SkyCube

A satellite and a small business

SOUTHERN STARS

What is **Sky**Cube?

- 1U CubeSat launched on SpaceX Falcon 9 Q1 2013
- Mission: publicity, education, public outreach
- Takes low-resolution Earth images, broadcasts “tweets” from space
- Deploys 3-meter reflective balloon to make itself visible and end mission cleanly
- Funded by mobile apps, crowdsourcing, social media, corporate sponsorship

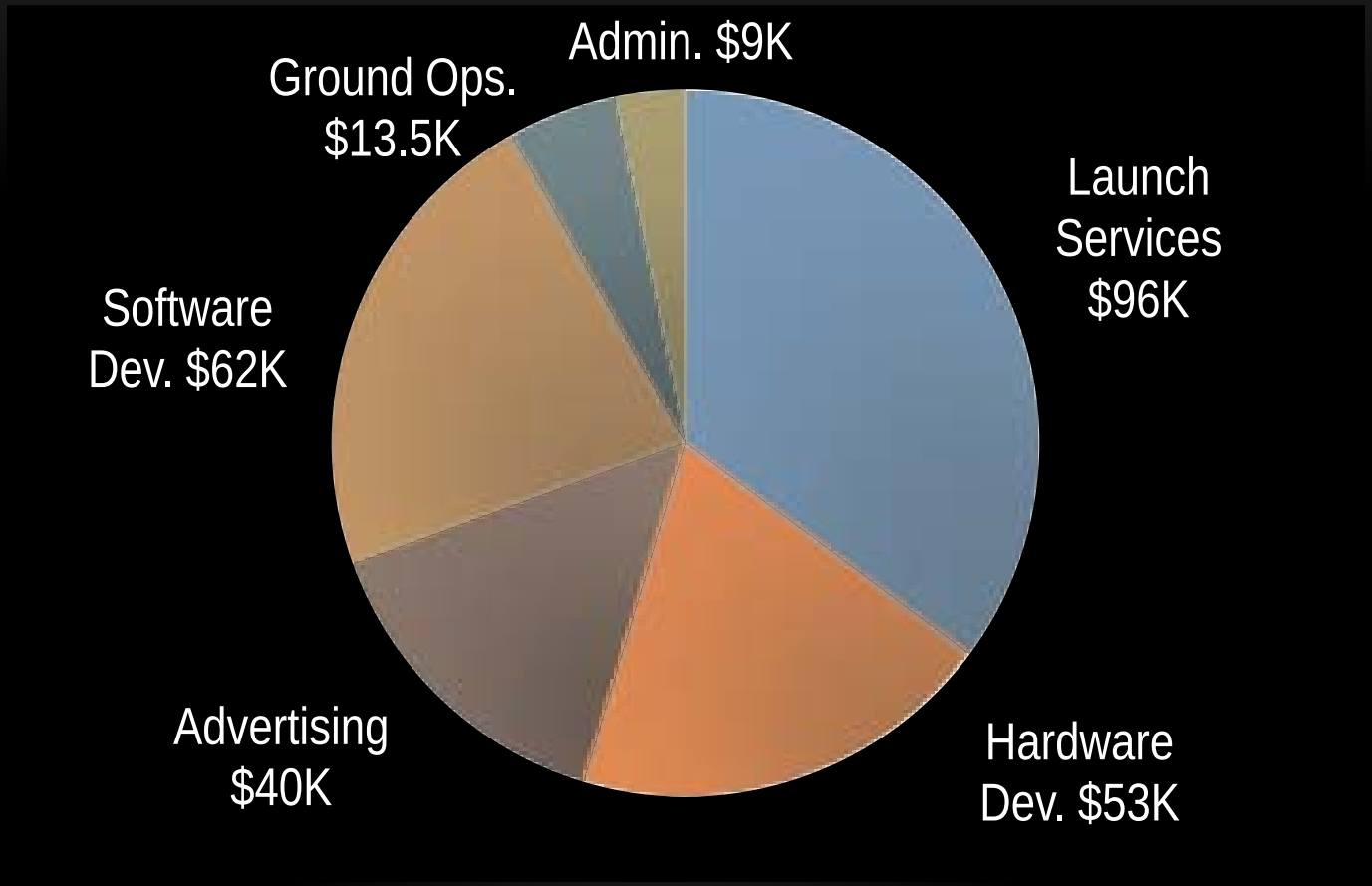
SkyCube: The Launch

- Launch from Cape Canaveral AFS Q1 2013
- Secondary Payload on SpaceX Falcon 9
- Circular orbit at 600 km altitude, 52° inclination
- Primary mission duration: 90 days
- Deliberately de-orbited at end of mission

