3D SCANNING

ASSIGNMENT 09

(DSL-732)

SHRUTI SHARMA 2019DDS6013

Introduction

3D scanning is the process of analyzing a real-world object or environment to collect data on its shape and possibly its appearance. The collected data can then be used to construct digital 3D models. A 3D scanner can be based on many different technologies, each with its own limitations, advantages and costs.

Softwares Used

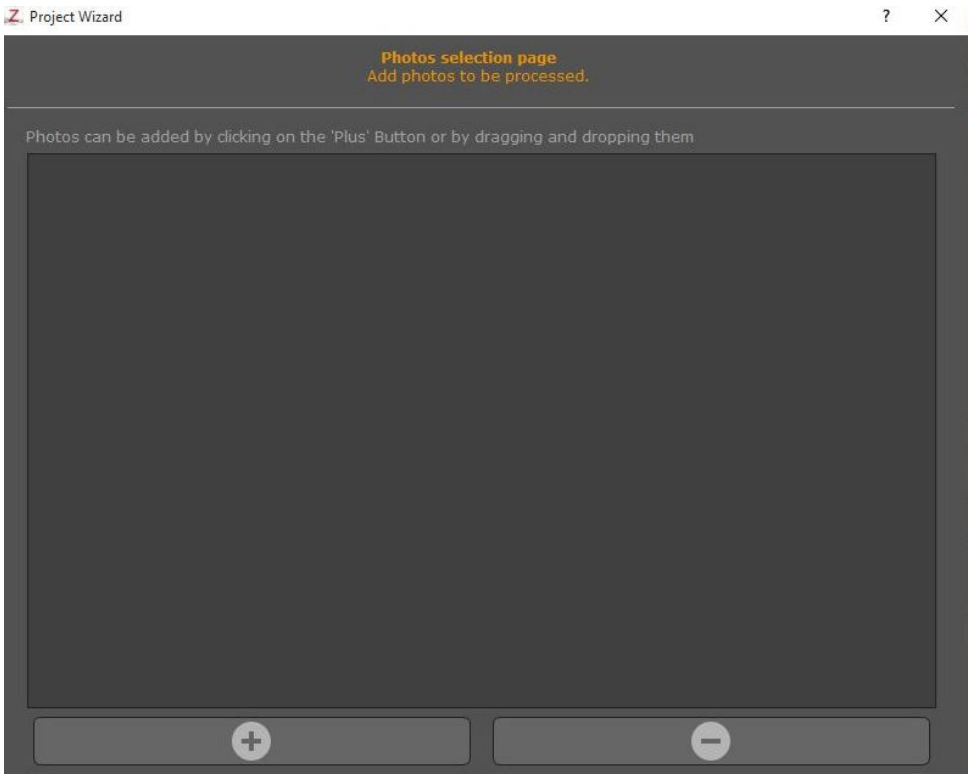
Smart phone camera: To capture images and videos
3DF Zephyr Lite: For the 3d rendering and viewing
Steps to be followed

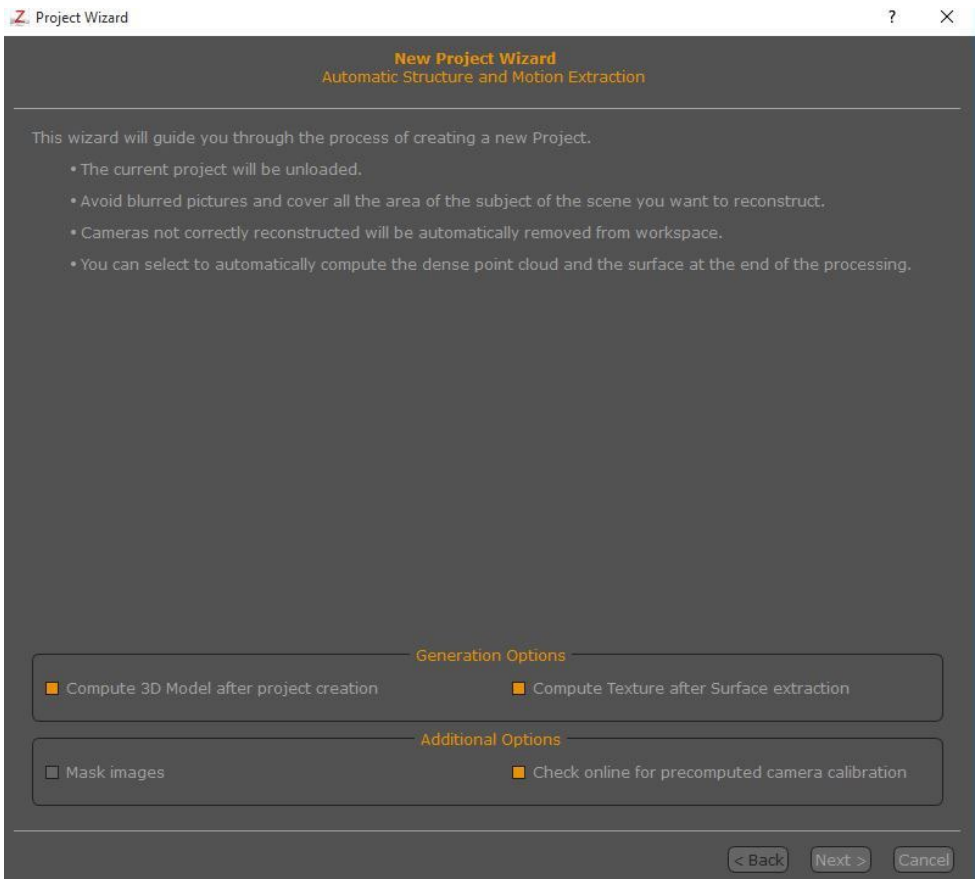
The following 3D printed object is scanned using the 3DF Zephyr software

