Zero-G Thinking

Vehicles for gravity-defying ideas

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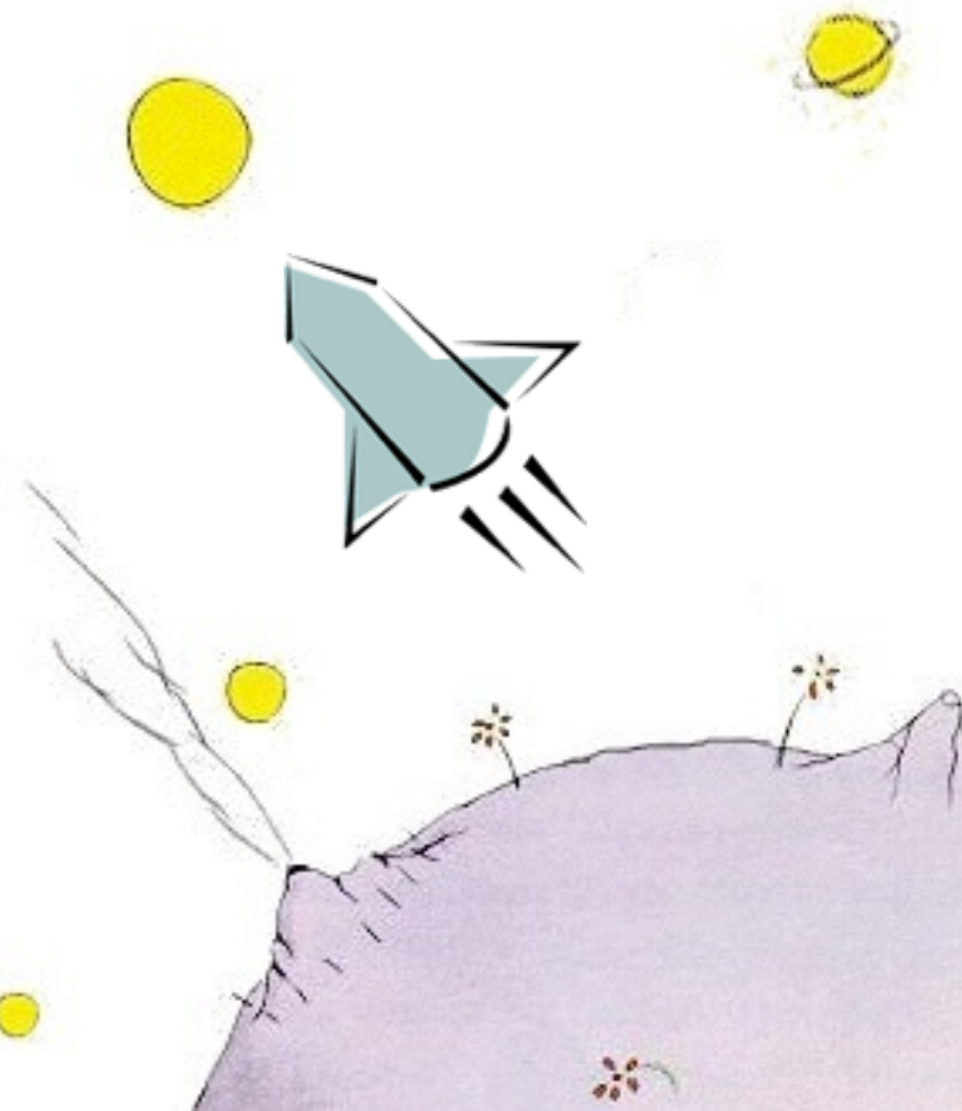Drawings from **Le Petit Prince** by Antoine Saint-Exupéry

We are enchanted by stars
glimmering faintly in the distant sky.

We wish to reach the stars, but we do not know how...

How can we ever reach the stars?

We begin our journey by flying to a nearby planet.