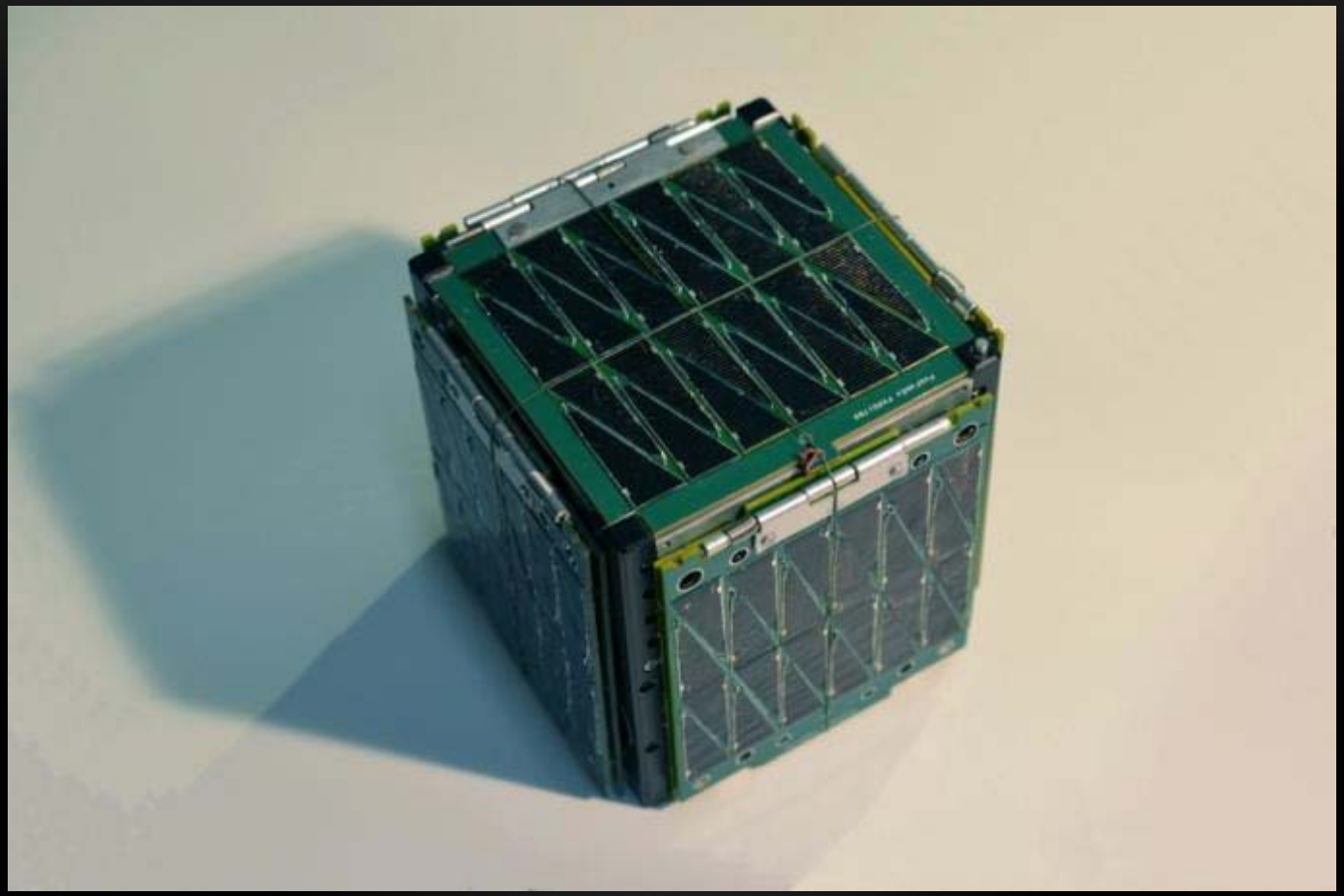
Cost & ROI

2012 - 2014

Program Cost Through Jan 2014: $273K

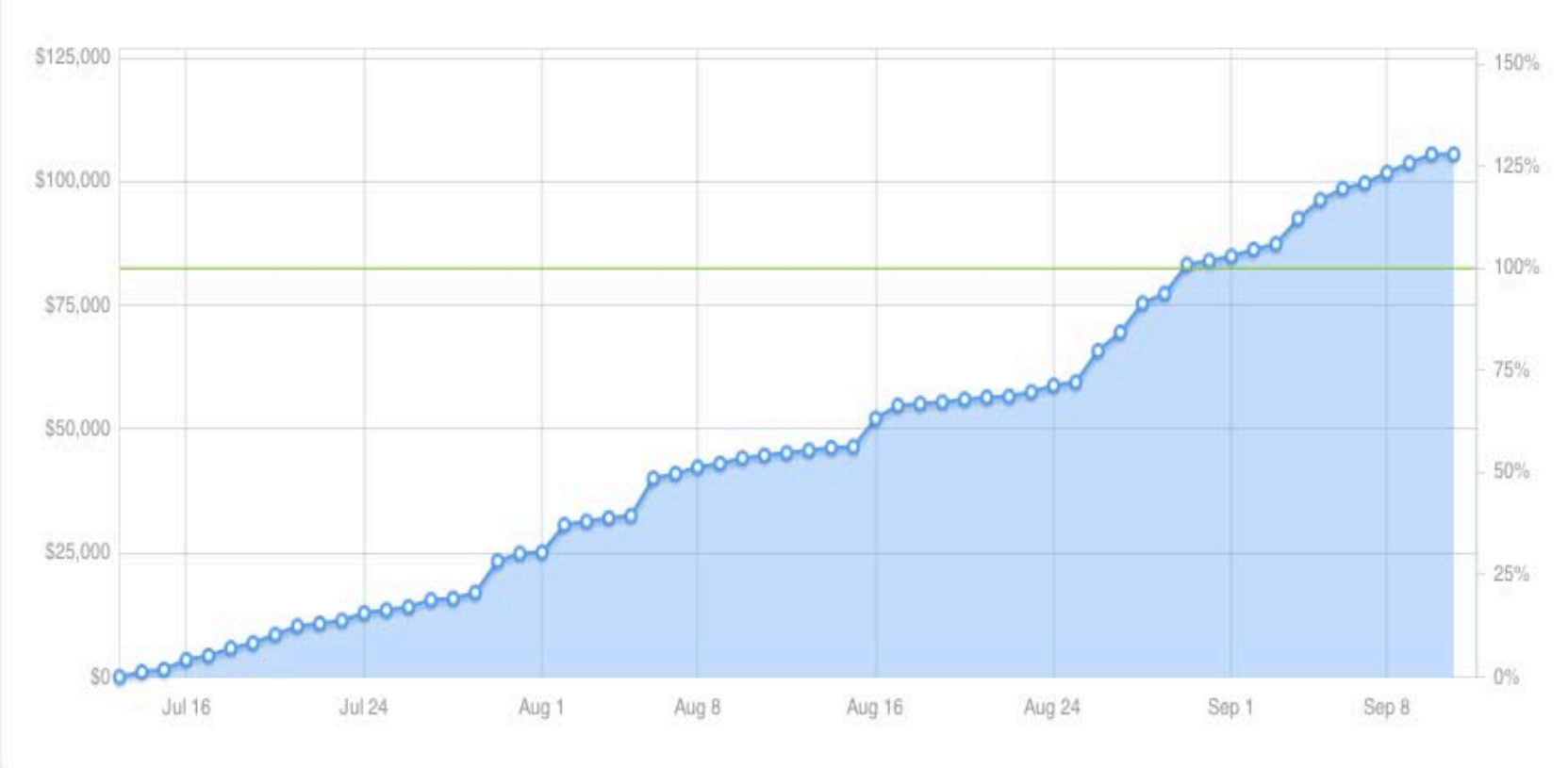


Hardware: COTS & Custom



Communication: US + Saber Astro

Successful SkyCube Kickstarter Raises $117K, 12 Sep 2102



SkyCube: Fundraising Partners

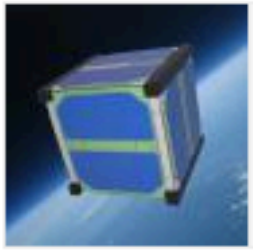
- Coordinated with Southern Stars partners:
  - *MacTech* Magazine ($25K sponsor)
  - Astronomical Society of the Pacific
  - NASA Night Sky Network
  - *Sky & Telescope* Magazine
  - Astronomers Without Borders
- Social Media (Twitter, Facebook, …)
- Celebrity Endorsements (George Takei)