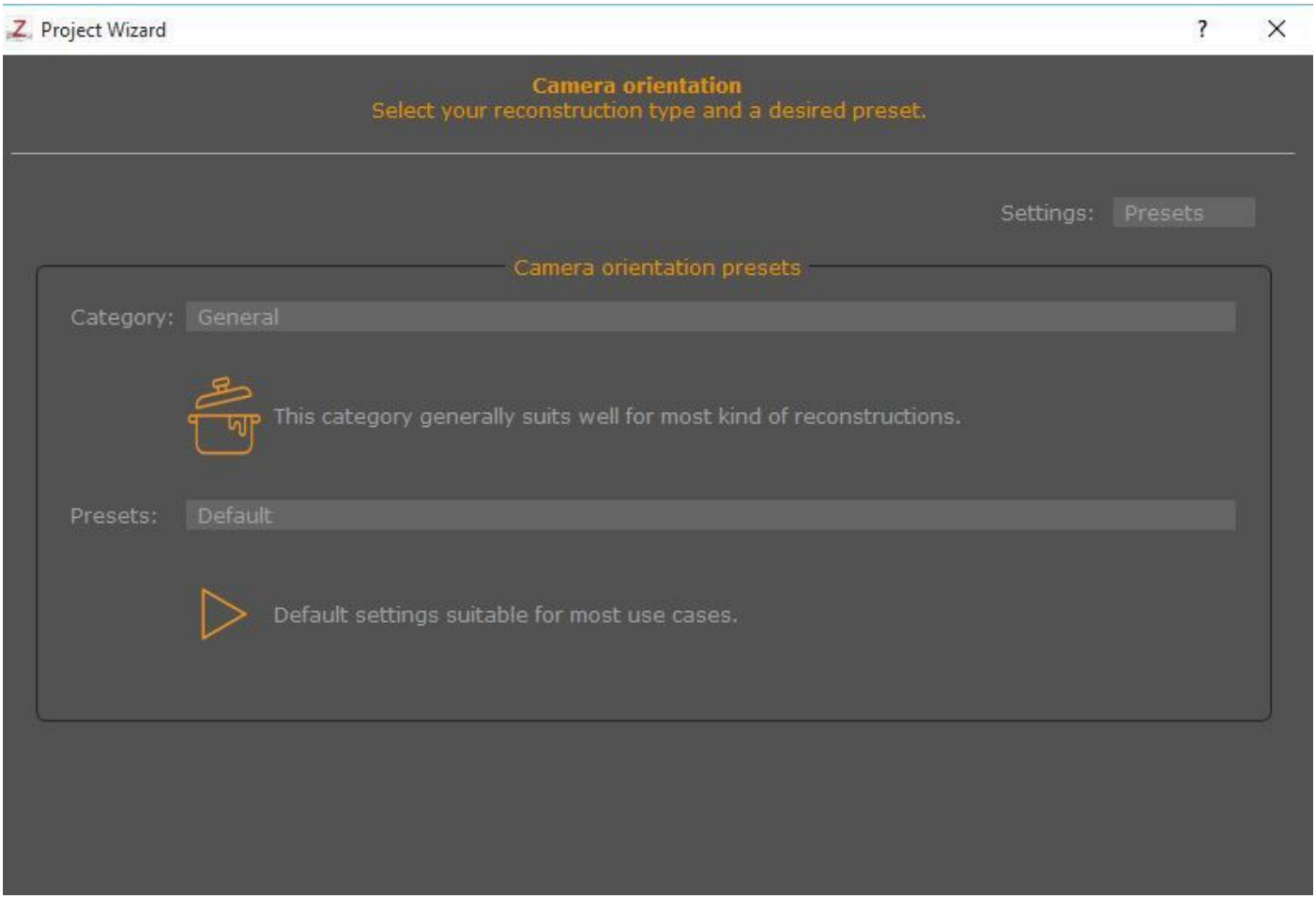
Process

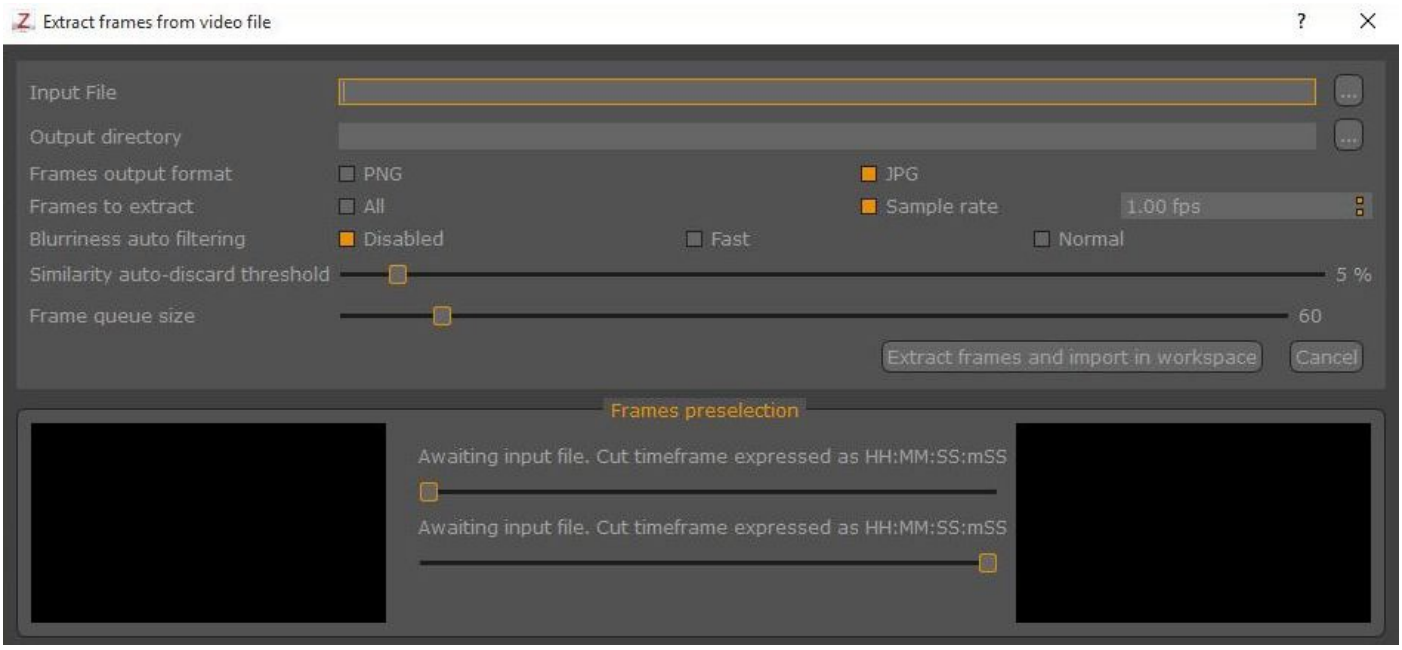
Step 1 : Capturing the images by taking multiple photos of