



3D Scanning Workflow

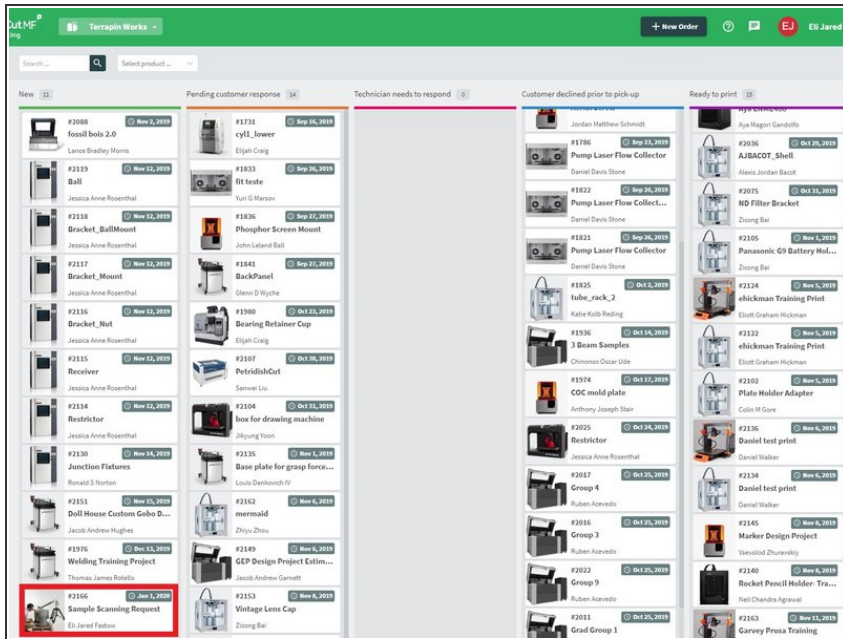
This guide reviews the process TerrapinWorks staff members undergo to document progress of scanning requests as they are assigned, processed, and completed.

Written By: Eli Jared Fastow

The screenshot displays the TerrapinWorks software interface, which is used for managing 3D scanning requests. The interface is divided into several sections, each representing a different status of a request. The 'New' section is highlighted, and the request '#2166 Sample Scanning Request' by Eli Jared Fastow is highlighted in red. The other sections include 'Pending customer response', 'Technician needs to respond', 'Customer declined prior to pick-up', and 'Ready to print'.

