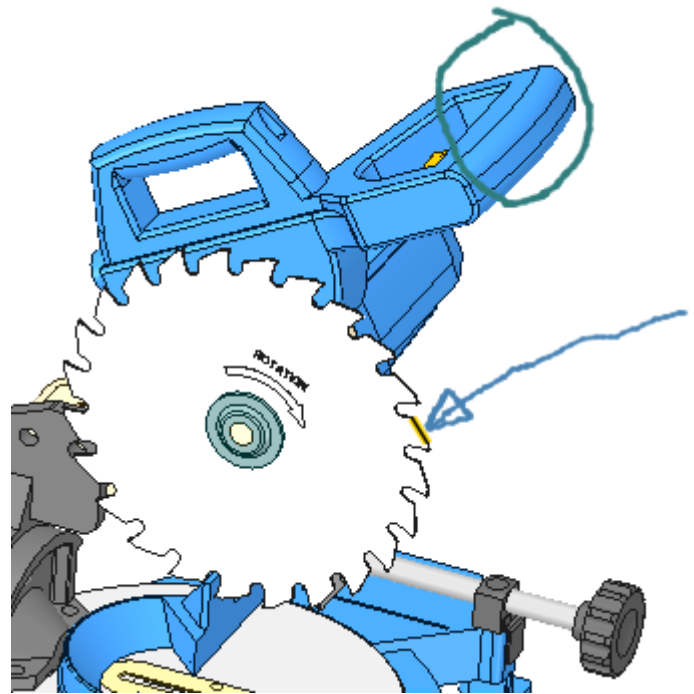Use the Pen tool to draw freehand markups on the model.

You can set the Pen color using the Color dropdown menu.

Pen line thickness can also be set with the Width dropdown menu

Erase markups using Clear All.

Upon entering the Pen tool on the Client, the cursor changes to indicate drawing.

Pen markups are broadcast to all clients, which allows simultaneous drawing on models by multiple users.

- Each client is assigned a different color

- Markups on clients display on the Host and the other Clients

- While anyone is marking up, all participants are prevented from spinning

- Spinning is enabled when the markup is cleared

In the example above, the image was taken on the Host machine. The green circle was sketched on the client and the blue arrow was drawn on the Client.

Client markups are cleared on the Host when the session is disconnected.

While a participant is marking up, their status shows as "Marking".

Snapshots

Snapshots allow you to snap images of the graphics window while connected to a shared session.
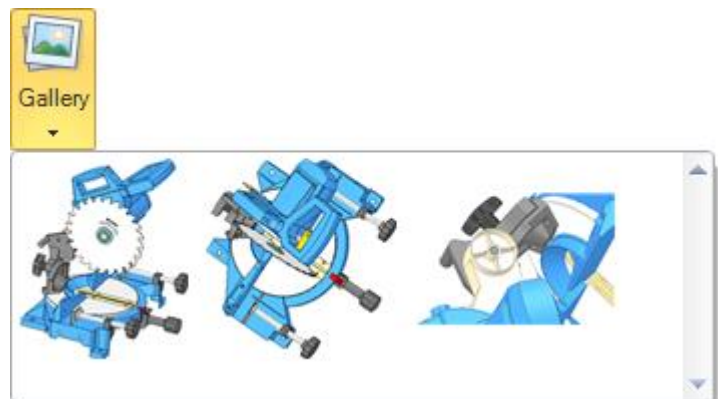
Click the **Snapshot** button to create an image of the screen.

Snapshots are added to the Snapshot Gallery in the ribbon.

Clicking on a Snapshot in the Gallery restores the view to the "as-snapped" orientation and zoom level.

Client Snapshots are also added to the Gallery.

Markups are also recorded in Snapshot images.

