

How to Create a 3D Model from Scanned Data in 5 Easy Steps



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Abstract



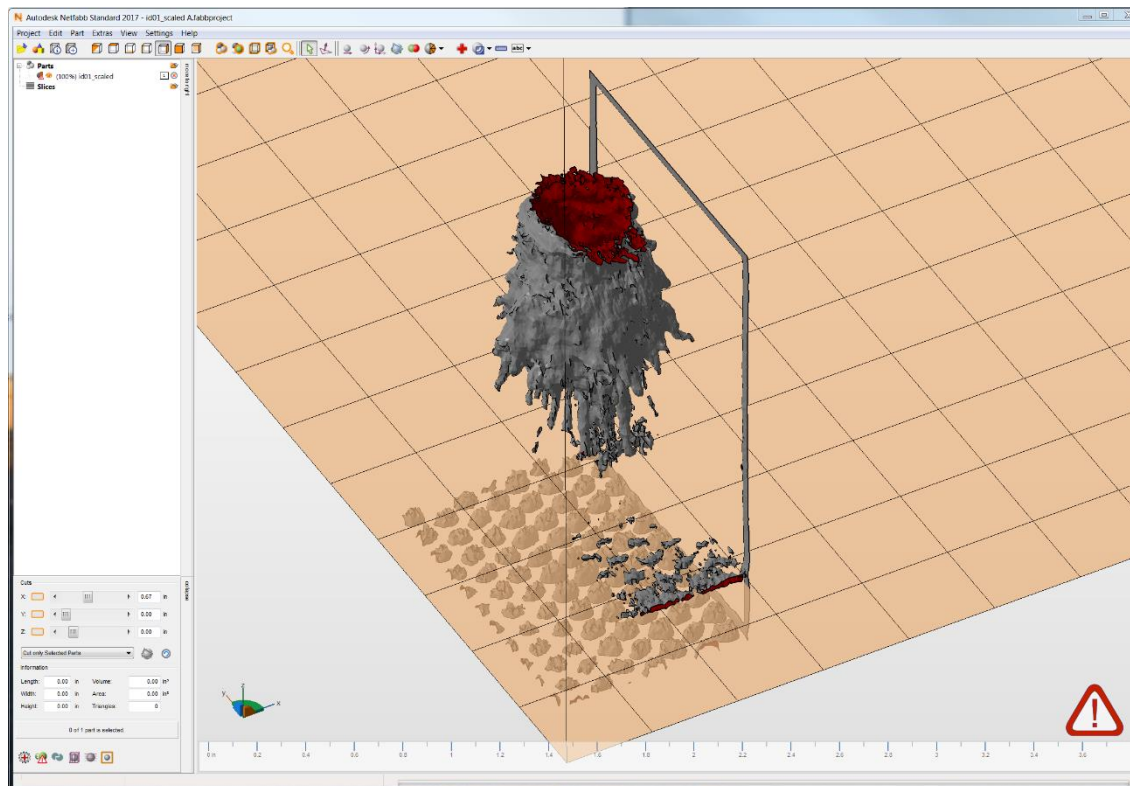
Additive manufacturing is a cost effective way to generate copies of damaged parts for demonstrations. Integrating scanned data of a damaged area into an existing model may be challenging. However, using the relatively inexpensive Nettfab software (from one can generate a "watertight" model that is easy to print.



