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IDEAS

3D Scanning Tips

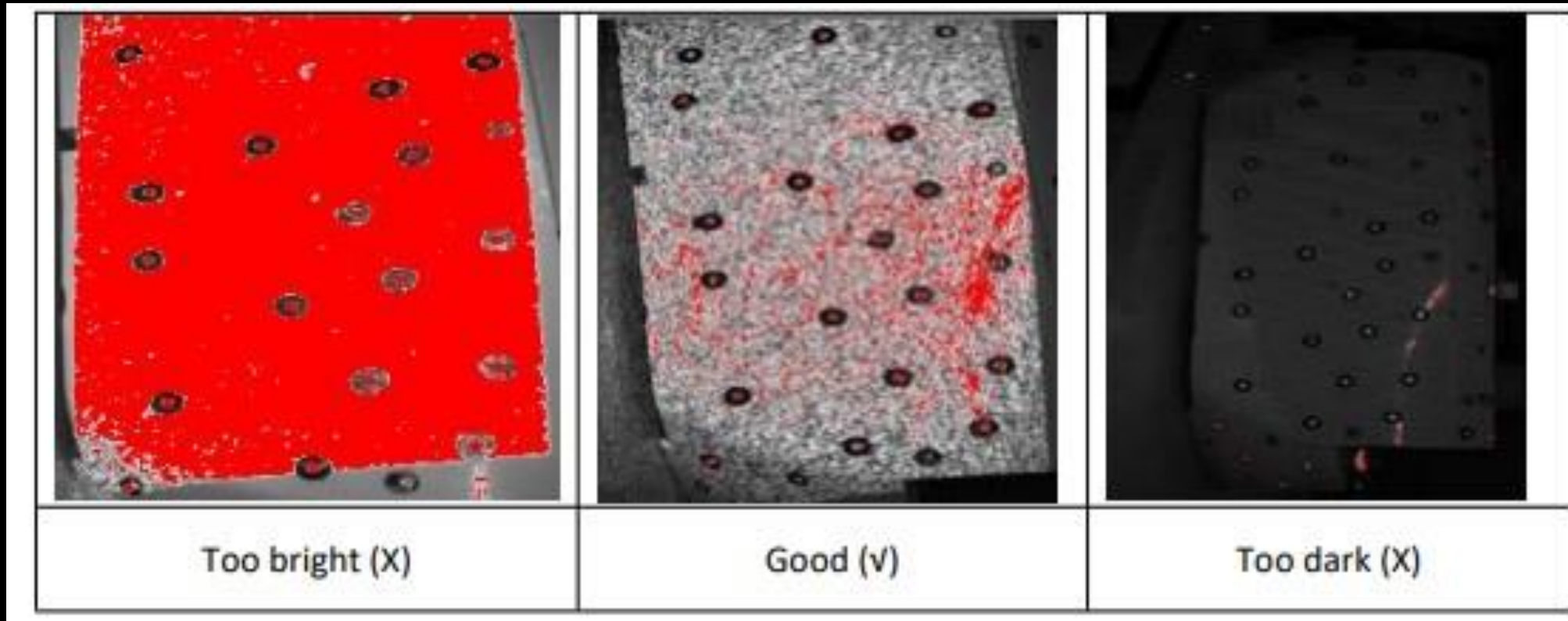
Maximize your potential for demonstrations

Presented by Eric and Olivia

General Scanning Tips

Set an appropriate brightness level just as below

Note: For the handheld series, be sure to set the distance before the brightness.