- Click **Record** while any participant, including the Host, is marking up
- In the Gallery, when you click on a Snapshot containing Markups
  - o The view is restored to the orientation and zoom level of the Markups
  - o All markups from all participants at the time of the Snapshot are displayed
  - o If you want to add more Markups, you need to re-enter the Pen tool
  - o You can Pan and Zoom and still see the Markups
  - o Spinning the model clears the Markups

When you end the shared session, you will be asked if you want to save the Snapshots.

If you choose to save them, the Save As dialog opens for saving the Snapshots as PNG files.

Sending feedback

While in a connected session, click the Feedback button to connect with the SpaceClaim Support page.

There, you can enter information about your session experience.

- Was the session useful

- Were there any performance issues

- What features would you like to see added

Closing the session

Click the Disconnect button to end the shared session.

- All markups are cleared when disconnected

- The Connect tab closes

- The blue border is removed from the Graphics Window

Client sessions

As a Client, you connect to the secure server session initiated by the Host.

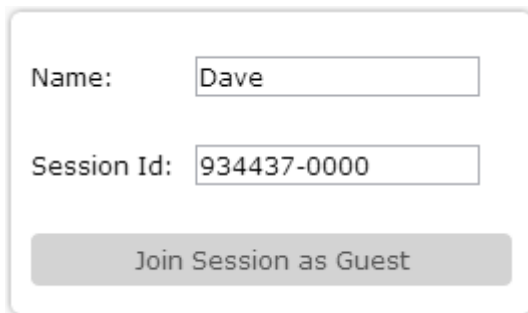During the session you see graphics information from the active model in the Host's SpaceClaim session.

SpaceClaim Connect provides enough graphics information for you to *independently* work with the model and perform the following actions.

- View navigation

- Selection

- Make measurements

- Markup the model

- Take view Snapshots

Joining a SpaceClaim Connect session

The Host provides a link to the secure session This will be by an email containing a direct link, or some other method providing a link to paste into your browser.

When you arrive at the session site, you will see a login box.

Before you can join the session, you must enter a username. This is the name that appears in the Participant list on the Host machine.