From there, we aim for the next planet...
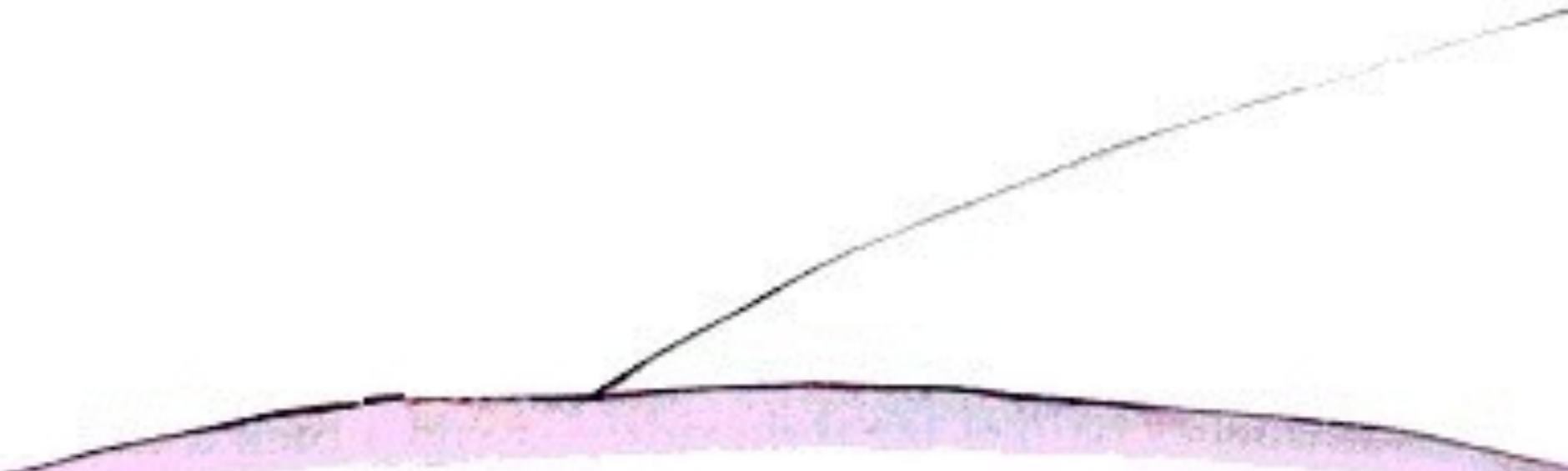and the next... and the next...

Along the way, we may meet others to aid us in our quest.

As we progress on our journey,
we begin to see the stars more clearly.

The final destination may be entirely different from what we have imagined in the beginning.

Vehicles to take us to the stars...

* Sketching

* Physical Mock-Up

* Video Prototyping

* Working Demo
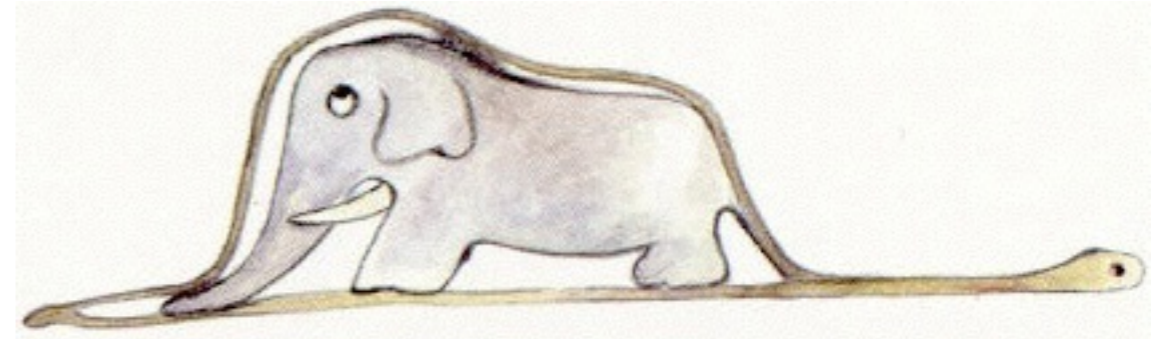
* **Sketching**

  Visualizing concepts for the self
  and others

Drawing Exercise!

