Makesmith CNC
The Most Affordable Desktop CNC Router
by Bar Smith & Tom Beckett
About Us

Owl’s Nest Café ~2011

UCSC Kresge Graduation 2013
About Us

Bar Smith:
• Electrical Engineering

Tom Beckett:
• History major
• TIM minor
• TIM 80C - Spring 2012
Our Project

Desktop CNC Router:
• **CNC** = Computer Numeric Control
• **Router** = the dremel tool you see
Developing the Idea

• Bar goes to graduate lab one day, sees cool stuff
• Bar comes home and looks online
• Bar finds underserved market: accessible CNC technology
• Bar begins prototyping his own
Going-to-Market

• Clear there was a market
  • Next available at $650
    • Our price: $195
• Looking to start a business after graduating
• Did not want to sacrifice ownership
• ...

Crowdfunding

• All or nothing
• No ownership loss
• Anyone can do it
  • the new / first time entrepreneur's best friend
Crowdfunding Basics

• Minimum funding goal
• Defined campaign duration

• Estimate your costs
• Write a LOT about your project
• Take a LOT of pictures
• Make a video
• Start working long before launching
Crowdfunding for Us

• Kickstarter is the most popular / household name
• Historically good for hardware projects
• Several other CNC machines
• We really liked the “All or nothing.” model
Project Costs

$3.35  shipping of business cards
$15.00  domain name
$21.12  Home Depot testing supplies
  3  lunches for our Video producer
( + some product development)

= ~$75.00 before Maker Faire

... by then already at $40,000
Successfully Funded

- $10,000 minimum funding goal, 30 days
- $82,207 fundraised
- 360 machine backers, 423 total backers
- from 45 different countries
Working at an Early Stage Startup
Official Start: January 2014

• laundromat meeting
February
March

- make free website
- mailing logistics
April

- photograph machine
- build Kickstarter page
- shoot Kickstarter video
May

- launch Kickstarter
- Maker Faire
June

- buy two laser cutters
- Tom quits his job
- Bar graduates college
- conclude kickstarter campaign

- say goodbye to outside world...
June (continued)
July

- move laser cutters into basement
July (continued)
July (continued)

- buy sample parts from suppliers (Alibaba)
August

- bulk purchases of parts (Alibaba)
- form as a LLC
- fill out lots of paperwork
August (continued)

- start laser cutting shifts
  - 16 hour shifts for us, 20 for the cutters
September

- search for workshop
- send Beta kits out
- finish laser cutting
October

• package everything
• move into workshop
• assembly videos
November

- release software (open source)
- release hardware plans (open source)
- ship Kickstarter kits out
Insights from TIM In-Class

• Group Projects: Learn to communicate with people with various communication tools

• Groups Projects: Deliver your deliverables to your teammates

• Start your assignments early

• Be organized / find a system that works for you
Conclusion

• Want to try a low-risk attempt at entrepreneurship?
  • Try crowdfunding!

• You can spend virtually $0 and raise a lot of money, but you'll have to work hard. Be resourceful.

• Put yourself out there and start!
Thank You

Email us at: MakesmithCNC@gmail.com

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Any questions?