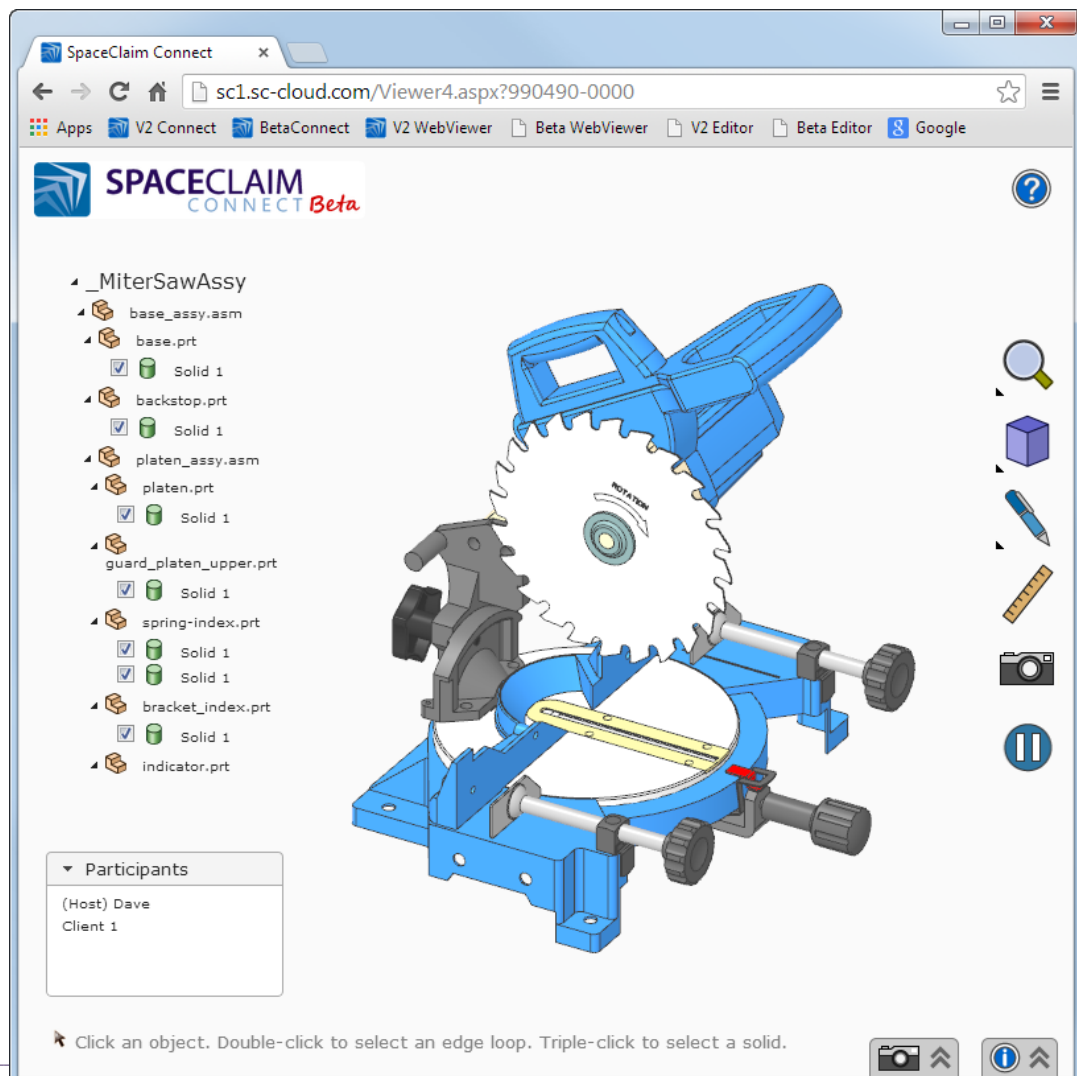When you join the session, the system reports your connection speed .
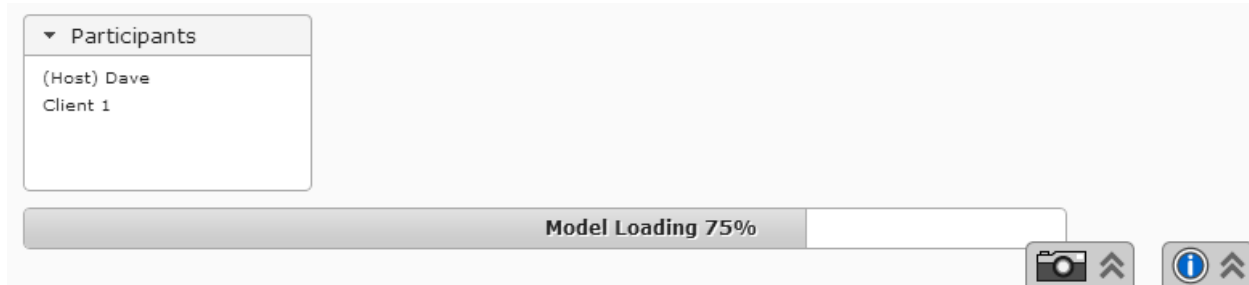

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Client user interface

The desktop UI defaults to viewer4.aspx.

- Structure tree to the left
- Structure tree is transparent
- Client commands on the right
- Participant list on bottom left
- Snapshots and Session Status Log on the lower right

When the Host loads a model, you will see a Progress bar on the Client.

If you want to Pause your session, click the Pause button.

You will be listed as "Paused" in the Participant list on the Host.

Your SpaceClaim Connect banner will change to show you as Paused.

You will not receive broadcasts from the Host until you Resume your session.

If the Host switches model tabs, your display will update to show the new model.

However, you will not receive any subsequent navigations, selections, and Markups.

Click the Play button to resume receiving broadcasts from the Host.

