
eyefly

The EyeFly Team

Team: Y-Prize 2014 Finalists for Eyefly

Michael Gromis: **Market Research**

- Drone Localization at GRASP Lab
- Plugged into the entertainment industry

Bahram Banisadr: **Mechanical Engineering**

- NASA: Curiosity Mars Rover robot vision
- Constructed bipedal walking robot for research project

Jeff Grimes: **Software & Artificial Intelligence**

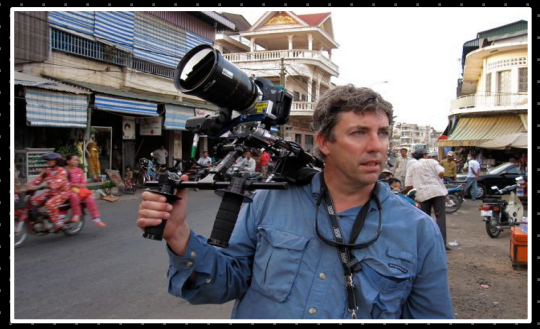
- Google Product Management
- Facebook Software Engineering

Mentors and Industry Contacts

Ashton Kutcher, Actor, A-Grade Investments

John Davis, 20th Century Fox

Stacey Snider, 20th Century Fox



Shane Hurlbut, Cinematographer, *Terminator Salvation* (2009), *Need for Speed* (2014)

Greg Foster, IMAX

Pain Points of Filming

1

Creativity

- Camera's are restricted by their stationary nature
- Currently, filming with drones is imprecise due to manual control, preventing close interaction with the set and limiting filming to the wide outdoors

2

Timeline

- Movies are constrained by timelines and experience many delays in filming
- Depending on multiple tools such as helicopters, rigs, and cranes to perform certain dynamic or aerial shots causes delays

3

Costs

- Costs add up when a combination of rig, crane, and helicopter systems are required to film single shots
- Helicopters are overkill for shooting movies

Introducing EyeFly

EyeFly is an intelligent hexrotor-mounted camera system that provides precise and fluid footage unattainable by remote-controlled drones.

EyeFly eliminates the need for helicopters, large cranes, and truck riggings.

EyeFly is controlled by one trained operator who specifies shooting instructions; with various onboard sensors, subsequent navigation (e.g. obstacle avoidance) is autonomous.

1

Creativity

- Omnidirectional precision
- Drone swarm capability

2

Timeline

- Rapid deployment
- Removes dependency on multiple filming systems

3

Costs

- All-inclusive rentable package

Market Sizing and Competition

Barriers	Solutions
Disruptive nature of the technology and stubbornness of film veterans	• Educating customers about EyeFly's benefits through demonstrations and creating proof of concept material
Safety and related perceptions	• Implementing rigorous safety measures • Safety demonstrations • Promotional efforts emphasize safety
High initial capital expenditure ($10,200 for drone and $40,000 for Vicon)	• Start small and grow • Be as cost efficient as possible
FAA regulations	•http://www.cnet.com/news/faa-eases-barrier-to-commercial-drone-use/ •FAA beginning to ease regulations on commercial drone use

Sizing/Competitive Landscape

2014 average Hollywood movie cost $76.63 million

- Total budget for 441 movies is $33.79 billion

Approximate breakdown of non-marketing film budget

- 55.75% production costs

Breakdown of production values

- 25.9% filming costs
  - 5.37% picture vehicles and related costs

Thus, the total addressable market (TAM) is $33.79 billion * 55.75% * 5.37% = $1.116 Billion in the US annually

- Competitors: Radio Controlled drone filming services such as SkyReel
- Not a threat: Current consumer filming systems such as HEXO+ which provide autonomous Gopro mounted quadrotors lack sophisticated onboard sensors, navigation software, and movie-grade filming quality from an Epic Red Camera or Canon C600

Execution Plan and Costs

6 Months

Develop preliminary flight control software and test drone control

Year 1

Complete alpha product and find alpha testers (indie movies, low production films)

Year 2

Beta testing

Year 3

Capture first customers

Year 4

Improve product and continue growth

Year 5

Create strategic alliances and introduce new products (aerial lighting, sound, noise cancellation)

Projections		Year 1	Year 2	Year 3	Year 4	Year 5
	Labor per person	$50K	$50K	$50K	$50K	$50K
	Employees	6	6	6	8	10
	Cost per unit	$10K	$10K	$10K	$10K	$10K
	New units	1	3	3	5	10
Costs		$310K	$330K	$330K	$450K	$600K
	Base price per day	-	$3K	$5K	$5K	$5K
	Additional unit price	-	-	$1K	$1K	$1K
	Days per film	-	3	5	5	5
	Films per year	-	1	4	22	42
Revenues			$0K	$120K	$660K	$1.26M
Total		($310K)	($330K)	($210K)	$210K	$660K