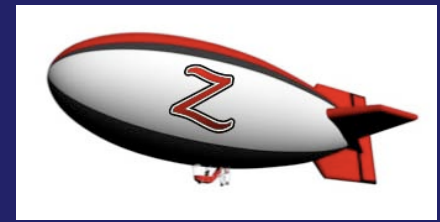


Airship Z-Prize



The Airship Z-Prize: for Humanitarian Logistics and Sustainable Transportation



"One Mind, One Heart, One corridor"



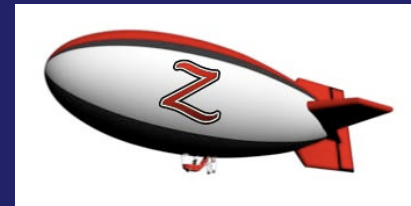
October 6th, 2009

Jeff Ashcroft

President, Strategic Logistics Partners

Founder – Airship Z-Prize

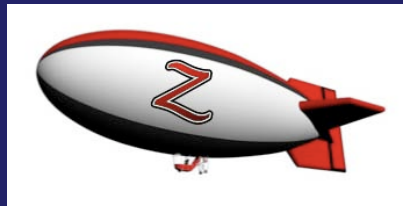
Airship Z-Prize



Why haven't transport airships succeeded before now?

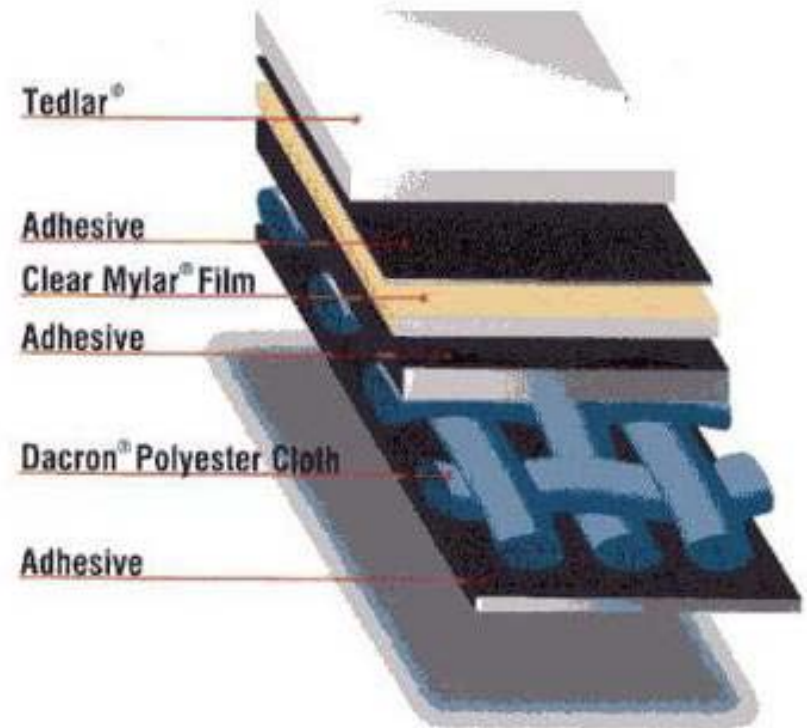
- Competition from high speed jet aircraft using established airports
- Customers demanded speed over economy of transport
- Fuel was inexpensive and plentiful
- No concern about CO² emissions
- Lack of sufficient impetus/sponsorship/R&D funding
- Airships had poor weather and ground handling issues
- The airship industry was small and fragmented

Airship Z-Prize



Why can transport airships succeed now?

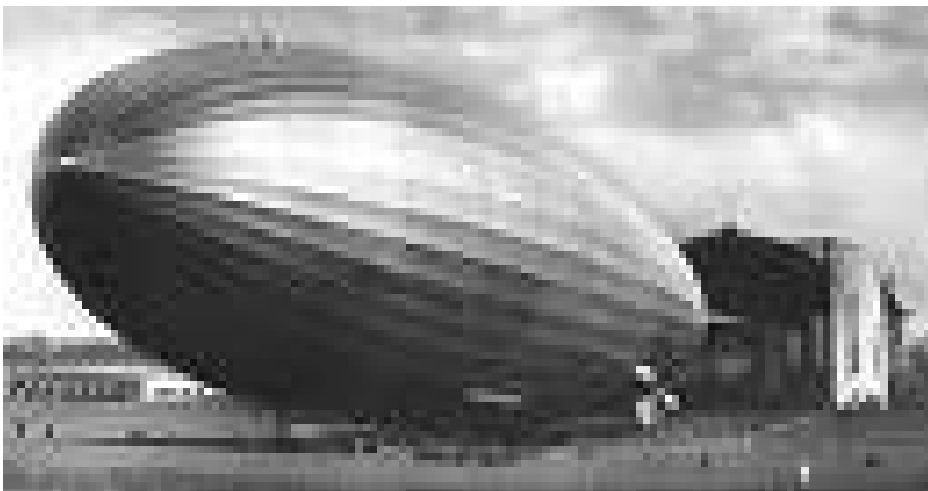
- Growing customer demand for new transport capacity and capabilities
- Cost of conventional transportation (fuel) is rapidly increasing
- Consortium approach to airship development can invigorate industry
- New technologies can solve weather and ground handling issues
- Robust, lightweight materials, like carbon-fibre composites, vectoring engines, etc.