Viewing the model

When a model comes up on the Client, it orients the same way as in the Host session.
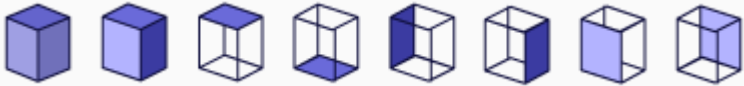
Spin, Pan, and Zoom operations are done with the same mouse buttons as in SpaceClaim.

You can also use:

- LMB – Spin
- RMB – Pan
- Wheel – Zoom
  - Wheel-zoom is blocked if another Client navigation is in progress

The table below summarizes other view functions available on the Client.

	Zoom	This is a Fly-out menu with the following options: **Zoom Extents** – Fits the model to the screen size **Zoom to Selected** – Fits the selected face to the screen size
	Snap to View	Select from predefined views like those found in SpaceClaim. (Isometric, Trimetric, Top, Bottom, Left, Right, Front, Back)

Display toggles in the Client Structure Tree can be used to toggle the display of Solids.

- Shared with Host and Clients
- No Component display toggles for components on Clients

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- Component displays toggled on the Host are shared with the Clients

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- Box
- Lasso
- Polygon
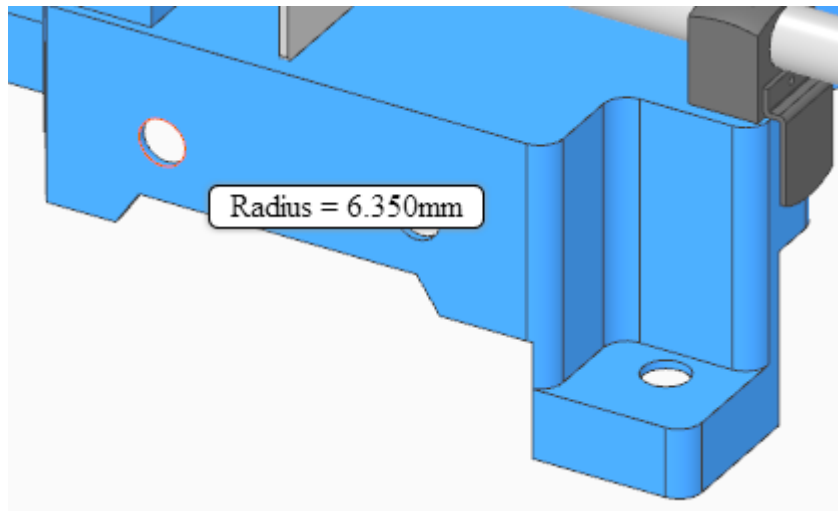- Paint
- Using Boundary

When Selection Modes are used on the Host, they are shared with the Client.