facebook 2 5 18 Search for people, places and things

George Takei · 2,408,995 like this
14 hours ago ·

Like

With all of the excitement around Curiosity on Mars, I thought I'd let you know about the first CROWDFUNDED Satellite project I've heard of. For as little a dollar, you can help launch this SkyCube into orbit and even tweet from space. This fascinating and frankly very cool idea needs just $50K more to happen. Nerds, unite! Let's do this.



SkyCube: The First Satellite Launched by You!
www.kickstarter.com
A nano-satellite that lets you take Earth images and "tweet" from space, then inflates a visible balloon, and de-orbits cleanly.

Like · Comment · Share 1,335

Thomas Hubbard, Richard Merrill, Bill Tschumy and 5,131 others like this.

View previous comments 50 of 325

Space Crowdfunding Goes Big: June 2013

The Future Arrives

2014

Launch: Antares/Cygnus Orb-1, 9 Jan 2014

Cygnus Arrives at ISS, 12 Jan 2014

ISS Deployment: 28 Feb 2014

Deployment, Cont'd: 28 Feb 2014

SkyCube De-Orbit Balloon: Full Size Model

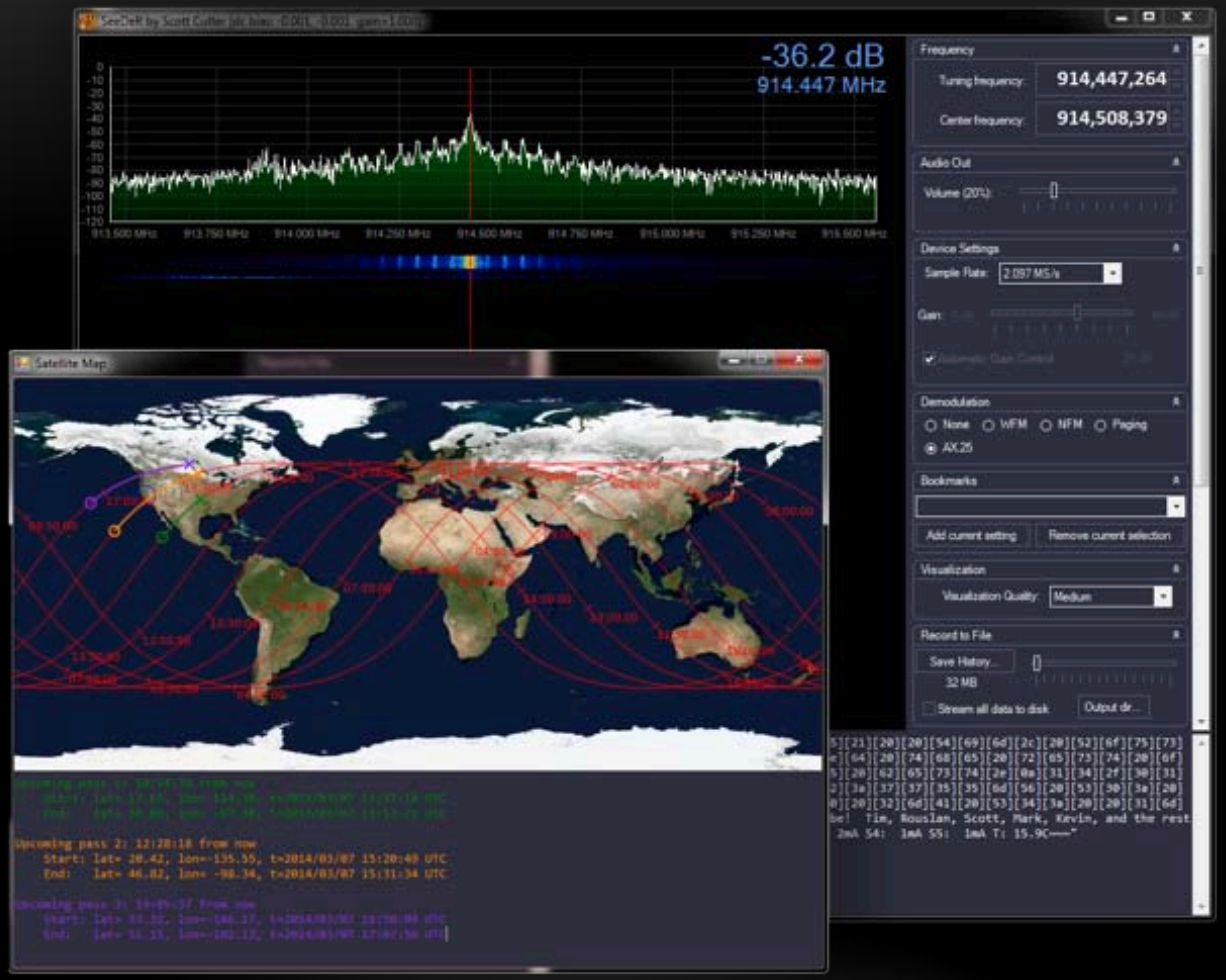
SkyCube Reentry: The Grand Finale!