Step 1: Scan Data of Damage



- Example of Scanned Data saved in a STL (Standard Tessellation Language) Format

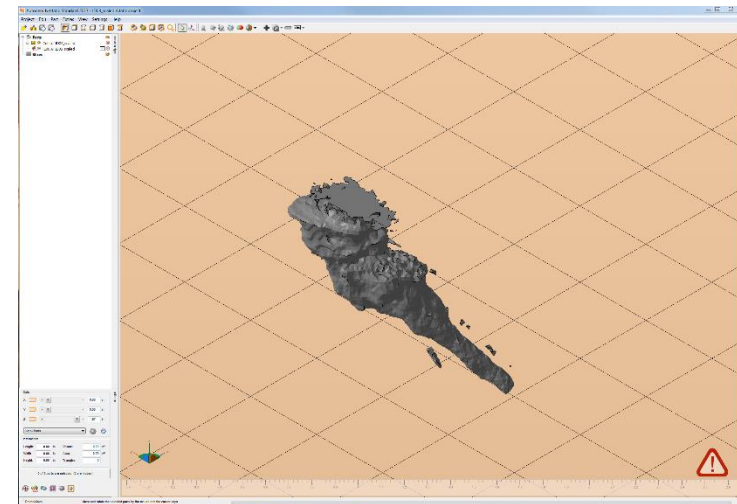
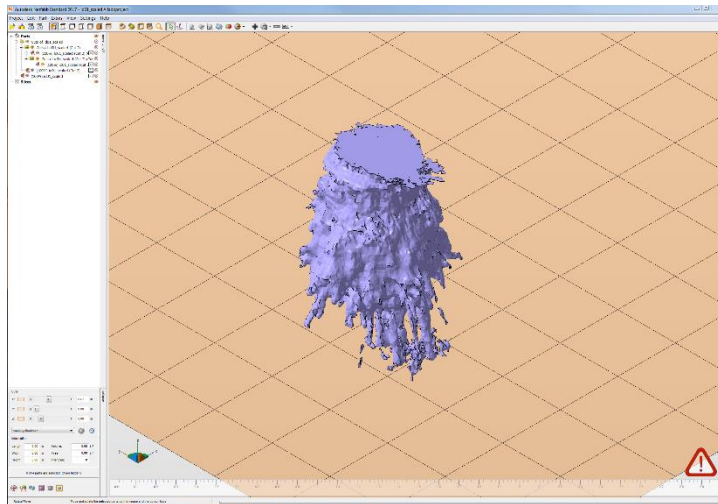
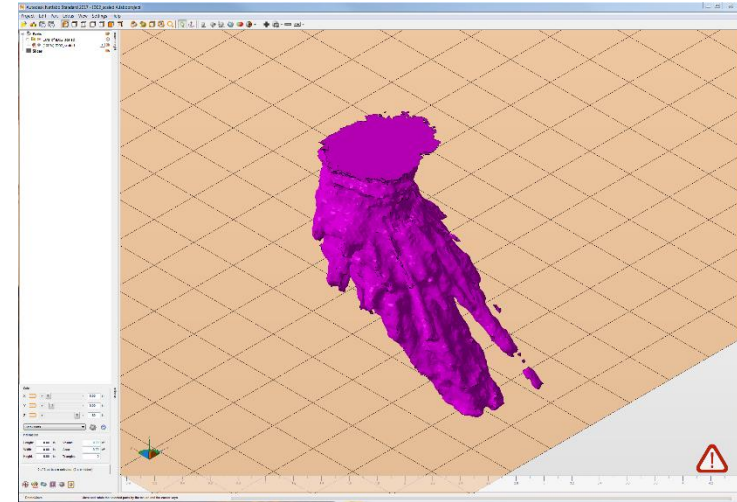




Step 2: Import Data into Nettfab and Make Repairs



Imported data is cleaned up and holes filled in so that the damaged area is now one solid model or "watertight".