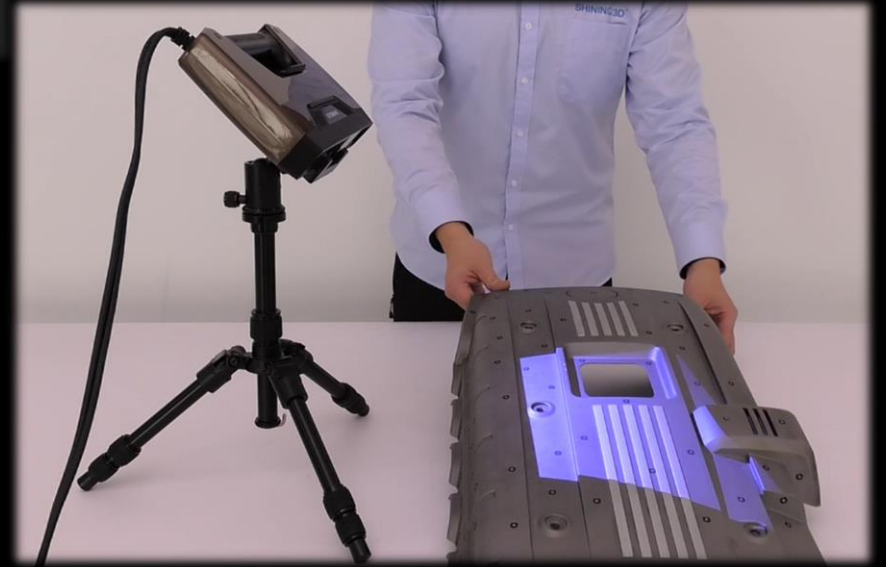


Tips for Fixed Scan

Ensure that the crosshair from the projector is in the center of the scan object.



Avoid overexposure by reducing the brightness level



If scanning without a turntable, there should be at least a 30% overlap to ensure alignment.

The difference in Align Mode



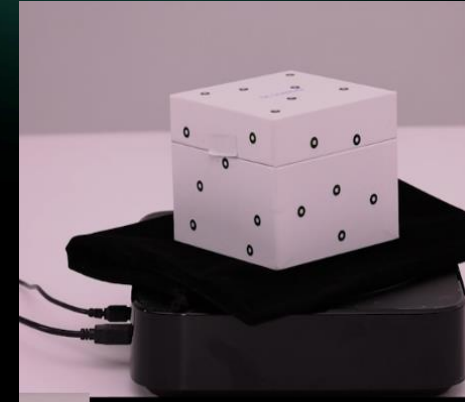
Coded Target Alignment

- The camera needs to see most of the target
- The degree between the scanner and the turntable needs to be at least 45 degrees



Feature Alignment

- Good features are needed to track the position of the scanned data
- Non-planar and non-symmetric



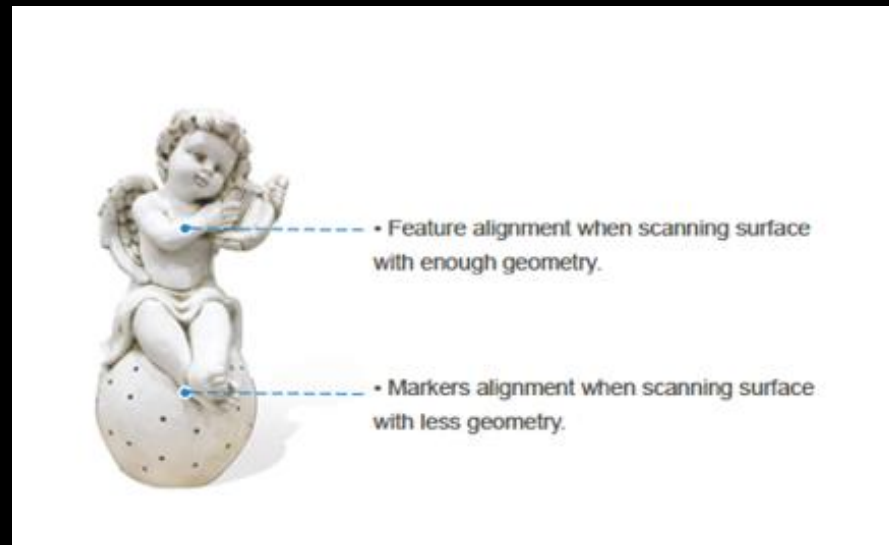
Markers Alignment

- Best alignment to selected when aligning multiple scans
- Significantly reduces the chance of misalignment
- Gives the best resolutions
- A minimum of 4 markers are required for each scanning frame



