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ENGR110/210
Perspectives in Assistive Technology

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Questions?

Agenda

- Project Activities & Naming
- PRL / Room 36 Passes
- Henry Evans
- Discussion
- ROTA Mobility presentation
- After-class demo

Projects

- Activities
  - Understanding the problem – empathy
  - Identifying the need
  - Researching what already has been done
  - Brainstorming – identify top design concepts
  - Meet with me twice before mid-term presentation (Feb 14th)
  - Report progress by email
- Naming
  - Team name - now
  - Name of project – should be short
  - Name of device or software

Project Expenses

- Expenses
  - Project expenses are expected to be modest, no more than a few $100, depending on the project.
  - Reimbursable items include supplies, parts, software, consulting services, shipping, tax directly relating to the project.
- Reimbursement Procedure
  - See webpage

PRL & Room 36 Shop Passes

Update on Shop Pass status for 6 students

Henry Evans

- Speech output device
  - SpeakEasy API for text-to-speech on Ubuntu
    - Pre-editted text
    - Speaks whatever is copied to clipboard
    - Pronounced my name correctly
    - Written by Andreas Paepcke, Stanford Digital Library Project - Research Scientist
  - Cepstral
    - Realistic synthetic voices

Henry Evans

- Cursor control - [TrackerPro by Madentec]

- On-screen keyboard

Henry Evans

- Communication – Eye Gaze Board (e-tran)

Failure

Failure

1. Is it always a negative thing?
2. Is it always something to avoid?
3. Are some failures better than others?
4. Is failure the opposite of success?

IF AT FIRST
YOU DON'T
SUCCEED,
TRY, TRY
AGAIN!

If at first you don't succeed, don't take up skydiving!

“Failure is not an option”

Apollo XIII

failure is always an option

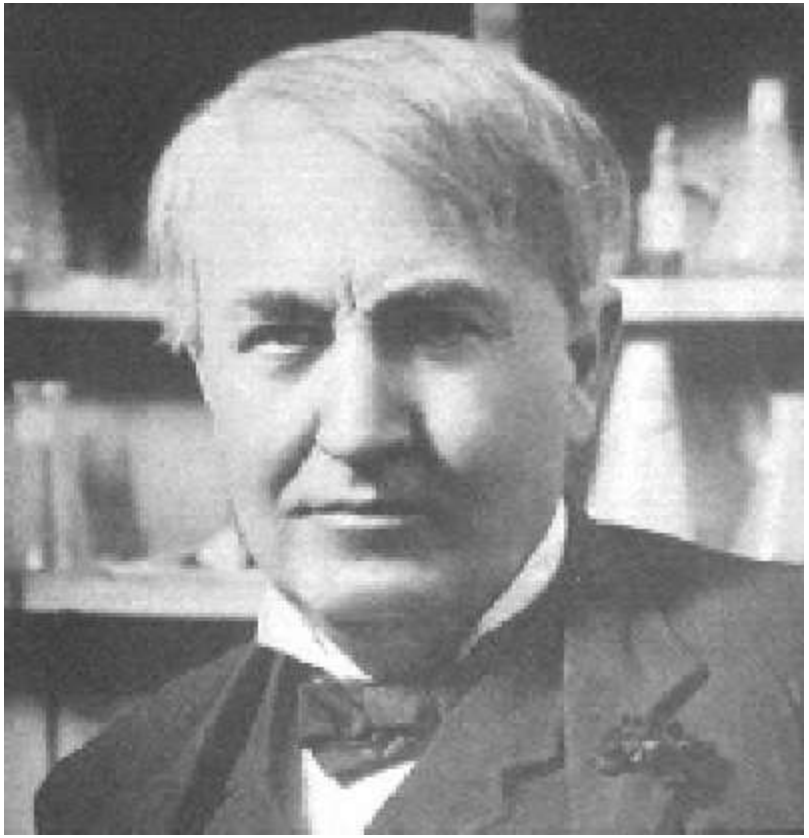
Adam Savage
Mythbusters

“Failure is not falling down,
it is not getting up again.”

Don’t give up after a setback

Mary Pickford
Actress

“I have not failed. I've just found 10,000 ways that won't work.”



Thomas Alva Edison

He could have benefitted from a better scientific understanding of the problem

Seth Shostak
SETI Astronomer

“If you want to increase your success rate, double your failure rate.”

Prototype more, prototype faster

You can be discouraged by failure, or you can learn from it
- so go ahead and make mistakes, make all you can -
- because, remember that's where you'll find success – on the far side of failure.

Thomas J. Watson Sr.

Need to experience failure before you can achieve success

Fail Faster.
Succeed Sooner.

Other Thoughts

Not many people are willing to give failure a second opportunity - they fail once and it's all over. If you're willing to accept failure and learn from it, if you're willing to consider failure as a blessing in disguise and bounce back, you've got the potential of harnessing one of the most powerful success forces.
Joseph Sugarman

Failure should be our teacher, not our undertaker. Failure is delay, not defeat. It is a temporary detour, not a dead end.
Denis Watley

From honest failure can come valuable experience.
William Arthur Ward

“Failure to prepare is preparing to fail”

Ben Franklin
Founding Father

Incorporate failure into your design process

“Trying is the first step towards failure”

Avoid failure by not making an attempt, taking a chance

Homer Simpson
Cartoon Father

“Embrace Failure!”

Professor Dave Beach

“Failure is the highway to success”

Failure is part of the process

John Keats
Poet

Messages

1. Prototype early and often – use sketches, crude models, cardboard-aided design (CAD)
2. Employ all your knowledge, senses, skills, and engineering intuition
3. Make good use of team members, coaches, resource people, teaching team, and facilities
4. Balance planning and fabrication tasks – **manage your time, your most valuable resource**
5. Don't expect a linear path of successes from beginning to end
6. Prepare to make mistakes and experience failures – plan for them, understand them, learn from them
7. Don't get discouraged & **don't give up**

Discussion

1. Was Apollo XIII a success or failure?
2. Was the Concorde a success or failure?
3. What ultimately determines success / failure?
4. Can an effort be a partial success / failure?

Thursday

Perspectives of Stanford Graduates

Nicole Torcolini & Jules Sherman

Today

ROTA Mobility Inc.: From Development to Commercialization

Chris Bayne & Michael Bayne

Short Break

Class
Dismissed!