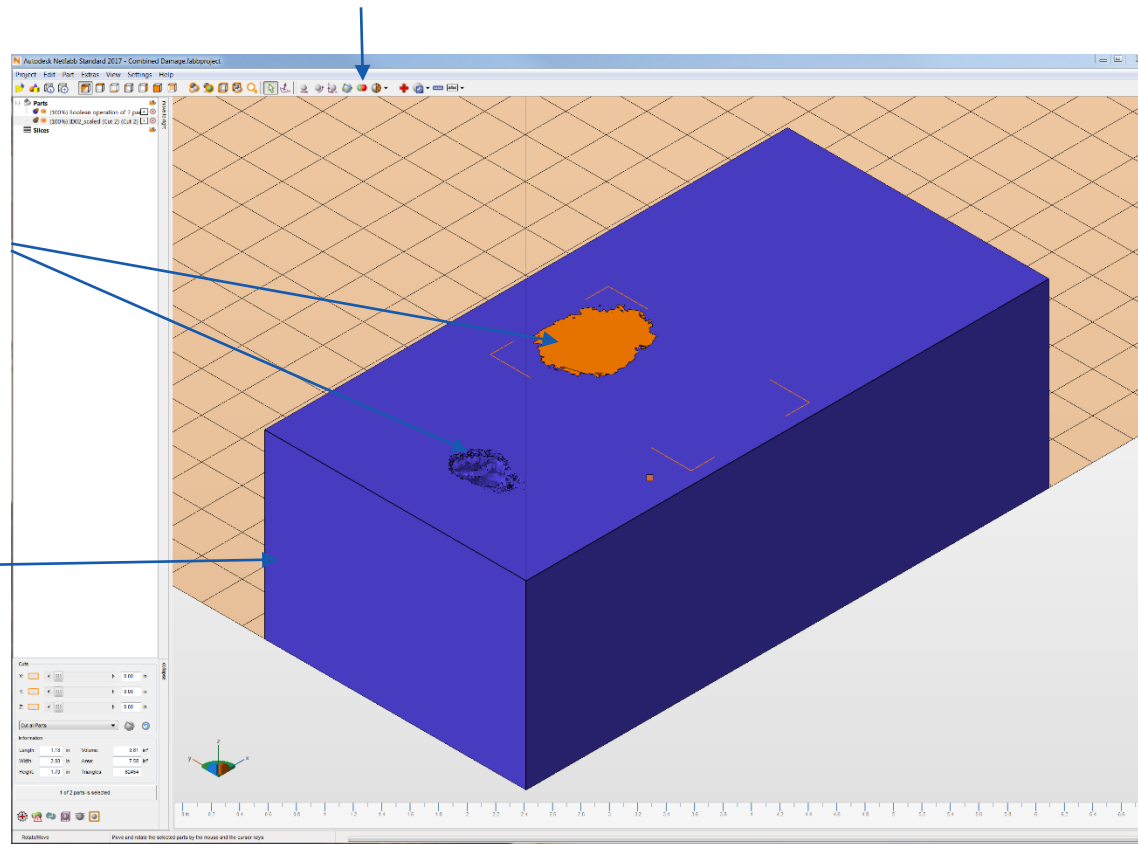
Step 3: Combine the "Repaired" Scan with the Desired Model