Measuring

The following measurements can be made in the Client through selection (not using measurement tools).
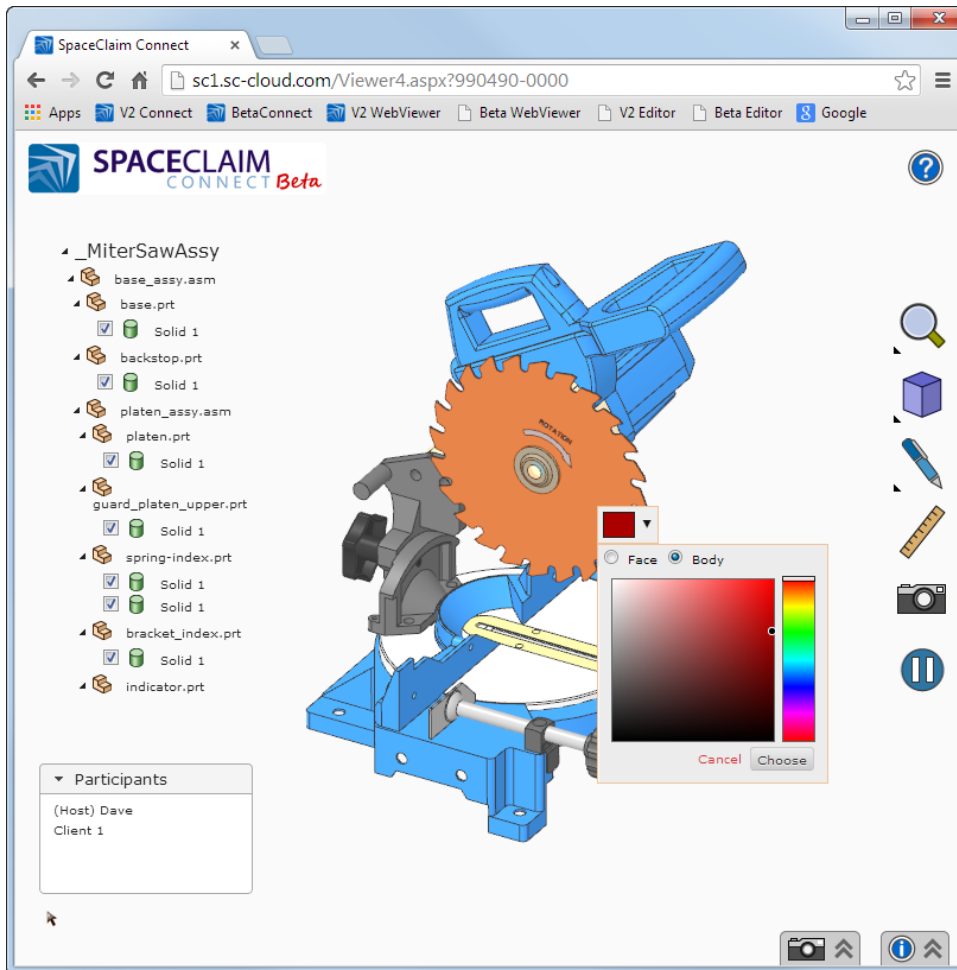
- Radius
- Point-to-point distance
- Length
- Angle

As selections are made, the corresponding measurement is displayed in the lower left corner of the screen.

Working with model colors

On the Client, there is a Change Color command in the RMB to change the color of the whole body.
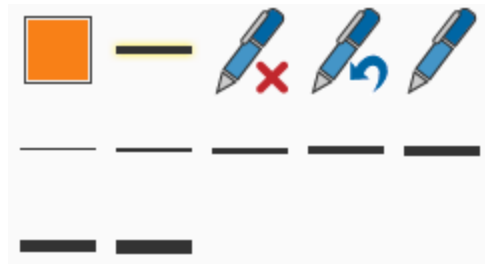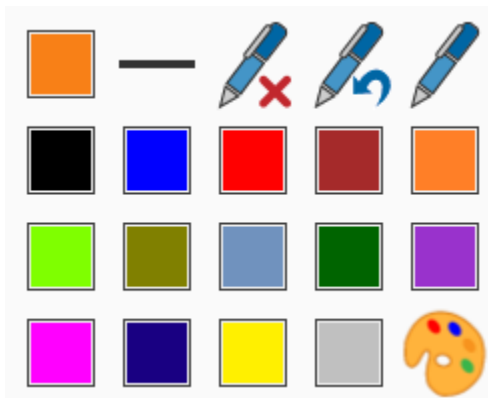
Color changes are shared among all Clients and the Host.

Markup

Use the Pen tool to draw freehand markups on the model.