SkyCube Spinoffs

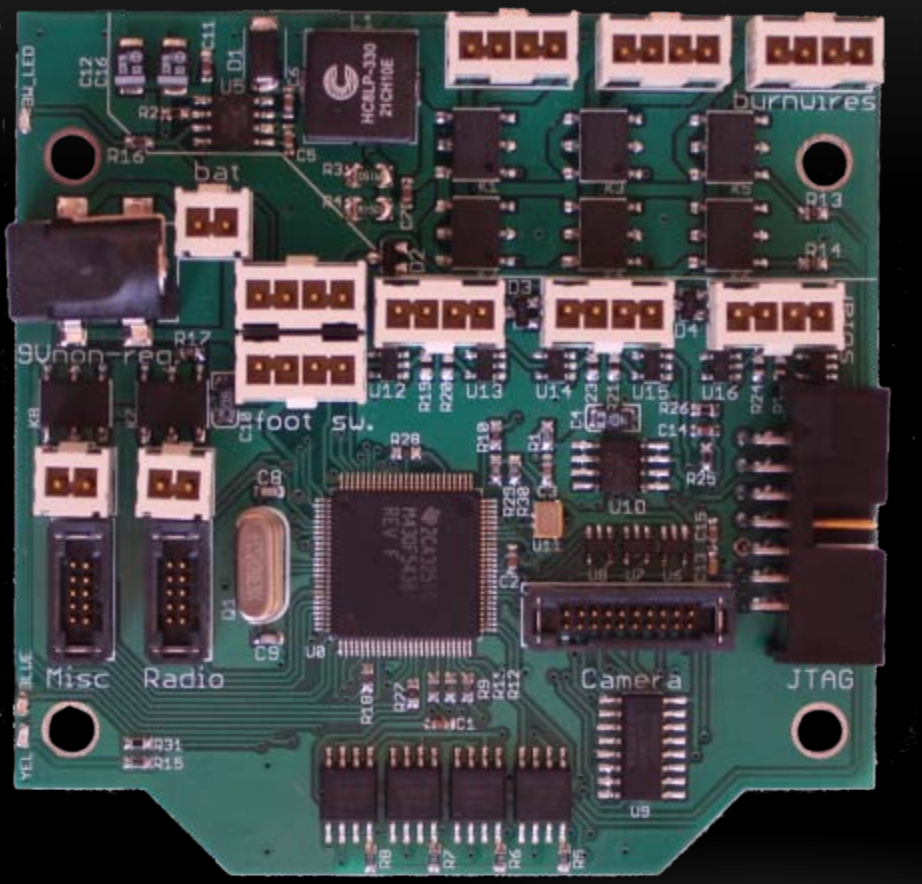
2014 - ???

Satellite Safari app

SeeDeR: Free SDR package for Windows



Unity: SkyCube Flight Mainboard



- Original development
- Combines 4 PCBs into 1
- Combines CDH and EPS
- Single MSP430 @ 20 MHz
- 16 MB flash
- 6 solar inputs, 6 – 18 V
- 6 constant-amp. outputs
- 5 TTL RS-232 ports
- Full-size JTAG connector
- DC power input
- 4 RBF/inhibit inputs
- Reprogram, recharge CubeSat w/o reassembly
- INCLUDES SOFTWARE!

The Team

- Scott Culter
- Rouslan Dimitrov
- Mark Caviezel
- Kevin Brown
- Chris Phoenix