Nettfab's Boolean function subtracts the scanned damage from the target part

Scanned Data

Model

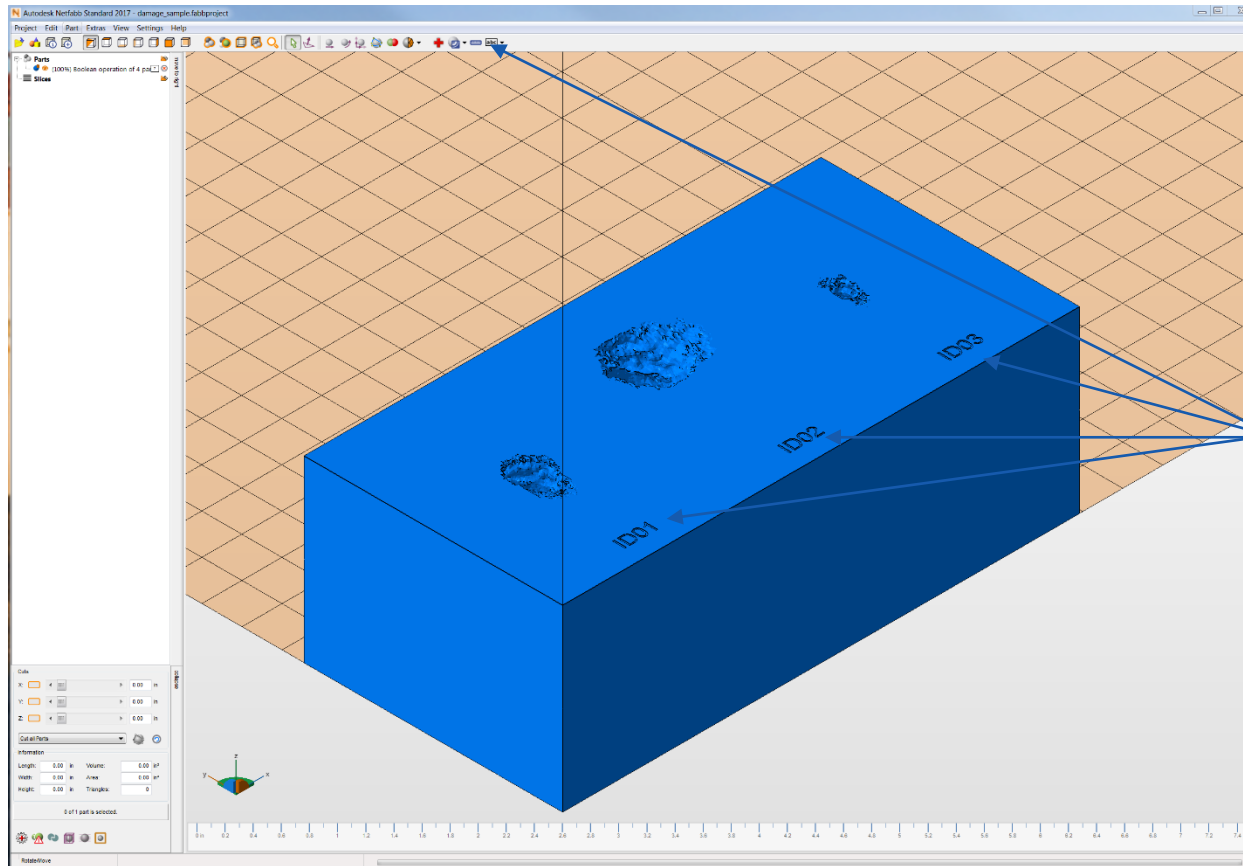




Step 4: Generate a New STL File



Export a new stl model file of the damaged part



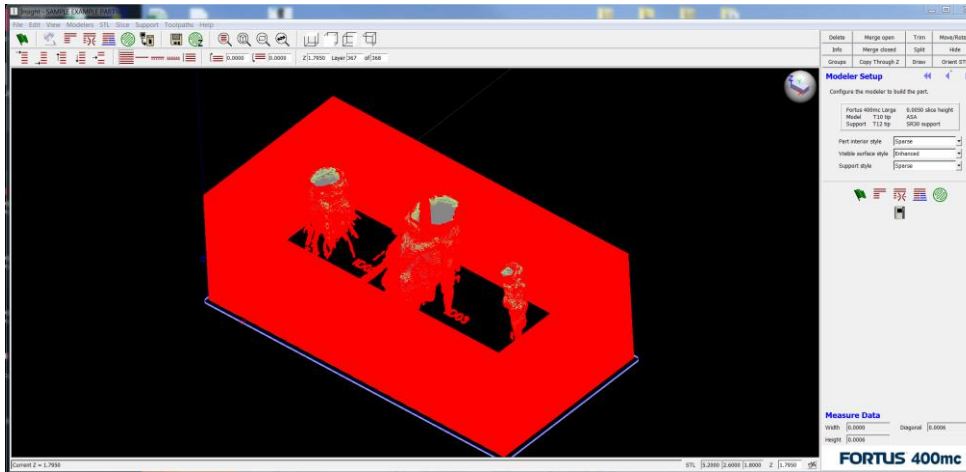
Nettfab also allows one to add text



Step 5: Print the Part



Processed STL Model in Insight Software



Example Prints from a Stratasys Fortus 400mc
Slice height of .005" Model Material - ASA





Questions?

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