* Sketching

Don't worry about realism
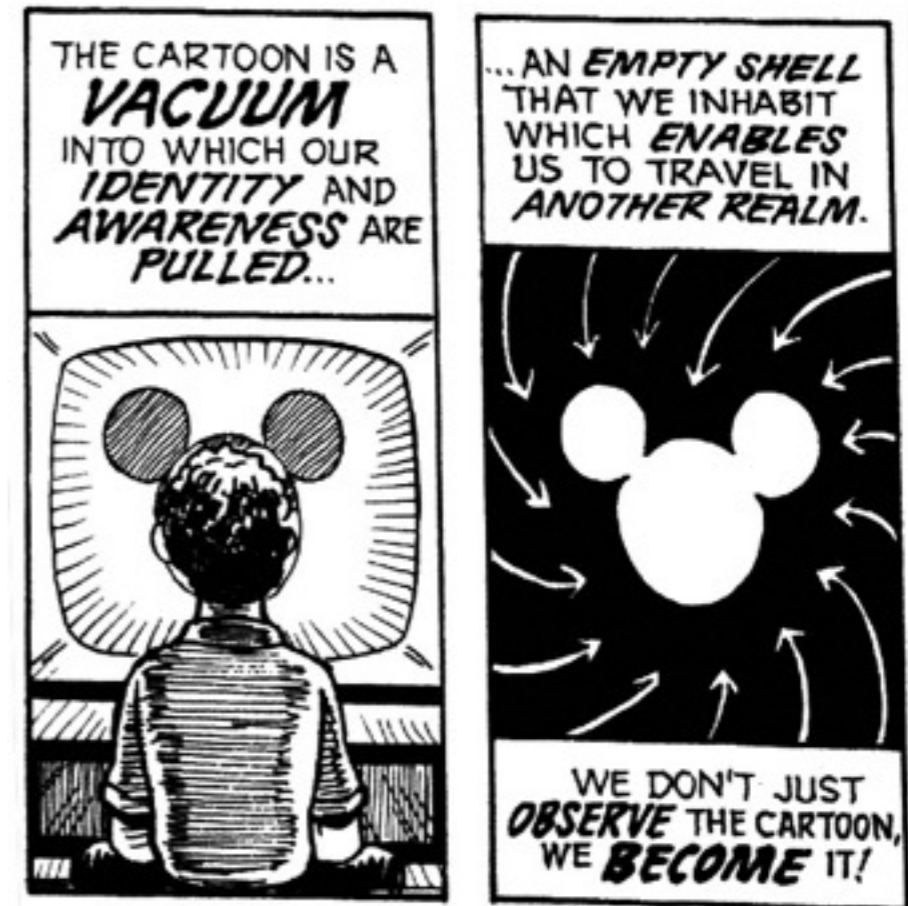Better that sketches are not realistic

Drawing "Star People"

More **expressive** than stick figures

from Bill Verplank

THE CARTOON IS A **VACUUM** INTO WHICH OUR **IDENTITY** AND **AWARENESS** ARE PULLED...

...AN **EMPTY SHELL** THAT WE INHABIT WHICH **ENABLES** US TO TRAVEL IN **ANOTHER REALM.**
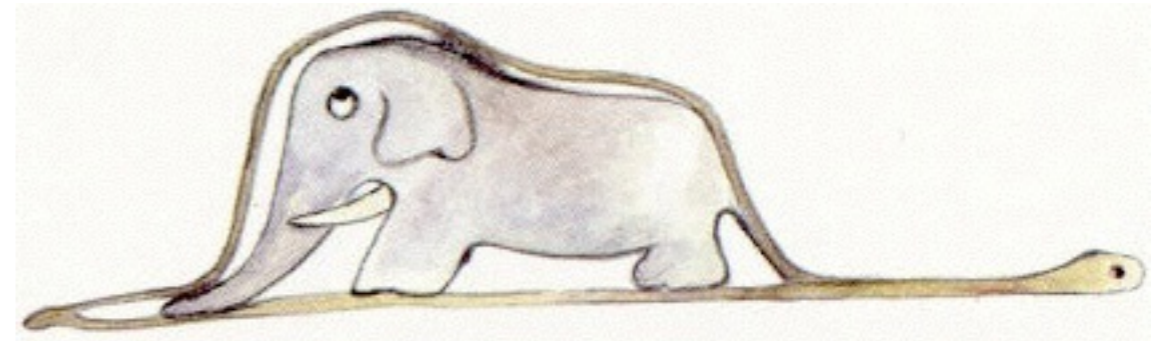
WE DON'T JUST **OBSERVE** THE CARTOON, WE **BECOME** IT!