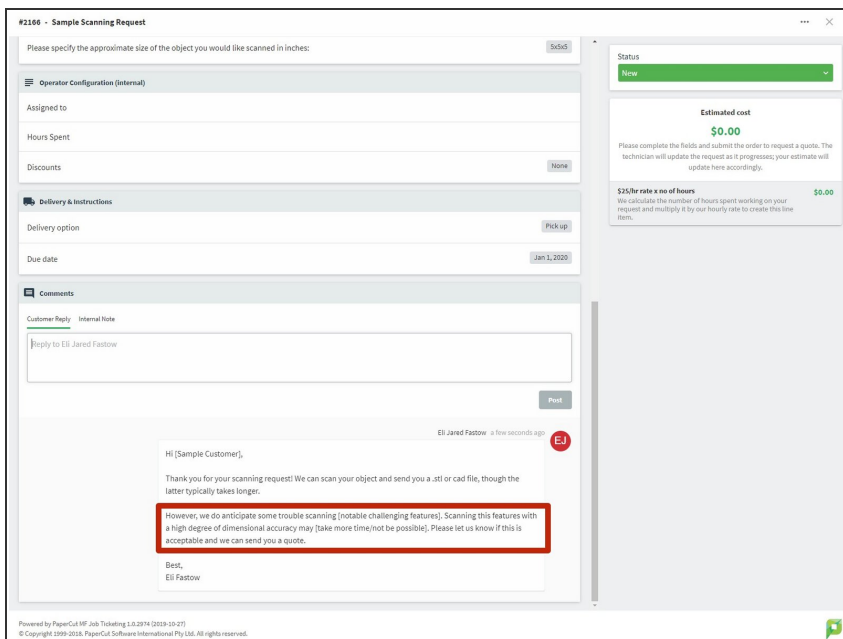
New	Pending customer response	Technician needs to respond	Customer declined prior to pick-up	Ready to print
<p>#2088 fossil bois 2.0 Lance Bradley Morris Nov 2, 2019</p> <p>#2119 Ball Jessica Anne Rosenthal Nov 12, 2019</p> <p>#2118 Bracket_BallMount Jessica Anne Rosenthal Nov 12, 2019</p> <p>#2117 Bracket_Mount Jessica Anne Rosenthal Nov 12, 2019</p> <p>#2116 Bracket_Nut Jessica Anne Rosenthal Nov 12, 2019</p> <p>#2115 Receiver Jessica Anne Rosenthal Nov 12, 2019</p> <p>#2114 Restrictor Jessica Anne Rosenthal Nov 12, 2019</p> <p>#2130 Junction Fixtures Ronald S Norton Nov 14, 2019</p> <p>#2151 Doll House Custom Gobo D... Jacob Andrew Hughes Nov 15, 2019</p> <p>#1976 Welding Training Project Thomas James Rotello Dec 13, 2019</p> <p>#2166 Sample Scanning Request Eli Jared Fastow Jan 1, 2020</p>	<p>#1731 cyl1_lower Elijah Craig Sep 16, 2019</p> <p>#1833 fit teste Yuri G Marsov Sep 26, 2019</p> <p>#1836 Phosphor Screen Mount John Leland Ball Sep 27, 2019</p> <p>#1841 BackPanel Glenn D Wyche Sep 27, 2019</p> <p>#1980 Bearing Retainer Cup Elijah Craig Oct 23, 2019</p> <p>#2107 PetridishCut Sanwei Liu Oct 30, 2019</p> <p>#2104 box for drawing machine Jikyung Yoon Oct 31, 2019</p> <p>#2135 Base plate for grasp force... Louis Dankovich IV Nov 1, 2019</p> <p>#2162 mermaid Zhiyu Zhou Nov 6, 2019</p> <p>#2149 GEP Design Project Estim... Jacob Andrew Garnett Nov 6, 2019</p> <p>#2153 Vintage Lens Cap Zicong Bai Nov 8, 2019</p>		<p>#1786 Pump Laser Flow Collector Daniel Davis Stone Sep 23, 2019</p> <p>#1822 Pump Laser Flow Collect... Daniel Davis Stone Sep 26, 2019</p> <p>#1821 Pump Laser Flow Collector Daniel Davis Stone Sep 26, 2019</p> <p>#1825 tube Rack_2 Katie Kolb Reding Oct 2, 2019</p> <p>#1936 3 Beam Samples Chinonso Oscar Ude Oct 14, 2019</p> <p>#1974 COC mold plate Anthony Joseph Stair Oct 17, 2019</p> <p>#2025 Restrictor Jessica Anne Rosenthal Oct 24, 2019</p> <p>#2017 Group 4 Ruben Acevedo Oct 25, 2019</p> <p>#2016 Group 3 Ruben Acevedo Oct 25, 2019</p> <p>#2022 Group 9 Ruben Acevedo Oct 25, 2019</p> <p>#2011 Grad Group 1 Ruben Acevedo Oct 25, 2019</p>	<p>#2036 AJBACOT_Shell Alexis Jordan Bacot Oct 29, 2019</p> <p>#2075 ND Filter Bracket Zicong Bai Oct 31, 2019</p> <p>#2105 Panasonic G9 Battery Hol... Zicong Bai Nov 1, 2019</p> <p>#2124 ehickman Training Print Elliott Graham Hickman Nov 5, 2019</p> <p>#2122 ehickman Training Print Elliott Graham Hickman Nov 5, 2019</p> <p>#2102 Plate Holder Adapter Colin M Gore Nov 5, 2019</p> <p>#2136 Daniel test print Daniel Walker Nov 6, 2019</p> <p>#2134 Daniel test print Daniel Walker Nov 6, 2019</p> <p>#2145 Marker Design Project Vsevolod Zhuravskiy Nov 8, 2019</p> <p>#2140 Rocket Pencil Holder- Tra... Neil Chandra Agrawal Nov 8, 2019</p> <p>#2163 Garvey Prusa Training Garvey Prusa Training Nov 11, 2019</p>

Step 1 — New scanning request recieved



- All new scanning requests are entered by customers in PaperCut.
- If customers email the helpdesk to inquire about making a 3D scanning request, direct them to Papercut

Step 2 — Feasibility review



- Send a customer a message evaluating the feasibility of their scan
- Highlight any features on the object that may not be possible to scan, or may require extra/unusual post processing steps
- Do not immediately give an estimate! We will do this in a later step based on the guide to making estimates here: <[3D Scanning: Quoting](#)>.

Step 3 — Opening Jira Task

The screenshot shows the Jira 'Create Issue' form on the left and a sample email template on the right.

