

“Think Future, Touch Tomorrow.”

Toys In Box Times

Wellesley MA

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ZERO DOLLARS

HELLO, I'M TOYSINBOX TIMES!

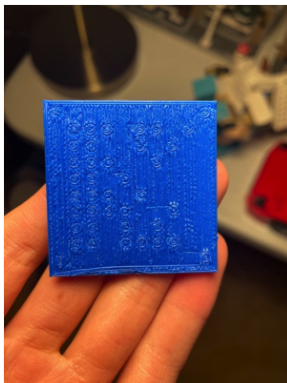
I am an Austin-originated newspaper sold at Toysinbox 3D Printing Store, Toysinbox.com, Toysinbox3DPrinting.com and Toysinbox events at zero dollars. I absolutely adore toys, crafts, books, fun activities, and **ENTREPRENEURSHIP!**

INTERESTING STUDY

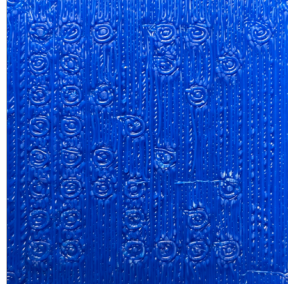
By JOSHUA YANG

Low fidelity 3D Printed ID Codes

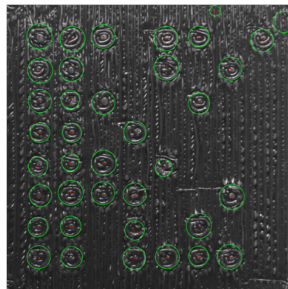
QR codes let us attach digital information (like a link) to real world objects. Recently Joshua decided to explore this idea with 3D printing ... by putting the codes on the bottom of a print! However, QR codes require precision that many 3D printers cannot print at, so Joshua used patterns of rings that a camera can reliably detect. This project is in-works and look at step 4 for the final encoded data (the word "verity"). Now let's jump to the fun!



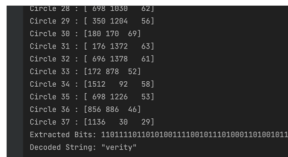
Step 1: Take photo of 3D printed object base with phone camera



Step 2: Use corner dots to "unskew" the square code before sharpening the image



Step 3: Use circular pattern detection to find and mark out the encoding dots



Step 4: Convert dots to bits and decode Reed-Solomon code for fault-tolerant result

ANNOUNCEMENT

By TOYSINBOX PEOPLE

3D Printing Summer Camp



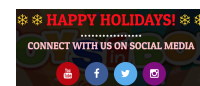
Thinking about summer fun for your kids? How about a 3D printing summer camp? [Click to register!](#)

REVIEW

By TOYSINBOX PEOPLE

Life is better with a Cactus! We have amazing summer helpers to put thread on the 3D printed pattern discs. More eye candies are coming.

Cactus



☺ Are you ready for the fun?

Thanks for Reading and See You Next Month!