

Competitions: Build it and They Will Play

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My Background

- Attempted to build a “Built-it” competition for the NSF
 - Became a skills-based competition
 - The winners reverse-engineered the competition!
- Participant(ish) in the FCC Open Internet Applications challenge
 - Deliberately did not participate in the Application portion
 - Co-winner of the academic research portion

Two Rough Categories

- Skills-based competitions
 - Demonstration of skill and knowledge between multiple parties
 - E.g. Capture the Flag
- Build-it competitions
 - Create a system which requires ***new technology***
 - E.g. The Longitude Challenge, Ansari X-Prize, DARPA car challenges, Genome Sequencing X-Prize

Competitors are Economically Rational Actors

- They must have **expected** compensation greater than the cost of entry
- But not all compensation is monetary...
 - Rather, **Coolness** is its own reward
 - Being “The Best” is damn cool
 - Beating the NSA is **super cool!**
 - Paul Allen didn’t spend millions on SpaceShip One to simply win the X-Prize
 - Rather, he expected a combination of sales of the technology and **its so frakking cool to be the guy who paid for the first private space ship!!!**
- But need to evaluate non-monetary compensation

Costs of Competitions

- Skills competition are comparatively low entry cost
 - Requires smaller prizes, or even just cool
- Build-it competitions are hard
 - Successful competitions either required huge prizes, massive cool-factor, or a combination of the two
 - The best competitions have combined them both:
The DARPA Grand Challenge offered an insane level of cool-factor combined with a huge monetary payout (not just to the winner, but the IP developed by all top competitors)
- Without coolness or ancillary benefits, build-it competitions are less valuable
 - **All** competitors expect some level of “positive payout”

Reduce, Reuse, Recycle

- A wise competitor will recycle an existing work into a build-it competition
 - “Been There, Done That...”
 - But entry recycling means a build-it competition is a **failure** at getting something new built
- Another problem is recycling effort: If the effort would be expended anyway, why have the competition?
 - E.g. the Genomics X-Prize:
If you can meet those sequencing goals, you have your \$1B biotech...
 - Similarly, the NASA tether strength competition:
Any winner is worth 10x to 100x the prize...