Jira 'Create Issue' Form:

- Project:** 3D Scanning (SCAN) (highlighted with a red box)
- Issue Type:** Task (highlighted with a blue box)
- Summary:** PC2165 (highlighted with an orange box)
- Attachments:** Drop files to attach, or browse.
- Due Date:** 01/01/2024 (highlighted with an orange box)
- Description:** Description of part to scan (highlighted with a green box)
- Assignee:** Unassigned (highlighted with a blue box)
- Priority:** Medium
- Labels:** (empty)
- Original Estimate:** 1 day (highlighted with a blue box)
- Remaining Estimate:** (empty)

Sample Email Template:

Hi [Sample Customer],

We estimate your scan will take 4.5 hours to scan and post process, and cost a total of \$112.50 at \$25.00 per hour. Before we proceed, please confirm that this estimate is acceptable and you feel comfortable with us continuing with the scan.

Best,
Eli Fastow

Hi [Sample Customer],

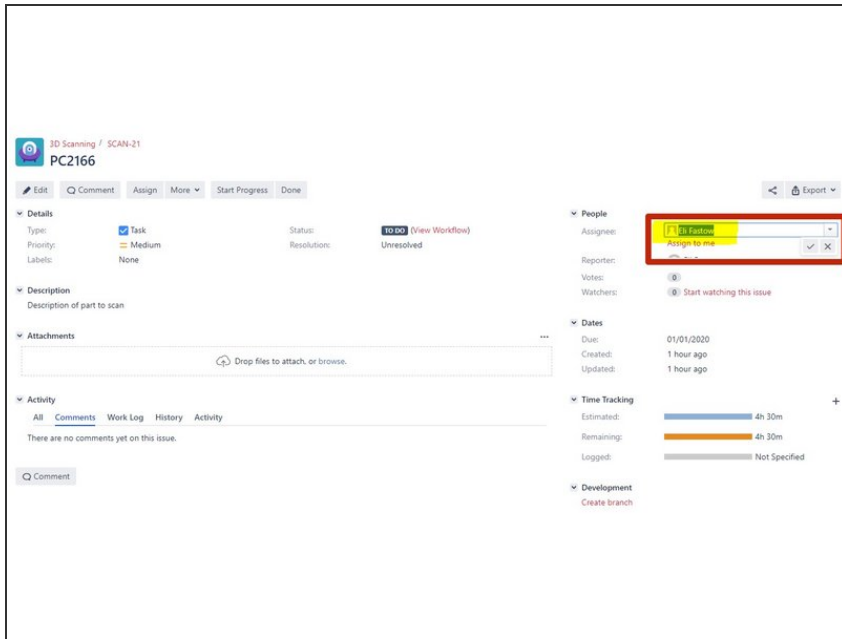
Thank you for your scanning request! We can scan your object and send you a .stl or cad file, though the latter typically takes longer.

However, we do anticipate some trouble scanning (notable challenging features). Scanning this features with a high degree of dimensional accuracy may [take more time/not be possible]. Please let us know if this is acceptable and we can send you a quote.

Best,
Eli Fastow

- Open a Jira task corresponding to the Papercut scan request in the project "3D Scanning". This is how we track the work our technicians perform on the scanning project.
- Name the new Jira task after the Papercut request number, and set the deadline to match the deadline given by the customer.
- Do not list an assignee
- List the estimated time in accordance with the guide to quoting here: < [3D Scanning: Quoting](#)>. Message the customer both the estimated time and cost.
- Make sure to describe the object to scan in detail. The future assignee will use this description when proceeding with the scan, and we'd rather not bother the customer for the same information twice
- Message the customer in Papercut to detail their quote. Clearly state both the time we estimate and the price.

Step 4 — Assigning the Scan



- After creating the jira task, message the LC or Scanning Equipment Specialist on slack with the link to the jira task, due date for the scan, and a brief assessment of the scan difficulty.
- The LC will assign the project to a scanning technician

Step 5 — Scanning in Progress

The left screenshot shows the Jira issue details for 'SCAN-21'. The 'Time Tracking' section displays a progress bar with the following values: Estimated: 4h 30m, Remaining: 2h 24m, and Logged: 2h 6m. A red box highlights the 'Log Work' button. The right screenshot shows the 'Log Work: SCAN-21' dialog box. The 'Time Spent' field is set to '2h' and is highlighted with a red box. The 'Work Description' field contains the text 'Description of work completed' and is highlighted with a green box. The 'Remaining Estimate' section shows options to 'Adjust automatically', 'Use existing estimate of 4 hours, 30 minutes', 'Set to', or 'Reduce by'.