You can set the Pen color and thickness using dropdown menus in the Pen tool.
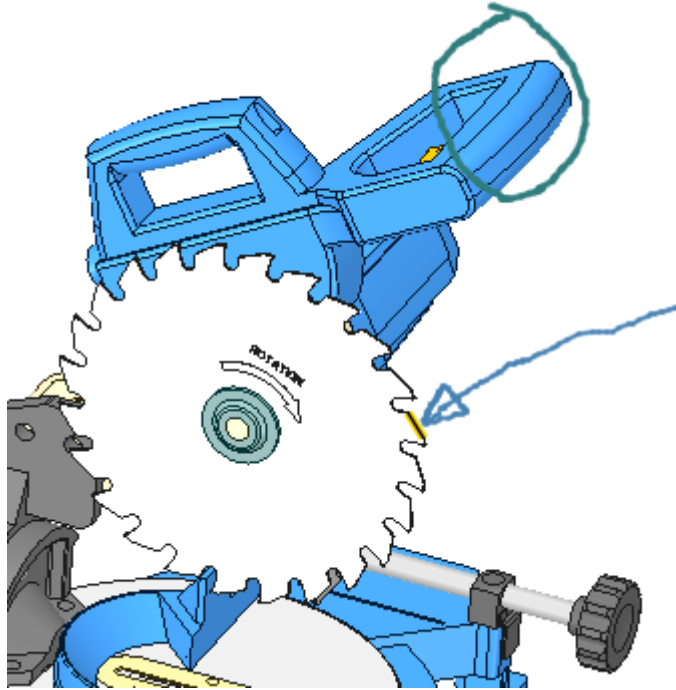
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In the example below, the image was taken on the Host machine. The green circle was sketched on the client and the blue arrow was drawn on the Client.

While you draw on the model, you are listed as "Marking" in the Participant list on the Host.
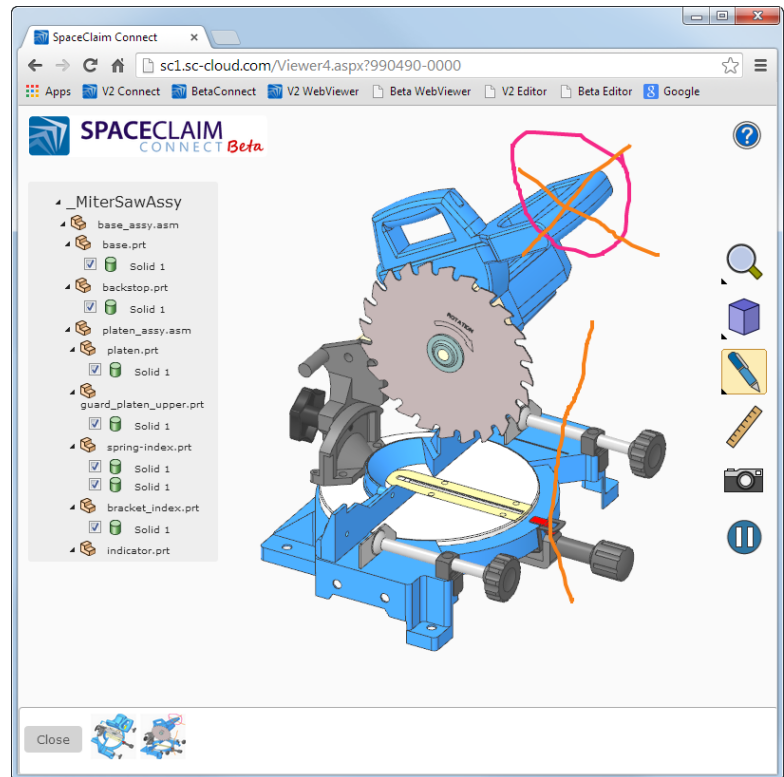
Snapshots

Snapshots allow you to snap images of the graphics window while connected to a shared session.

Click the **Snapshot** button to create an image of the screen.

Snapshots are added to the Snapshot Gallery at the bottom of the page.

Clicking on a Snapshot in the Gallery restores the view to the "as-snapped" orientation and zoom level.

All Snapshots taken on the Host and the other Clients are added to the Gallery.

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- Click **Record** while any participant, including the Host, is marking up

- In the Gallery, when you click on a Snapshot containing Markups

    o The view is restored to the orientation and zoom level of the Markups

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    o If you want to add more Markups, you need to re-enter the Pen tool

    o You can Pan and Zoom and still see the Markups

    o Spinning the model clears the Markups

When the Host ends the shared session, they are asked if they want to save the Snapshots.

They can be saved as PNG files in a directory on the Host machine.

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