From **Understanding Comics**
by Scott McCloud

* Sketching

Scenarios: Illustrating temporal events

Moment to Moment

Action to Action

Subject to Subject

Scene to Scene

From **Understanding Comics** by Scott McCloud

* **Physical Mock-up**

Designing by **playing pretend**

Legos

Paper

Foam

Clay

Everyday Objects

* Physical Mock-up

Some **example** objects

Focus on **form** or **behavior**

* Video Prototyping
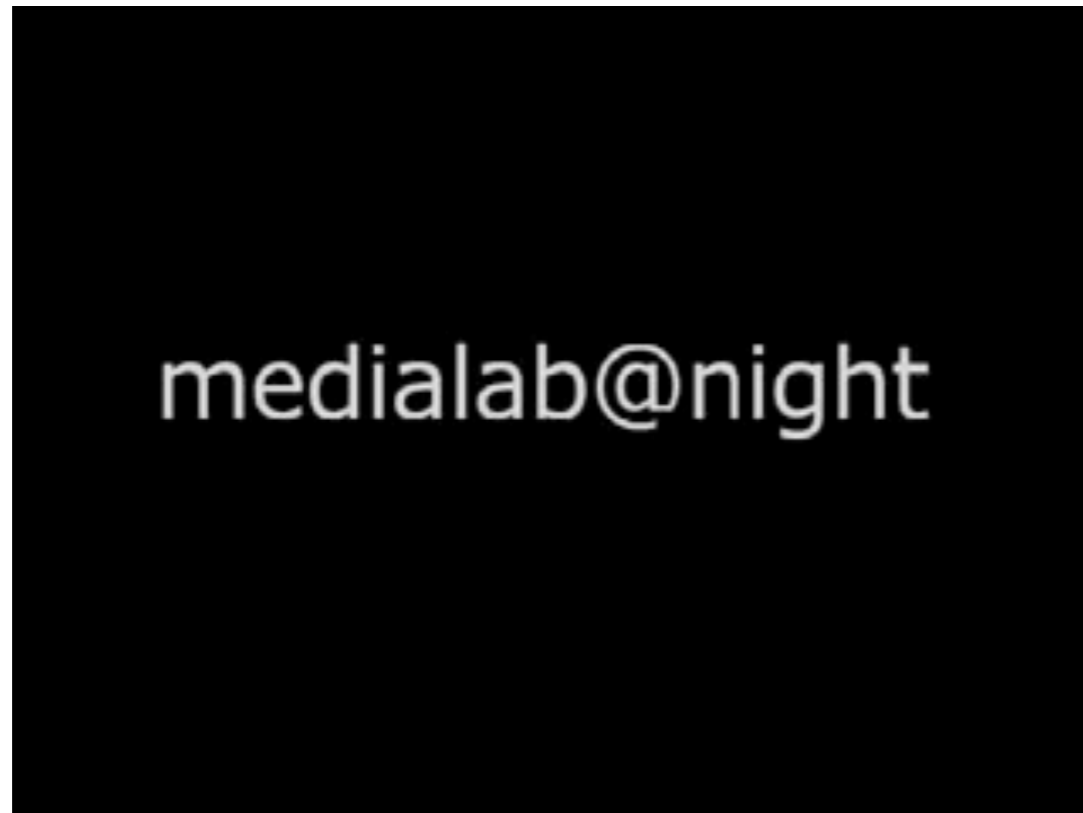
Weaving **visions** of alternate realities