the objects or by making a video of the object.

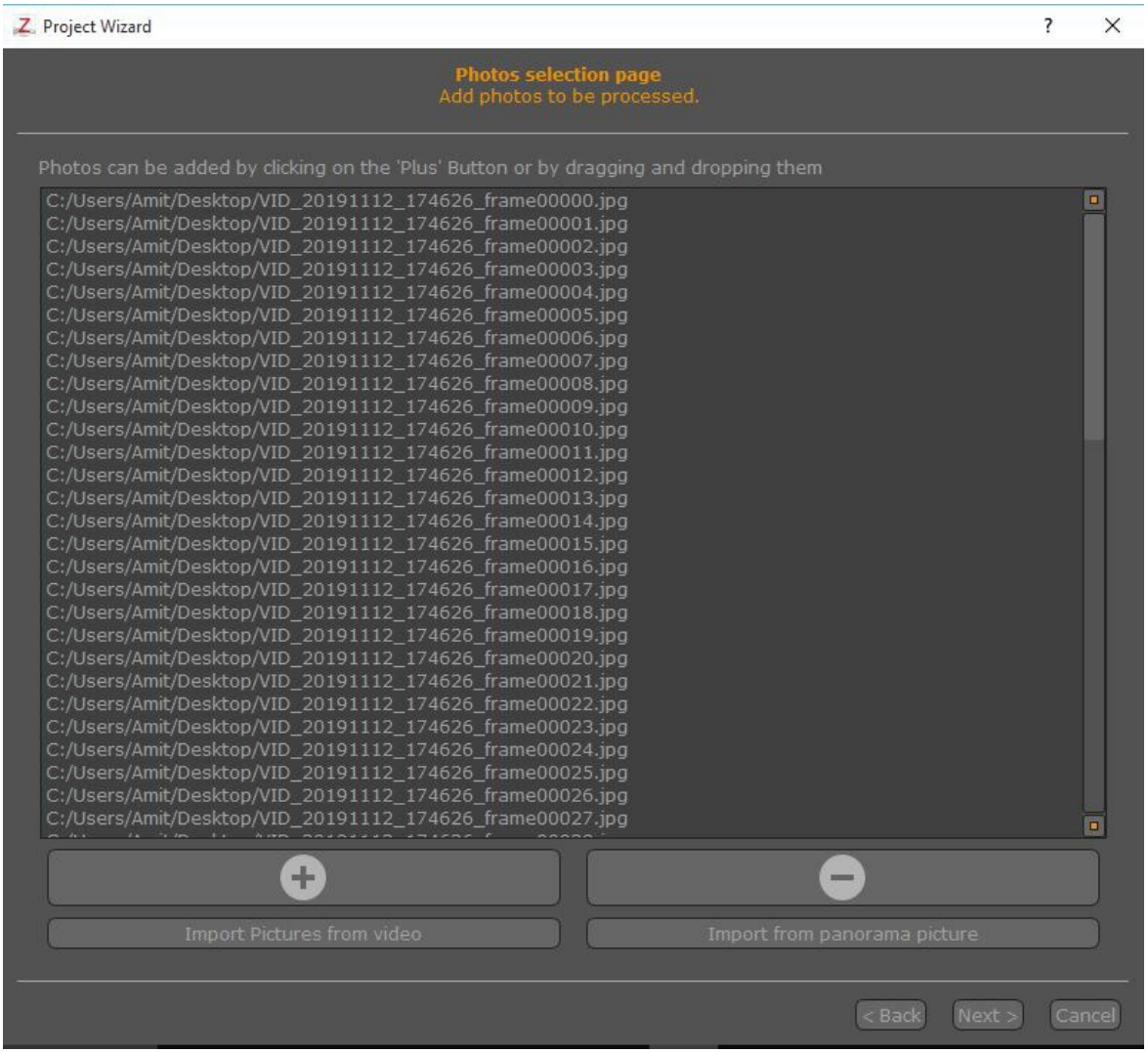
Step 2 : Importing pictures in to the 3DF Zephyr software