⚠ Do not start work on the job until the customer confirms, in writing, that they accept the cost of the scan as quoted

- Reserve all scanning time on <http://tw-schedule.umd.edu/>
- Move the job in Papercut to the "Scanning" bin
- In Jira, press the plus button next to "Time Tracking" to log work
- Log all work, both scanning time and post-processing time, in Jira
- Clearly describe all of the progress completed in the "Log Work" window
- **i** The folder <[JIRA](#)> has a set of guides outlining jira usage in greater detail

Step 6 — Revising Estimates

Edit Issue : SCAN-21

Summary: PC2166

Issue Type: Task

Component: None

Attachment: Drop files to attach or browse.

Due Date: 01/01/2020

Description: Description of part to scan

Assignee: Eli Fastow

Priority: Medium

Labels:

Original Estimate: 4h 30m

Remaining Estimate: 1h 30m

Comment:

#2186 - Sample Scanning Request

Due date: Jan 1, 2020

Comments

Customer Reply Internal Note

Reply to Eli Jared Fastow

Post

Eli Jared Fastow a few seconds ago

Hi [Sample Customer],

Unfortunately, some features in your object proved more difficult and time consuming to scan than we initially estimated. We have already taken approximately 3 hours to scan, and will not be able to produce a complete scan of your object in the remaining 1.5 hours of the original estimate. We estimate that producing a complete scan will require 3 more hours, for a total time of 6 hours and a total cost of \$150. Please let us know if this revised estimate is acceptable. If not, please let us know which features to prioritize capturing in the remaining 1.5 hours of our original quote. Best, Eli Fastow

Eli Jared Fastow 38 minutes ago

Hi [Sample Customer],

We estimate your scan will take 4.5 hours to scan and post process, and cost a total of \$112.50 at \$25.00 per hour. Before we proceed, please confirm that this estimate is acceptable and you feel comfortable with us continuing with the scan.

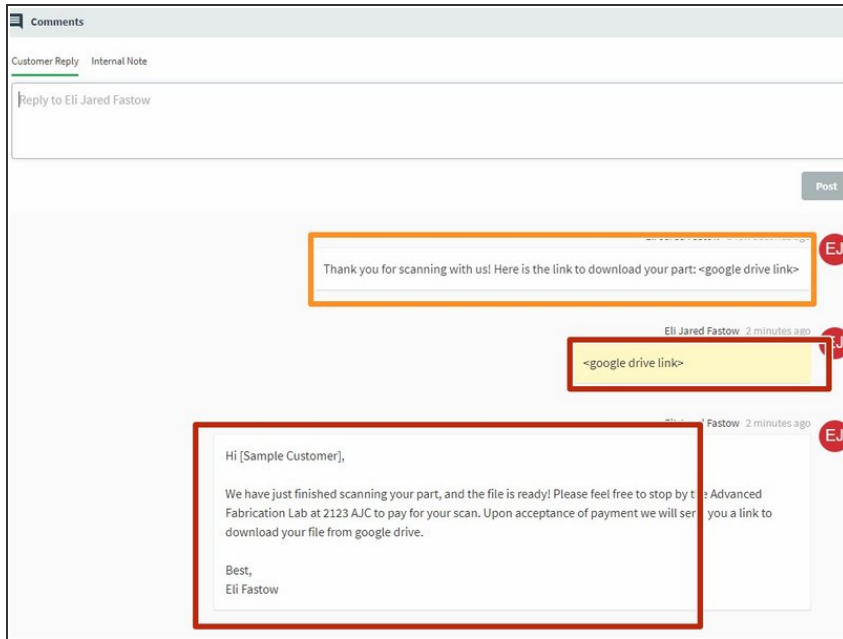
Best,
Eli Fastow

- At 80% of the estimate (e.g. after 4 hours of a 5 hour job) evaluate the progress of the scan
- If the scan is nearly complete, finish the job and deliver to the customer as specified in future steps.
- If the scan is not nearly complete, create a new estimate for the remaining time.
- Edit the "Remaining Estimate" in Jira to reflect this new estimate
- Message the customer with the new estimate and new cost.

⚠ Do not proceed with the scan until they confirm the new time.

- If the customer does not accept the new estimate, ask for key features to capture with the remaining time in the original estimate

Step 7 — Delivering the Scan



⚠ Do not just send the client the files produced from the scan!

- Save the output file on the network drive and in the shared TerrapinWorks google drive
- Send a message to the client informing them of their completed scan, and place a link to the google drive in the internal comment
- Once the customer pays for their scan, comment again with the link to the google drive file
- Mark the Jira task as done and the Papercut request as picked up