Stop-Motion Video

Enables anyone with a digital camera to create video fiction

Western Spaghetti by PES
http://www.youtube.com/watch?v=qBjLW5_dGAM

* Video Prototyping

Weaving visions of alternate realities

medialab@night

MediaLab@night by Leonardo Bonanni
http://www.youtube.com/watch?v=0Ig3p3NsrJl

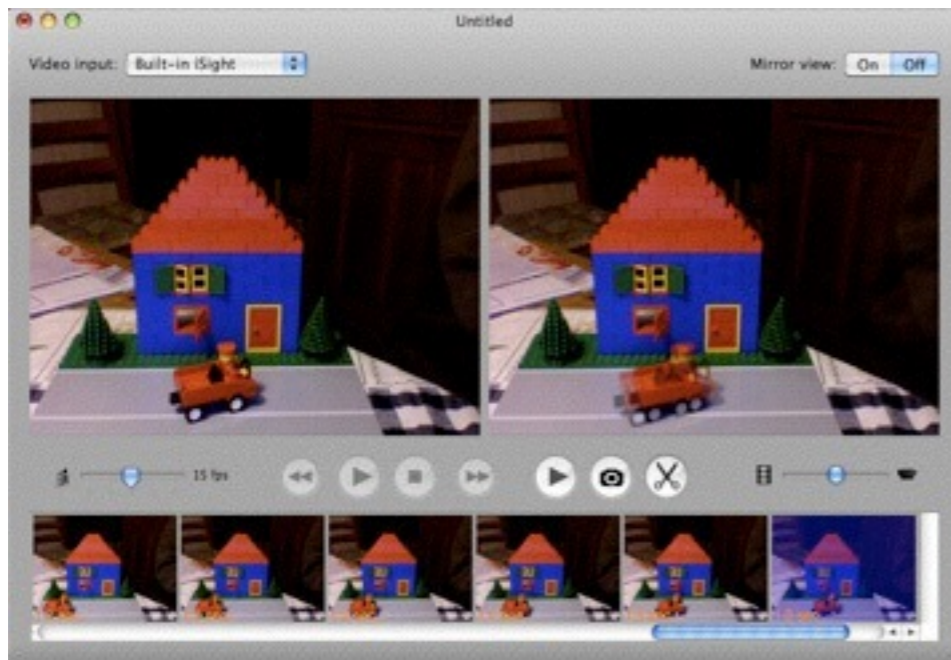## Stop-Motion Video

Example from Media Lab student

* **Video Prototyping**

(Free!) tools for **stop-motion** video

Frame by Frame
for Mac

Stop Motion Maker
for PC

* **Working Demo**

Partial or fully–functioning prototype

What we do at the Media Lab

Example: I/O Brush

– Built in two weeks

– Simple circuitry and software to demonstrate **idea**

LEDs
Camera
Touch sensors

* Working Demo

Partial or fully-functioning prototype

Example: I/O Brush

* **Working Demo**

Partial or fully-functioning prototype

Photographic mockup of vision

Interface prototype

Example: MirrorFugue
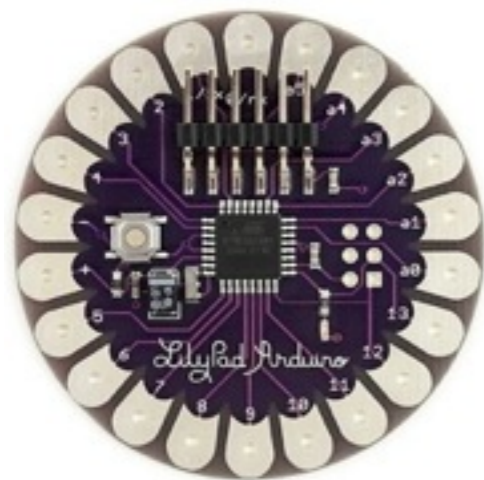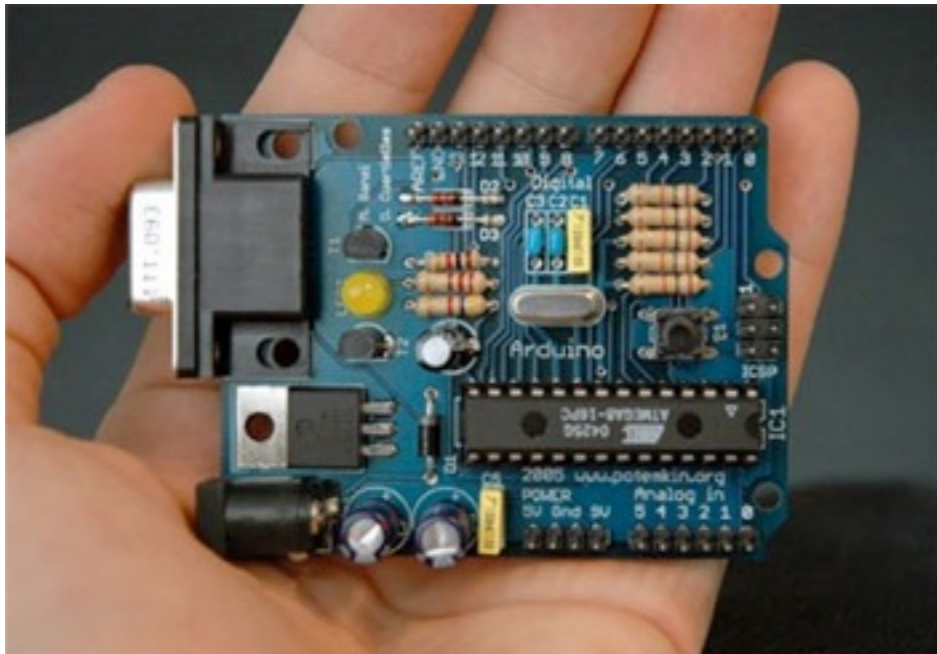
An interface for remote collaboration on the piano

