Redefining the term "Home Office"

XRobots inspires global audience of makers with Hollywood-caliber creations

XRobots is led by UK-based James Bruton whose interests are as varied as his talents. Bruton's early projects include a bipedal android robot powered by Raspberry Pi, and life size Star Wars props such as R2-D2, C3PO, and Jabba the Hutt. He has since gone on to build boats, full-sized Iron Man suits, visible lasers beams, and much more.

Bruton's creations are made possible through his impressive home workshop that features two LulzBot 3D printers, which he credits for providing a robust, low cost way of making things. Over the years he has garnered a global audience with over 10-million YouTube channel views and tens of thousands of social media followers.
Replicating rare items and antiquities

Bruton used 3D printing extensively when replicating Mr. Fusion from Back to the Future 2. For those unfamiliar, Mr. Fusion is the ‘home energy reactor’ that powers the time traveling DeLorean in the film. While the top of Mr. Fusion is made from a Krups 223A Coffee Grinder, the base is made of entirely 3D printed parts.

The base presents a special challenge because it is modeled after a Singer Librascope, a rare piece of 1960’s-era computer equipment whose last reported sale was for over $700. Bruton notes, “If you got your hands on one of these, you’d hesitate to cut a hole in it.” Instead, he made his own for a fraction of the cost!

“I could pay to cut these parts out of sheet material such as MDF or Foam PVC board, but it's easier to have it precisely made on my LulzBot,” Bruton explains. He continues, “The mechanics are quite tight, so being able to print it with everything in the right place is critical.”
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James Bruton, Creator and Founder, XRobots

Bruton found measurements for the Singer Librascope on a replica prop forum and printed it with approximately $43 worth of filament, plus the negligible cost of acetone to furbish a polished veneer.

**Making life-sized costumes and props**

One of Bruton’s most popular projects is a life-sized Iron Man MKVI costume that he started in 2010. The costume boasts an impressive range of capabilities. For example, he designed a 3D printed Iron Man Arc Reactor that can be easily printed on a desktop 3D printer, like a LulzBot, with common filament materials like PLA or ABS.

Next XRobots will be revisiting a previously completed Giger-style Alien suit project. The original suit was made with latex in plaster molds and fiberglass, however Bruton clarifies these materials are, “messy and time consuming.”

In revisiting the project, Bruton is experimenting printing hybrid flexible and rigid parts. Thanks to LulzBot’s open source hardware, he is using the latest printing materials available in the market and experimenting with cutting edge modifications from LulzBot’s research and development team.
XRobots At A Glance
http://xrobots.co.uk

Industry
Robotics, cosplay costumes and props, electronics

3D printing application
Prototyping and end-use products

Key Challenges
Satisfying 'movie-accurate' props builds while producing high quality video and blog content on a budget

Key Benefits
Ease and affordability of producing custom accurate parts with minimal mess and reduced labor

3D Printing Software tool chain
Autodesk123D, Slic3r, Printrun/Pronterface

Material(s) used to print
ABS, PLA, Ninjaflex

Operating System
Windows 7

For more information on 3D printers, parts and plastics,
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