DIY Scanners

What is a 3D Scanner?

From https://en.wikipedia.org/wiki/3D_scanner :

A 3D scanner is a device that analyses a real-world object or environment to collect data on its shape and possibly its appearance (e.g. color). The collected data can then be used to construct digital three-dimensional models.

What would you use it for?

- Replicating parts from off the shelf purchases

- Reverse engineering parts

- Creating complex 3d models from real world objects not easily designed in CAD software (such as faces or organic objects)

- Fixing broken parts by scanning them and correcting the model

- Preserving objects that may change or degrade over time

Scanify by fuel-3d

Youtube:
Scanify at CES 2015

The Good

- Hand held design allows for unique use cases

- Very fast 0.1 seconds to scan

- Scans colors

- Big scan area 40cm/16" diagonal

- Detailed scans down to 350 microns

The Bad

- Very Costly at $1,490

- Not really DIY, pre-calibrated and ready to work out of the box

- Takes scan from only 1 vantage point at a time

Pixelio by smart3d

Vimeo:
Indie Go Go Campaign Video

The Good

- Inexpensive at less than $199

- Works with any smart phone or GoPro camera

- Can be used to take panorama pictures or 3d images

- Is also a wireless charger

The Bad

- Also not DIY

- Not a complete product – you bring the camera

Eora 3D

Youtube: Sample Scan of a cup

The Good

- Works with any smart phone
- Less than 100 micron precision

The Bad

- Not out yet, no sense of when it will be
- No idea on cost
- Very little detail about the product on their site
- Not DIY

Atlas 3D by Murobo

Youtube: Atlas 3D Kickstarter video

The Good

- Open Source/Open Hardware

- Kit is reasonable at $229

- You can save $20 by providing your own Pi

- Can control it through a web browser, no software installs

- Parts and an enclosure can be 3d printed

The Bad

- Kit doesn't include the plastic parts, you have to print them yourself

- Not as high resolution as other options at 0.25mm

- Small scan area at 8x6 inches

Ciclop by BQ

Youtube:
Ciclop building instructions

The Good

- Our cheapest contender – kits can be had for $135

- Open Source/Open Hardware

- As DIY as you want – all information on github, parts on thingiverse

- Lulzbot offers the kit as well

The Bad

- Has it's own software that isn't ported to all flavors of Linux

- Resolution is fairly low between 0.3 and 0.5 mm

- Small scan area

So What's next?

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