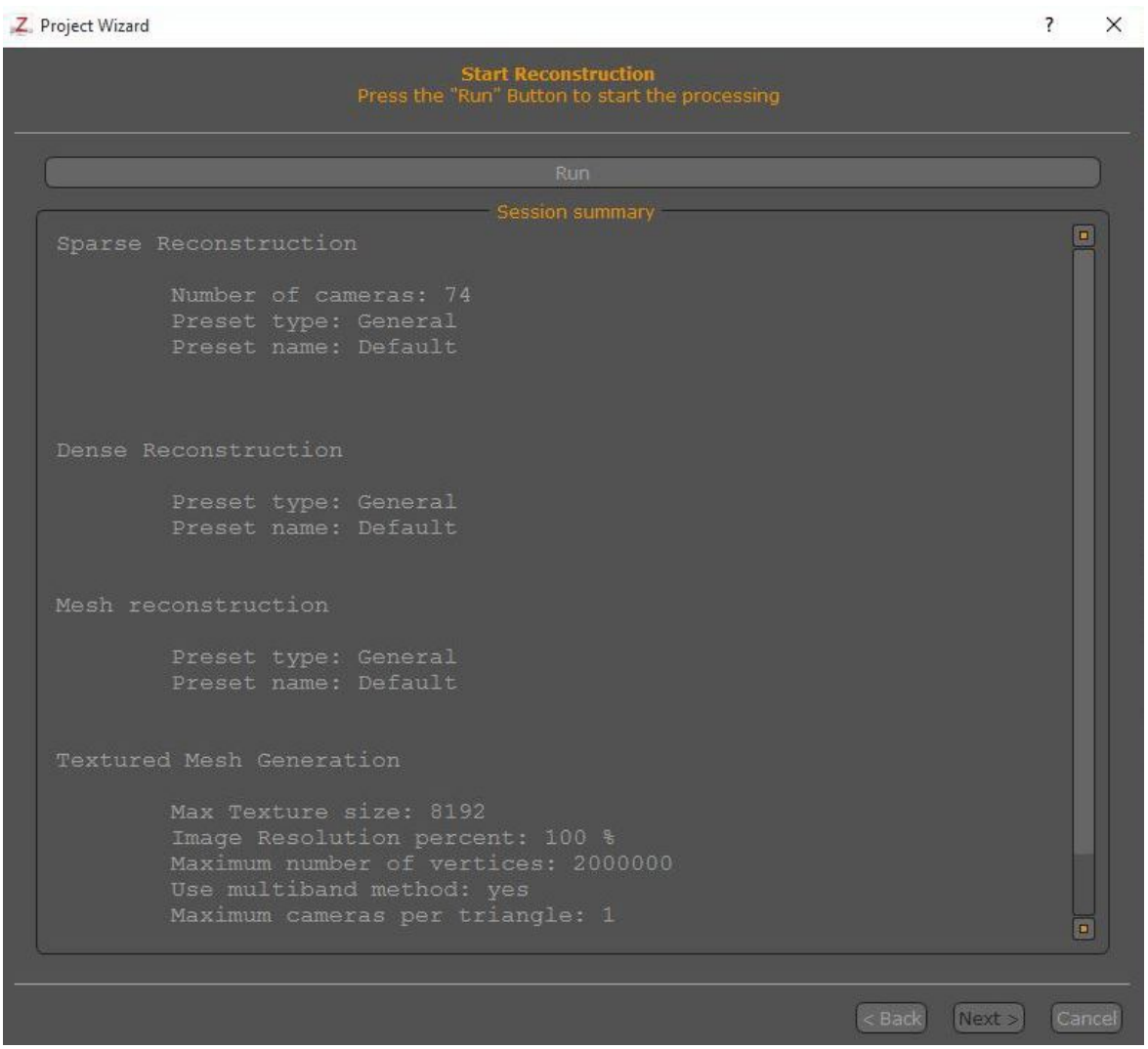


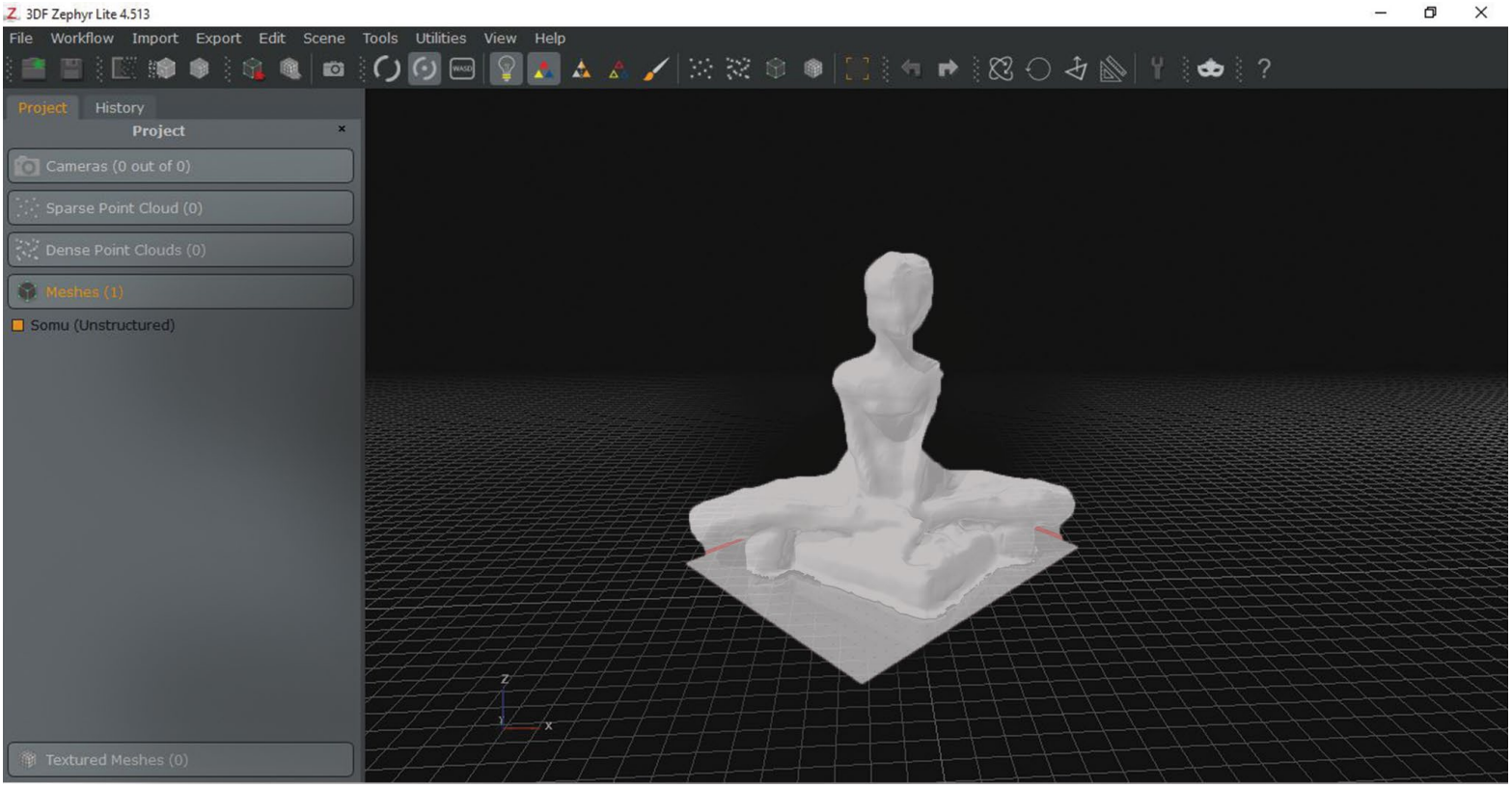


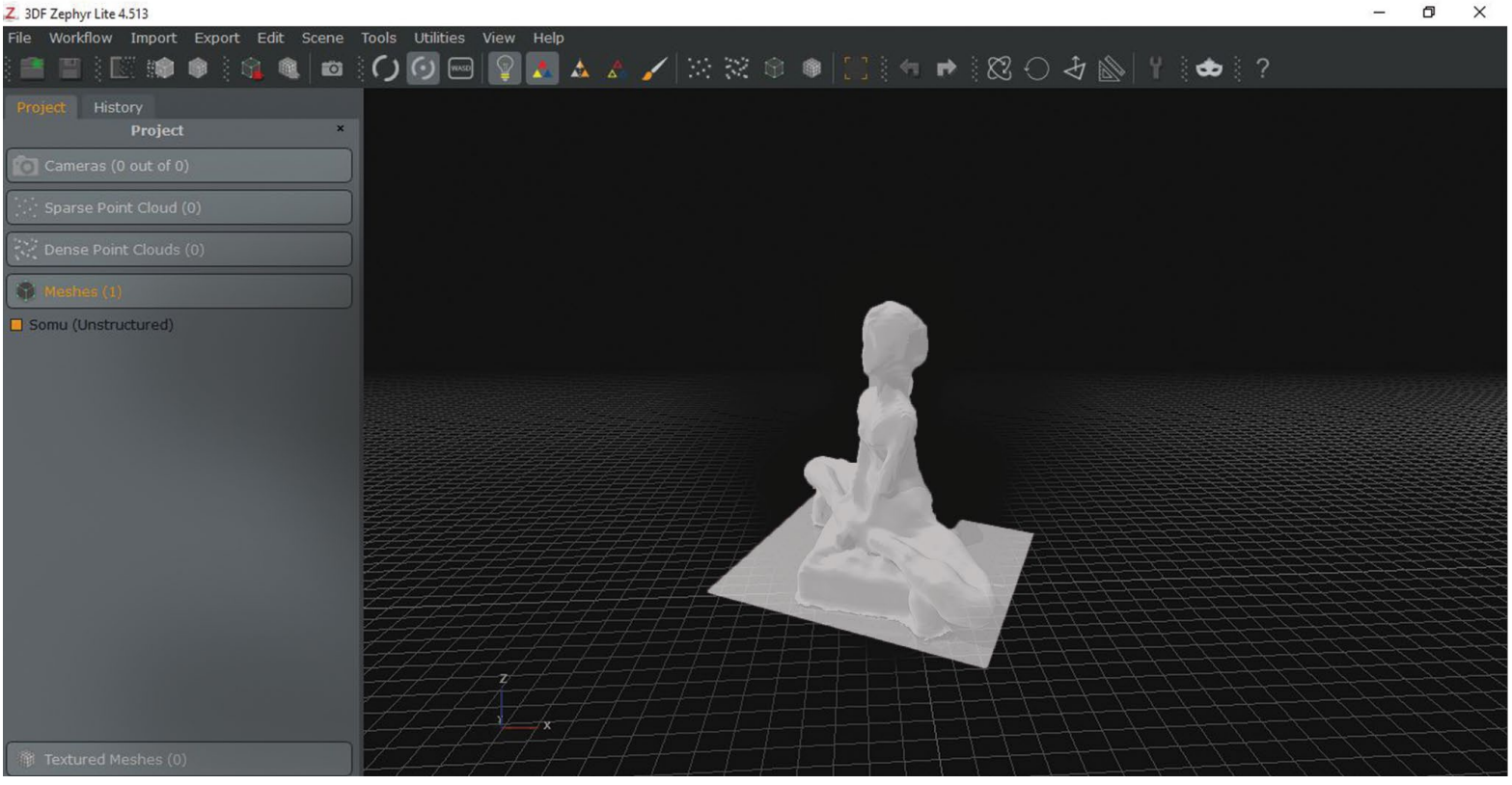

Project Wizard
Camera orientation
Select your reconstruction type and a desired preset.
Settings:
Presets
Camera orientation presets
Category:
General
This category generally suits well for most kind of reconstructions.
Presets:
Default
Default settings suitable for most use cases.


Extract frames from video file
Input File
Output directory
Frames output format
PNG
JPG
Frames to extract
All
Sample rate
1.00 fps
Blurriness auto filtering
Disabled
Fast
Normal
Similarity auto-discard threshold
5 %
Frame queue size
60
Extract frames and import in workspace
Cancel
Frames preselection
Awaiting input file. Cut timeframe expressed as HH:MM:SS:mSS
Awaiting input file. Cut timeframe expressed as HH:MM:SS:mSS


Project Wizard
Photos selection page
