

SpaceGAMBIT Project Proposal Outline

1. Project Title

Project APEX - Asteroid Promotion and EXploration - a follow up program to SPEDCAP

2. Primary Contact

Stephen Murphey

3. Project Summary

Documenting and promoting the Asteroid Grand Challenge to the general public. SPEDCAP will create infographics, animated videos and 1 page handouts describing asteroid hunting, detecting and mitigation.

4. Relevance to SpaceGAMBIT Mission

Creating content for a multi-media website explaining the Asteroid Grand Challenge – threat of asteroids, how we find them, ways to deal with them. Creating engaging, entertaining and educational content will help promote space exploration and asteroid detection to the general public.

5. Project Description

Project SPEDCAP is designed to create engaging content that will inspire the general public to support and participate in space exploration. We break down complex the complex technology and science used in space and create easy to digest multimedia content (articles, videos, infographics and handouts) and promote both online and offline.

To support the Asteroid Grand Challenge, SPEDCAP proposes to create a series of infographics, animated videos and 1 page handouts to promote asteroid hunting (and it's importance). We have already used this approach to promote cubesats (see the below examples)

INFOGRAPHIC: <http://www.diyspaceexploration.com/what-can-you-do-with-a-cubesat/>

VIDEO: <http://www.diyspaceexploration.com/what-can-you-do-with-a-cubesat-video/>

By animating the graphics from the Infographic rather than starting from scratch, we can quickly

and affordable create multiple types of content. Additionally, we provided 1500 copies of our “What is Open Source” handout to the 2013 Open Hardware Summit. Infographic provided below for informational purposes. New content would follow the same style.

All videos will be posted on our You Tube channel (View existing animated infographics) <https://www.youtube.com/user/diyspaceexploration>

WHAT IS OPEN SOURCE HARDWARE?

Physical item whose source files have been **OPENLY SHARED** with the world and can be **FREELY COPIED OR MODIFIED**.

Anyone can **STUDY, MODIFY, DISTRIBUTE, MAKE** and **SELL** the design or hardware based on that design.

Open source hardware gives people the freedom to **CONTROL** their technology while **SHARING** knowledge and **ENCOURAGING** commerce through the open exchange of designs.

Sharing designs allows **RAPID INNOVATION** on a global scale

DON'T REINVENT THE WHEEL, anyone can reuse and improve on Open Hardware designs

Popular Open Source Hardware Designs

- Electronic prototyping platform
- Open Source Satellite
- 3D printer
- Volunteer Space Program

DIY
SPACE EXPLORATION
www.DIYSpaceExploration.com

6. Methods and Implementation Plan

a. Objectives

Publish a comprehensive set of infographics, printed handouts and animated videos to explain asteroid hunting and provide information to help the general public participate in asteroid research. Second objective is to provide a class for kids under 12 on “How to Solder.”

b. Tasks

Create content based on the following topics. This includes both an infographic and an animated video.

1. What is the Asteroid Grand Challenge
2. How to become an asteroid hunter
3. How to detect an asteroid
4. How to track an asteroid
5. How to characterize an asteroid
6. Common asteroid detection problems and how to avoid them
7. Where to look for asteroids
8. Asteroid Databases

Host a “How to Solder” class for kids 12 and under at the Makelab Charleston for 30 kids.

c. Time allocation

Designing Content: 20%

Graphic Design: 30%

Video Animation: 40%

Project Management: 10%

d. Milestones and Deadlines

All work will be completed by August 30th, 2014

Infographic design will be completed by July 31st, 2014

Video animation will be completed by August 30th, 2014

How to Solder Class for kids will be completed by August 30th, 2014

7. Team, Hosting and Partner Organizations

Primary Instigator: Stephen Murphey

Stephen is the founder of DIY Space Exploration, LLC and graduated with his Bachelors in Aerospace Engineering from Embry-Riddle Aeronautical University in 2003 and worked for Spectrum Astro (Now owned by Orbital Sciences). As a Mechanical Engineer he was responsible for the design, fabrication and testing of a number of projects. In 2009, he earned his MBA in Marketing from the W. P. Carey School of Business at ASU. Stephen has spent the last several years working for and advising technology startups. He actively promotes Open Hardware and space technology and has spoken at the Open Hardware Summit. Steve is involved in NASA's Space Apps challenge and blogs for MAKE Magazine.

<http://diyspaceexploration.com>

<http://blog.makezine.com/author/stephenmurphey/>

<http://open.nasa.gov/blog/2012/10/24/open-hardware-summit-2012/>

<http://stephenmurphey.com/>

Graphic Designer: Adriana Danaila

Adriana is a self taught graphic artist who specializes in technology design. She has created infographcs for various NGO's, marketing agencies, and corporations.

Video Animator: Andrej Vujicic

Andrej is a motion graphic designer and stock photographer with almost 20 years of working experience in digital graphics industry. He started his career in television, in motion graphic design and 3D animation. His photo work is present at every major microstock agencies (iStockphoto, Shutterstock, Dreamstime, Fotolia...).

<http://solarisdesign.co/>

Partner Organization: **Makelab Charleston**

Located in Charleston, South Carolina - Makelab Charleston is a makerspace for hobbyists and professionals.

<http://makelabcharleston.org/>

8. Budget

Graphic Design: What is the Asteroid Grand Challenge	\$200.00
Video Animation: What is the Asteroid Grand Challenge	\$400.00
Graphic Design: How to become an asteroid hunter	\$200.00
Video Animation: How to become an asteroid hunter	\$400.00
Graphic Design: How to detect an asteroid	\$200.00
Video Animation: How to detect an asteroid	\$400.00
Graphic Design: How to track an asteroid	\$200.00
Video Animation: How to track an asteroid	\$400.00
Graphic Design: How to characterize an asteroid	\$200.00
Video Animation: How to characterize an asteroid	\$400.00
Graphic Design: Common asteroid detection problems and how to avoid them	\$200.00
Video Animation: Common asteroid detection problems and how to avoid them	\$400.00
Graphic Design: Where to look for asteroids	\$200.00
Video Animation: Where to look for asteroids	\$400.00
Graphic Design: Asteroid Databases	\$200.00
Video Animation: Asteroid Databases	\$400.00
1 year of hosting - Pressable	\$540.00
Project Administration	\$534.00
	\$5,874.00

9. Project Deliverables

The following content will be created and posted online under a Creative Commons license in both an infographic form and animated video.

1. Infographic: What is the Asteroid Grand Challenge
2. Video Animation: What is the Asteroid Grand Challenge
3. Infographic: How to become an asteroid hunter
4. Video Animation: How to become an asteroid hunter
5. Infographic:How to detect an asteroid
6. Video Animation: How to detect an asteroid
7. Infographic:How to track an asteroid
8. Video Animation: How to track an asteroid
9. Infographic:How to characterize an asteroid
10. Video Animation: How to characterize an asteroid
11. Infographic:Common asteroid detection problems and how to avoid them
12. Video Animation: Common asteroid detection problems and how to avoid them
13. Infographic:Where to look for asteroids
14. Video Animation: Where to look for asteroids
15. Infographic:Asteroid Databases
16. Video Animation: Asteroid Databases

How to Solder class for kids 12 and under - 30 attendees at Makelab Charleston