Texture Alignment

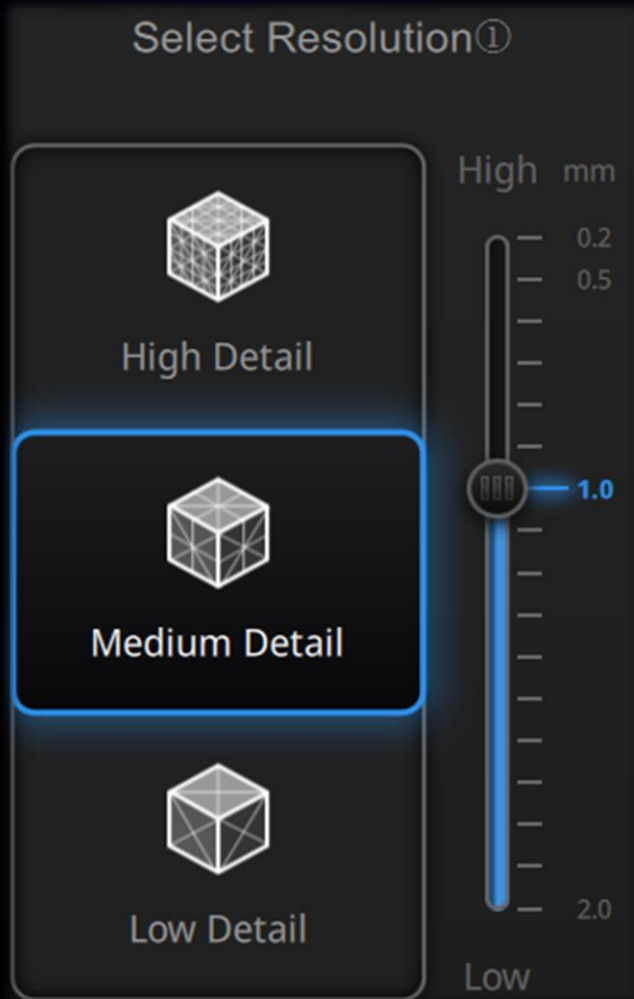
- Great for objects without much geometry but with a lot of color.
- It may require the use of the Color Pack add-on for some models



Hybrid Alignment

- Switch between the feature and the marker tracking during the scan process
- Markers is only needed with a surface that has less geometry
- Scanning speed will be slower