Add photos to be processed.
Photos can be added by clicking on the 'Plus' Button or by dragging and dropping them
C:/Users/Amit/Desktop/VID_20191112_174626_frame00000.jpg
C:/Users/Amit/Desktop/VID_20191112_174626_frame00001.jpg
C:/Users/Amit/Desktop/VID_20191112_174626_frame00002.jpg
C:/Users/Amit/Desktop/VID_20191112_174626_frame00003.jpg
C:/Users/Amit/Desktop/VID_20191112_174626_frame00004.jpg
C:/Users/Amit/Desktop/VID_20191112_174626_frame00005.jpg
C:/Users/Amit/Desktop/VID_20191112_174626_frame00006.jpg
C:/Users/Amit/Desktop/VID_20191112_174626_frame00007.jpg
C:/Users/Amit/Desktop/VID_20191112_174626_frame00008.jpg
C:/Users/Amit/Desktop/VID_20191112_174626_frame00009.jpg
C:/Users/Amit/Desktop/VID_20191112_174626_frame00010.jpg
C:/Users/Amit/Desktop/VID_20191112_174626_frame00011.jpg
C:/Users/Amit/Desktop/VID_20191112_174626_frame00012.jpg
C:/Users/Amit/Desktop/VID_20191112_174626_frame00013.jpg
C:/Users/Amit/Desktop/VID_20191112_174626_frame00014.jpg
C:/Users/Amit/Desktop/VID_20191112_174626_frame00015.jpg
C:/Users/Amit/Desktop/VID_20191112_174626_frame00016.jpg
C:/Users/Amit/Desktop/VID_20191112_174626_frame00017.jpg
C:/Users/Amit/Desktop/VID_20191112_174626_frame00018.jpg
C:/Users/Amit/Desktop/VID_20191112_174626_frame00019.jpg
C:/Users/Amit/Desktop/VID_20191112_174626_frame00020.jpg
C:/Users/Amit/Desktop/VID_20191112_174626_frame00021.jpg
C:/Users/Amit/Desktop/VID_20191112_174626_frame00022.jpg
C:/Users/Amit/Desktop/VID_20191112_174626_frame00023.jpg
C:/Users/Amit/Desktop/VID_20191112_174626_frame00024.jpg
C:/Users/Amit/Desktop/VID_20191112_174626_frame00025.jpg
C:/Users/Amit/Desktop/VID_20191112_174626_frame00026.jpg
C:/Users/Amit/Desktop/VID_20191112_174626_frame00027.jpg
Import Pictures from video
Import from panorama picture
< Back
Next >
Cancel


