Satellite Design Project

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The Satellite Design Project (SDP)

- What is the Satellite Design Project
- What have we done in past years
- What we are doing this and next year
Satellite Design Project

- To Design, Build, Test, ”Launch” and Operate a CubeSat whose mission is the demonstrate the detection of Forest Fires in Canada
- A multi year project
- Also participating in the Canadian Satellite Design Project
**CubeSats**

- Concept originated at Stanford University
- Inexpensive way for student projects to access space
- Many required specifications given
- A one U: 10 cm by 10 cm by 10 cm, 1 kg mass
- Many larger variations now exist
- Universities, governments and corporations now building
- Some 500 satellites designed and launched

*Figure 1: Image from NASA*
Launching CubeSats

- Usually launched as secondary or tertiary payloads on ELVs
- Can also be deployed from ISS

Image from “AIS: Technology Development to Commercialization, Dr. Elliott Coleshill”

Image from NASA
Figure 2: Current Configuration
Status

- Prototype thermal camera available for "testing"
- Current have flight computer and flight GPS receiver/antenna
- Procuring portions of the power and communications subsystems
- Conducting vibration testing on the structural model
- Conducting "Flat Sat" electrical/signal flow testing
- Conducting antenna deployment testing
To Do

- Still lots to do
- Build or procure the remaining hardware and software
- Integrate and Test