Resolutions & Operation Modes



Resolutions

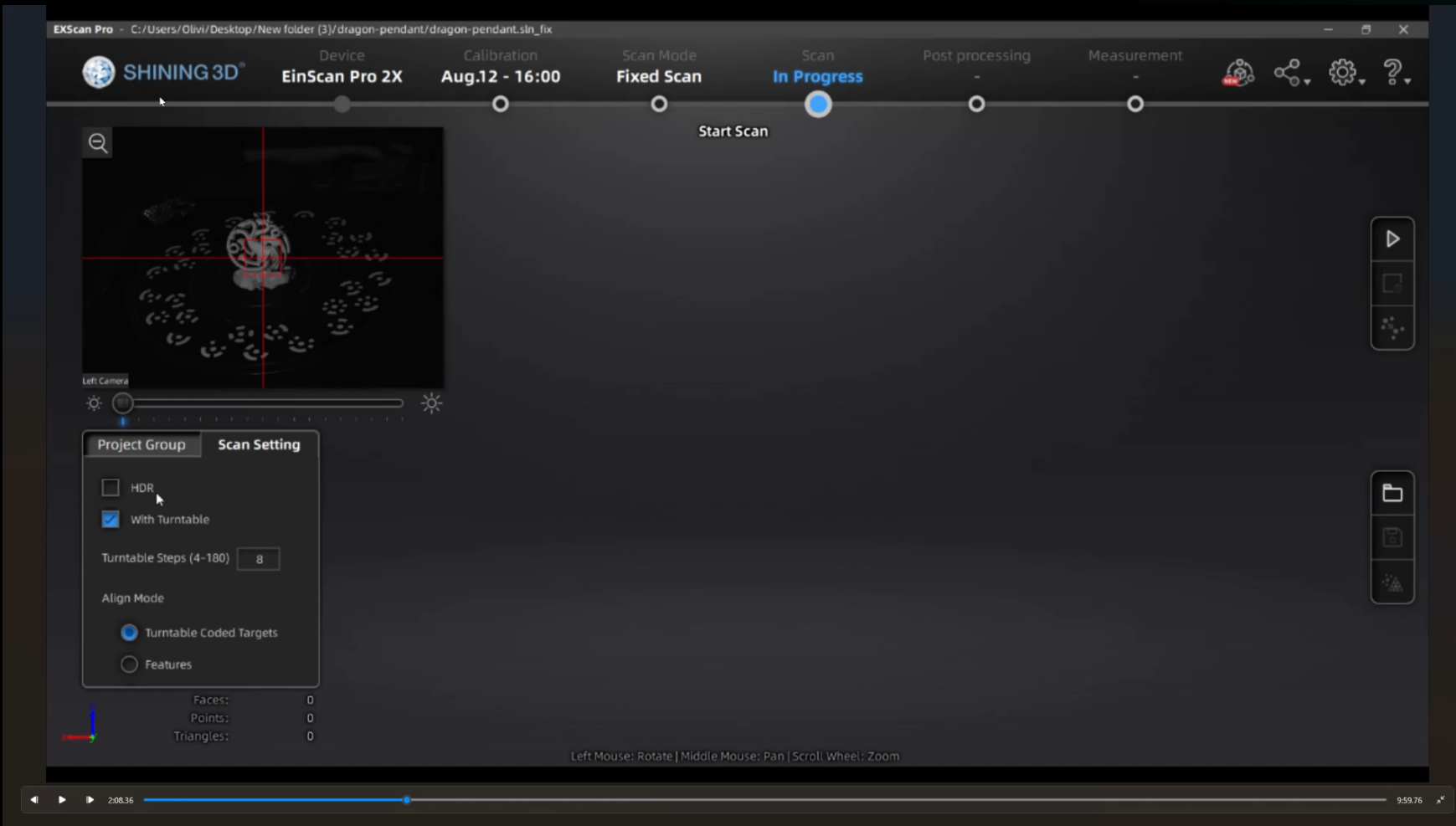
- Higher resolutions take more time to scan and consume more video card memory.
- When scanning large objects, it is recommended to select a lower resolution
- When importing a project and continuing a scan job, the scan resolution and alignment mode will be the same as the settings for the previously imported project.

Operation Mode

Scanning Speed: Lightning = Lightning + Refine > Classic
Data Resolution: Classic = Lightning + Refine > Lightning
Data Processing time: Lightning + Refine > Lightning > Classic

Tips for desktop and turntable scans

- Using sticky tack to hold up small or thin parts
- Position the scanner to focus on the center of the part



