

Historic Prize Summary

- Select a historic incentive prize from the attached list or other resources, and summarize the key points using the *one-page* template below. Final summaries may be made available on our website as a resource for others learning about prize theory, so please take care to use your own words, or cite appropriately.
- Submit final PPT before class SES #5.

Some Prize Options

Some historic prizes from which to choose:

- Chicago Times-Herald Prize for Motors
- Volta Prize
- Liverpool & Manchester Railway Locomotive Prize
- Bright Tomorrow Lighting Prize
- Saltire Prize
- Super Efficient Refrigerator Program Prize
- Virgin Earth Challenge
- Any of the alphabet prizes: H Prize, M, N, V, IF, etc.. Prizes

Or feel free to select your own historic incentive prize in the same vein. (Existing X PRIZES and those we've discussed in class are off-limits, as are recognition prizes like Nobel.)

Prize name

- *Sponsor(s):*
- *Date Offered:*
- *Deadline (if known):*
- *Date Completed:*
- *Description and Motivation:*

- *Type of Prize (e.g. First to Achieve, Top Performer, Community-based Incentive, etc.):*
- *Prize Purse(s):*
- *Nature and Number of Competitors (if known):*

- *Total Investment by Teams (if known):*
- *Winner(s) and Approach:*

- *Impact of Prize:*

- *Sources:*

Example

Ansari X PRIZE

- **Sponsor(s):** X PRIZE Foundation, funded by Anousheh and Amir Ansari
- **Date Offered:** May 18, 1996
- **Deadline:** December 31, 2004
- **Date Completed:** October 4, 2004
- **Description and Motivation:** This prize was modeled after the Orteig Prize, which spurred Charles Lindbergh's flight across the Atlantic. Motivation was to spur private investment in spaceflight, with a particular eye towards commercial space tourism. Privately-funded teams were challenged to design and fly a 3-person vehicle to a suborbital altitude of 100 km, and return safely to the ground. A reflight had to be accomplished within 2 weeks, replacing <10% of the vehicle's non-propellant mass.
- **Type of Prize:** First to Achieve
- **Prize Purse:** US\$10 million
- **Nature and Number of Competitors:** 26 teams from 7 countries registered to compete, but only SpaceShipOne ultimately flew in competition.
- **Total Investment by Teams:** ~US\$100 million
- **Winner(s) and Approach:** SpaceShipOne, designed by Burt Rutan and Scaled Composites, funded by Paul Allen. The spacecraft was lifted to approximately 50,000 as a payload of the WhiteKnight carrier aircraft. After being dropped from WhiteKnight, a hybrid "rubber and laughing gas" engine was ignited to reach the desired altitude. At apogee, the vehicle was reconfigured to a shuttlecock geometry for passively stable reentry. Horizontal landing at the original launch complex completed the trajectory.
- **Impact of Prize:** SpaceShipOne proved the feasibility of private commercial spaceflight, at least to suborbital altitudes. Since the winning flight, estimates are that over US\$1.2 billion has been invested in the commercial spaceflight industry. The X PRIZE Foundation has expanded to offer other prizes.
- **Other Notes:** Prize purse was not backed by full cash value, but by a "hole-in-one" insurance policy that bet against the competitors. SpaceShipOne broke previous flight altitude record held by X-15 pilot, Joseph Walker.
- **Resources:** <http://www.xprize.org> ; <http://history.nasa.gov/x-prize.htm> ; http://en.wikipedia.org/wiki/Ansari_X_Prize

MIT OpenCourseWare
<http://ocw.mit.edu>

ESD.172J / EC.421J X PRIZE Workshop: Grand Challenges in Energy
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