

# UnBox3D TestRail Report – Snapshot 3

Alexander Ramirez  
Vivian Casas  
Jacky Lim  
Nicholas Sisneros  
Vince Wang

## 1 Overview

Snapshot 3 adds:

- Bounding-box filtering to remove small mesh parts.
- Mesh simplification using Blender’s decimation modifier.
- Retesting of all Snapshot 2 functionality.

This test cycle validates model processing and ensures rendering remains stable following geometry modifications.

## 2 Test Environment

- OS: Windows 10/11
- Blender installed
- OpenTK/OpenGL rendering
- Snapshot 3 build

## 3 Test Cases

| ID      | Title                      | Preconditions   | Steps        | Expected Result               | Re- |
|---------|----------------------------|-----------------|--------------|-------------------------------|-----|
| TC-3-01 | Regression:<br>Launch + UI | Build installed | Launch app.  | UI loads successfully.        |     |
| TC-3-02 | Regression:<br>port        | Im- Valid .obj  | Import file. | Imports and renders normally. |     |

| ID      | Title            |             |  | Preconditions         | Steps   | Expected Result                                     |
|---------|------------------|-------------|--|-----------------------|---|---|
| TC-3-03 | Small Parts Re-  | moved       |  | Multi-object scene    | 1. Import scene 2. Apply filter                 | Small objects removed based on threshold.           |
| TC-3-04 | Filter Threshold |             |  | Filter adjustable     | 1. Import 2. Raise threshold 3. Lower threshold | Higher threshold removes more, lower removes fewer. |
| TC-3-05 | Filter Disabled  |             |  | Filter off            | Import scene                                    | No filtering occurs.                                |
| TC-3-06 | Mesh Decimation  |             |  | Blender installed     | 1. Import mesh 2. Apply decimation              | Polygon count reduced.                              |
| TC-3-07 | Blender Missing  |             |  | Blender missing       | Trigger decimation                              | Clear error; app does not crash.                    |
| TC-3-08 | Combined         | Performance |  | Scene loaded          | Filter → Decimate                               | App stays responsive.                               |
| TC-3-09 | Camera           | Interaction |  | Processed mesh loaded | Move camera                                     | Camera interacts properly.                          |

## 4 Test Run Results

| ID      | Result | Tester            | Notes                               |
|---------|--------|-------------------|-------------------------------------|
| TC-3-01 | Passed | Vivian Casas      | UI stable.                          |
| TC-3-02 | Passed | Nicholas Sisneros | Rendering unchanged.                |
| TC-3-03 | Passed | Alexander Ramirez | Small parts removed correctly.      |
| TC-3-04 | Failed | Jacky Lim         | Slider lacks visible numeric value. |
| TC-3-05 | Passed | Vince Wang        | Correct behavior.                   |
| TC-3-06 | Passed | Vivian Casas      | Polygon count reduced 50%.          |
| TC-3-07 | Passed | Jacky Lim         | Error message readable.             |
| TC-3-08 | Passed | Nicholas Sisneros | Slight CPU spike but stable.        |
| TC-3-09 | Passed | Vince Wang        | Camera works smoothly.              |

## 5 Metrics

- Total Tests: 9
- Passed: 8
- Failed: 1

- Pass Rate: 88.9%

## 6 Conclusion

Snapshot 3 confirms stable model manipulation via filtering and decimation, with only minor UI improvements needed.