Project Wizard
Start Reconstruction
Press the "Run" Button to start the processing
Run
Session summary
Sparse Reconstruction
Number of cameras: 74
Preset type: General
Preset name: Default
Dense Reconstruction
Preset type: General
Preset name: Default
Mesh reconstruction
Preset type: General
Preset name: Default
Textured Mesh Generation
Max Texture size: 8192
Image Resolution percent: 100 %
Maximum number of vertices: 2000000
Use multiband method: yes
Maximum cameras per triangle: 1
< Back
Next >
Cancel


3DF Zephyr Lite 4.513
File Workflow Import Export Edit Scene Tools Utilities View Help
Project History
Project
Cameras (0 out of 0)
Sparse Point Cloud (0)
Dense Point Clouds (0)
Meshes (1)
Somu (Unstructured)
Textured Meshes (0)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Project
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Sparse Point Cloud (0)
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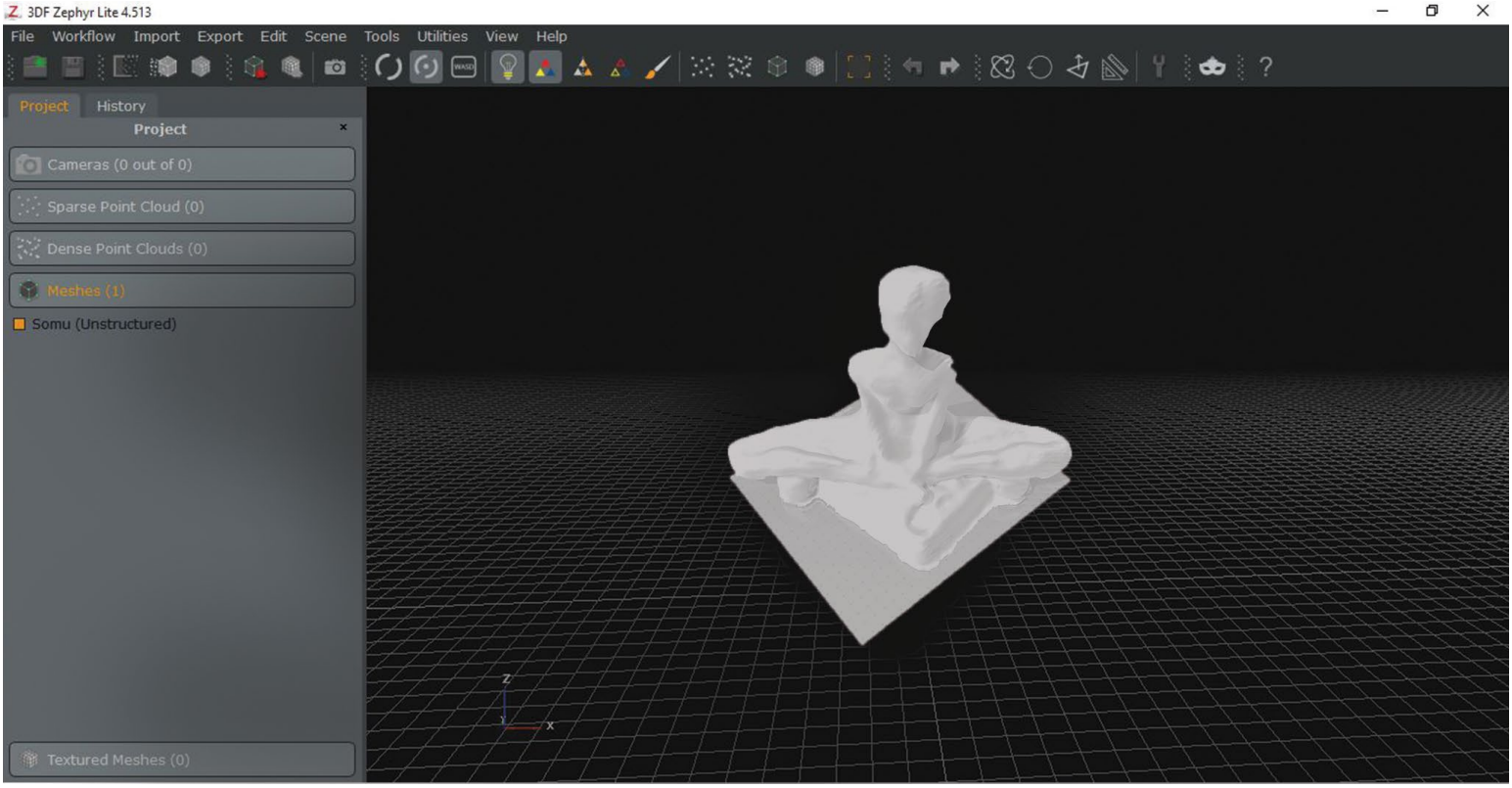
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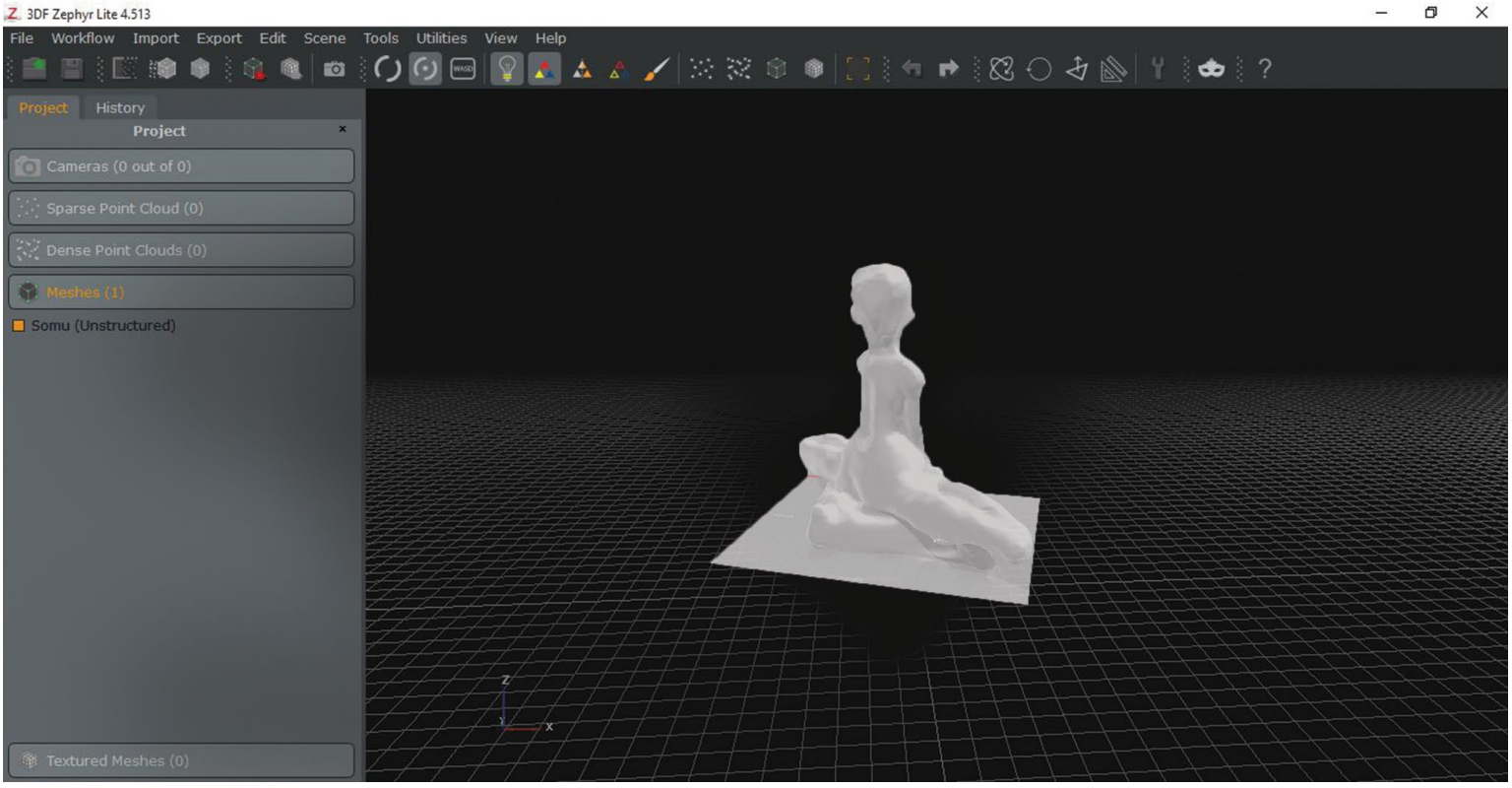
Project
Cameras (0 out of 0)
Sparse Point Cloud (0)
Dense Point Clouds (0)
Meshes (1)
Somu (Unstructured)
Textured Meshes (0)


3DF Zephyr Lite 4.513
File Workflow Import Export Edit Scene Tools Utilities View Help
Project History
Project
Cameras (0 out of 0)
Sparse Point Cloud (0)
Dense Point Clouds (0)
Meshes (1)
Somu (Unstructured)
Textured Meshes (0)

THANKYOU

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