Did not implement actual remote communication

* **Working Demo**

Toolkits to support
prototyping

Form | **Hardware** | Software

* **Working Demo**

Hardware tools

Arduino

– Simplifies prototyping electronics

– Several versions for different applications (e.g. Lilypad)

– Additional modules (e.g. XBee for wireless communication)

More info:
arduino.cc

* **Working Demo**

Software tools

Programming environments for quickly trying out ideas

Processing
processing.org

Open Frameworks
openframeworks.cc

Refining your ideas

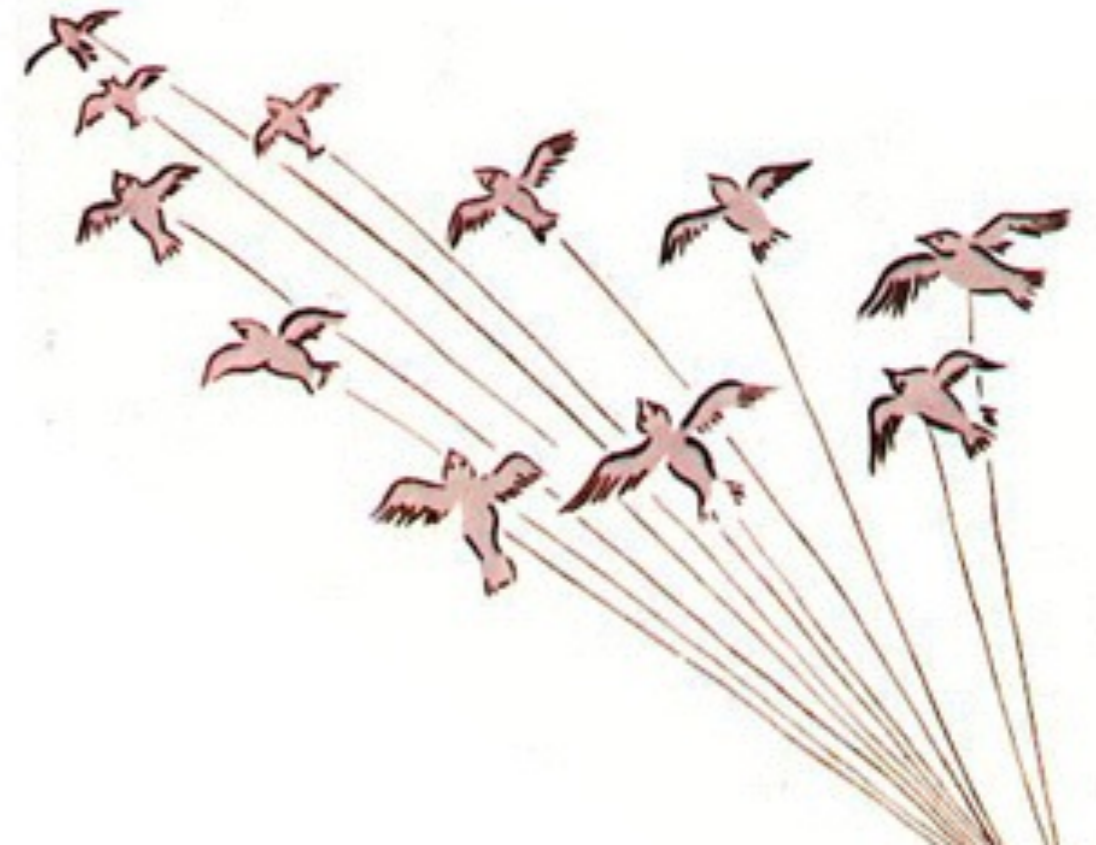Communicating your vision

Building on each other's ideas

Tools for Zero-G Thinking

* Sketching

* Physical Mock-Up

* Video Prototyping

* Working Demo

Questions?