Using a tripod with the EinScan SE and SP

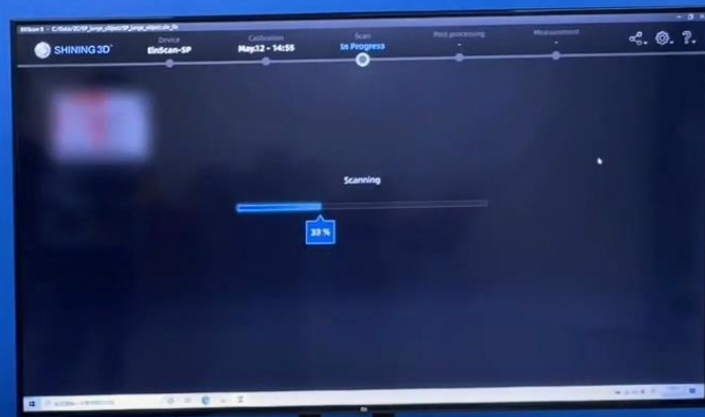
How to scan large objects with a desktop 3d scanner EinScan-SP?

SHINING 3D®

R
RE
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AS

EinScan-SP

Tripod



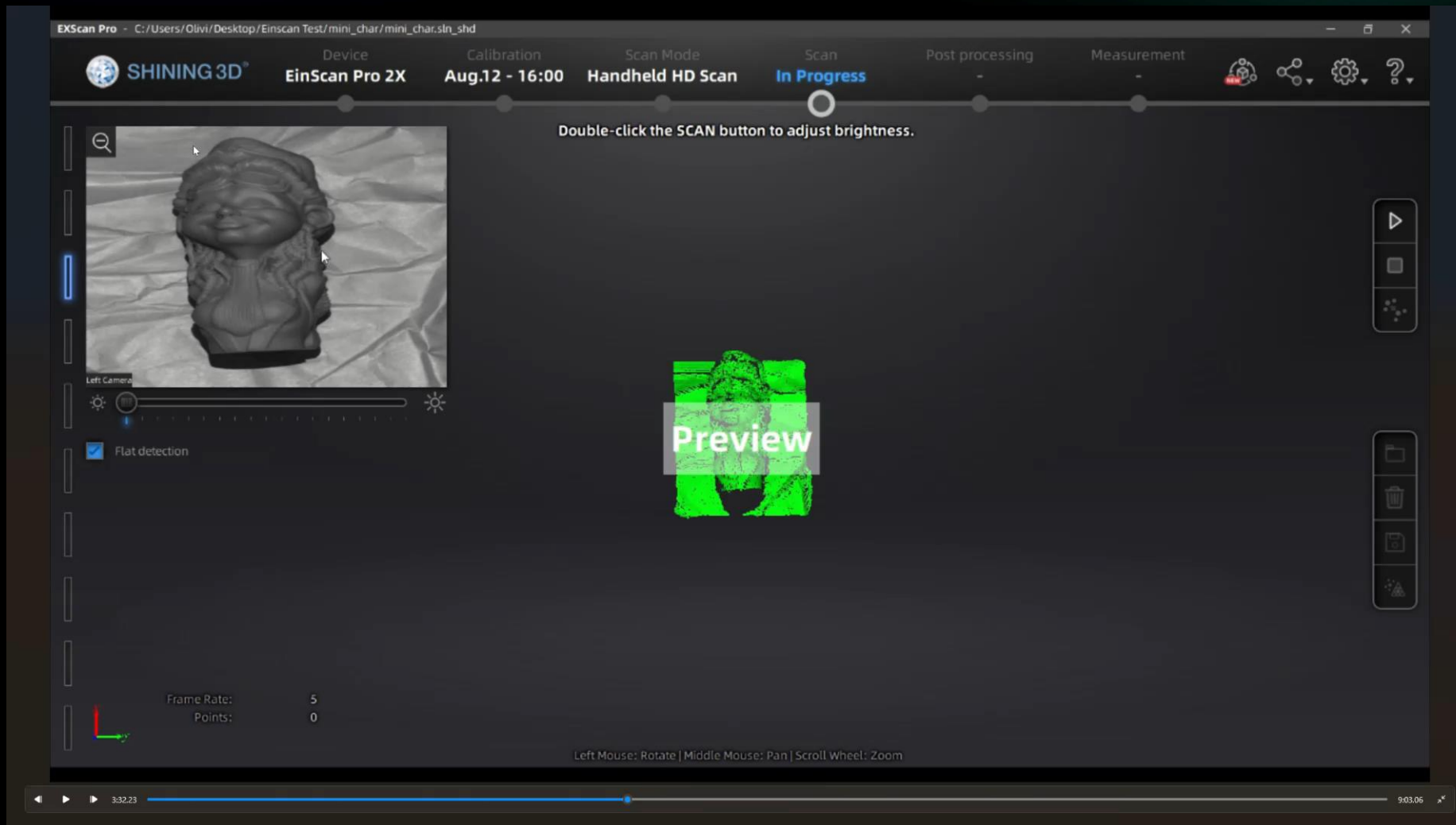
0:12 / 2:16



SHINING 3D

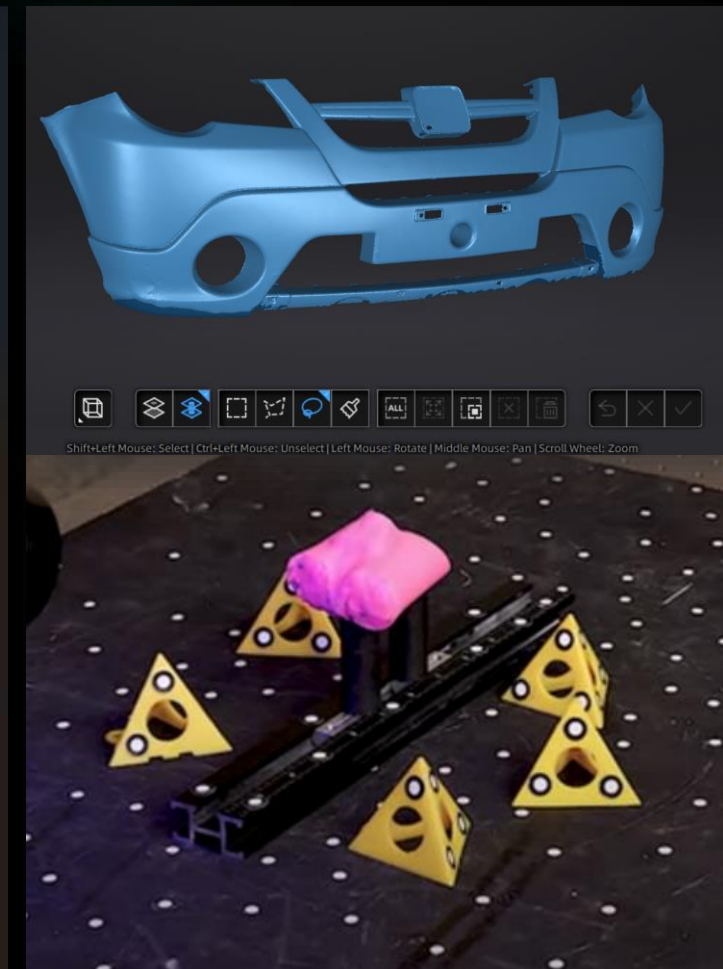
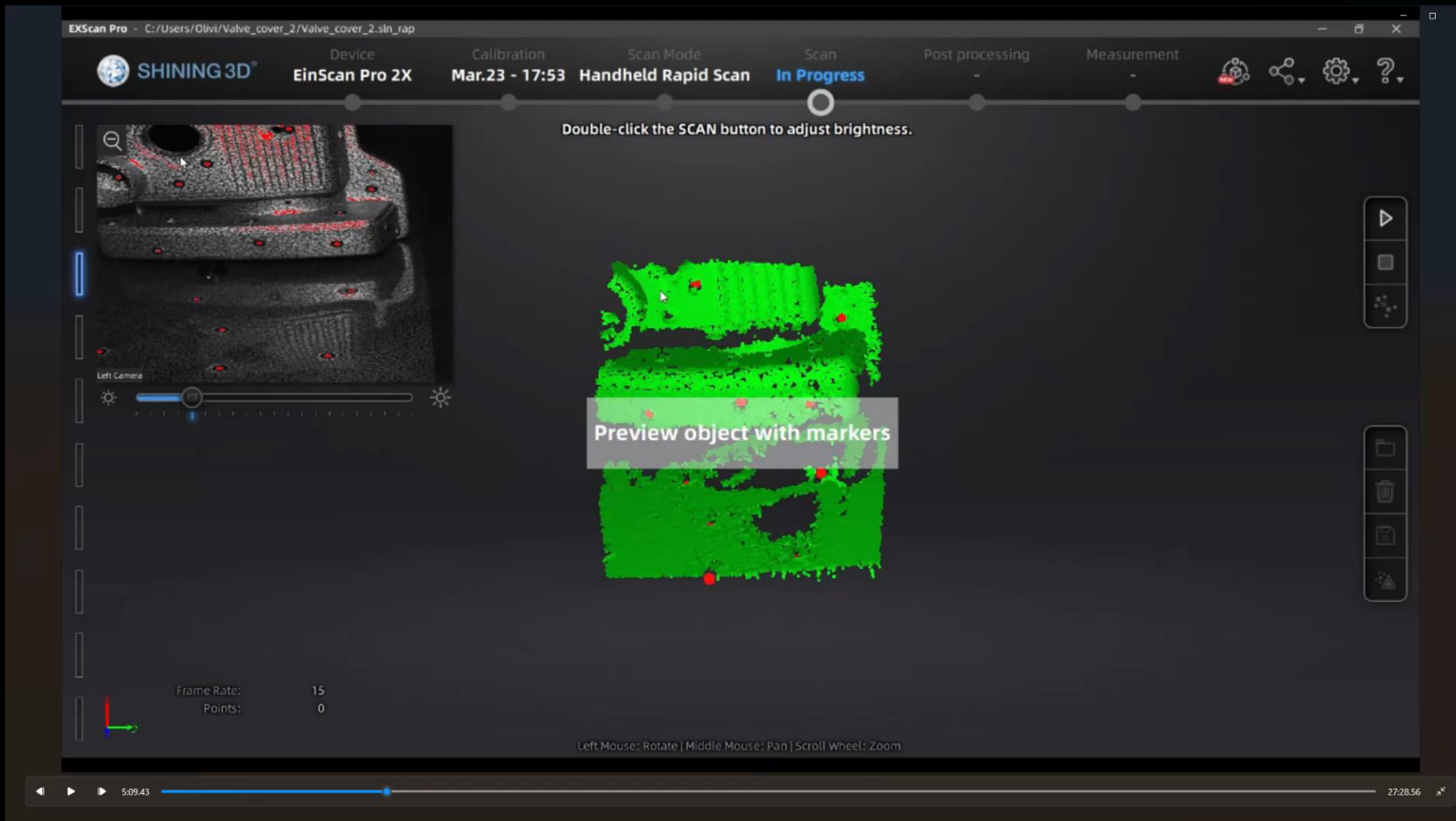
Feature alignment with crumpled cloth

Adding features to the environment to help with data tracking



Marker skeleton . P3 file for thin parts

Scanning thin objects are difficult because you can't move to the opposite side without proper alignment. Adding markers to the floor or objects around



Scanning in color and remapping textures

- Scan in a dimly lit room for the best color results
-

Use a scanning rig with markers for small parts

Laser scanners excel when there are enough markers for tracking. Small objects are often difficult to scan because it cannot fit enough markers on its surface for tracking, so we need to use the environment for data alignment.

A small blackboard with markers and a platform to lift up small parts will help us scan any small part from different angles and positions. The marker triangles laid below help us keep data alignment when scanning the object sides



Marker sheets for wider flat surfaces