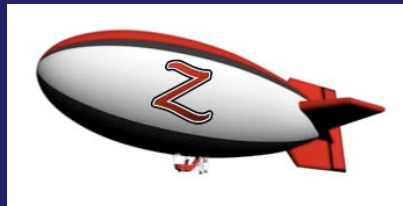
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What's old technology has made "new" again!



Airship Z-Prize



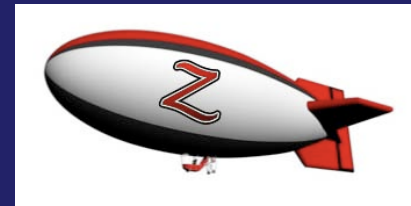
Boeing Skyhook JHL 40



Potential Markets:

- pipeline construction
- hydro transmission lines
- mining operations
- oil rig relocation
- wind turbine assembly
- houses in remote areas
- forest harvesting
- humanitarian logistics
- emergency response

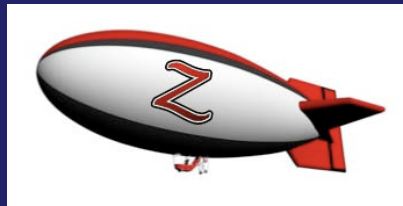
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Humanitarian Logistics

- Transport is the key to successful disaster relief operations
- Lack of infrastructure makes remote regions difficult to reach
- Large range of cargoes need to be delivered urgently
- Climate change, political upheaval and natural disasters are all on the rise
- Heavy lift airships could play a vital role in improving delivery of humanitarian logistics

Airship Z-Prize

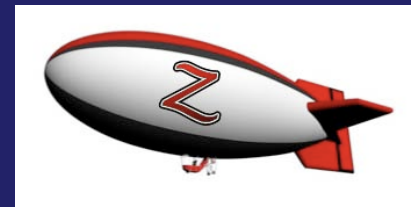


Airship Applications in LDCs

- Law Enforcement
 - ✓ Excellent platform for airborne policing (day & night)
- Disaster Relief
 - ✓ Rapid and direct delivery of relief supplies where and when existing transportation systems are disrupted
- Critical Transport
 - ✓ Flight services into dangerous and inaccessible areas are possible ie: Africa (DRC) & Canada's northern communities
- Medical Services
 - ✓ Remote medical clinics and emergency services supportable with regular airship visits by medical personnel with special onboard equipment
- Communications
 - ✓ Temporary telecommunications services can be provided



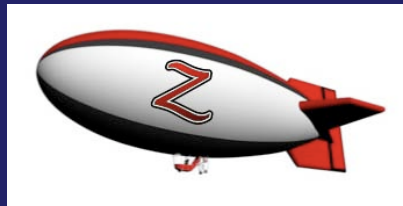
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2009 Status of Airship Developers

Location and Company		Aerostats	LTA Vehicles	Hybrid Vehicles
U.S.:	Lockheed-Martin		design/testing	prototype
	TCOM	certified		
	Millennium Airships			design
	Worldwide Aeros	certified	certified	design
	Boeing-SkyHook			design
	American Blimp Co.		certified	
	Ohio Airships			prototype
Germany:	CargoLifter KG	testing		
	Zeppelin		certified	
U.K.:	Varialift Airships		design/testing	
	Hybrid Air Vehicles		certified	model testing
Canada:	21st Century Airships		prototype	
Russia:	RosAeroSystems	certified	certified	design
Japan:	National Research		testing	
South Korea:	National Research		testing	
China:	Vantage Airship Co.		certified	

Airship Z-Prize



Spherical
Airships



High Altitude Airships

Airships 2009

Hybrid Airplane - Airships



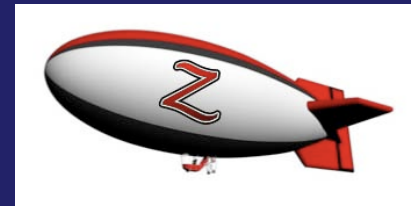
Traditional
Airships

Airship Z-Prize



**More
Airships
2009**

Airship Z-Prize

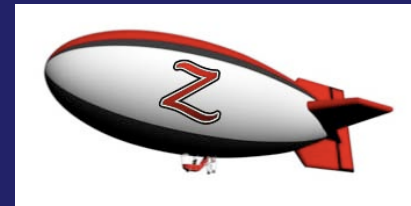


Why create an airship competition?

- No cargo airships currently exist
- Business risks for initial development are not trivial
- Optimum design and critical technologies are currently still being defined
- Airship design and development expertise remains decentralized
- Need to create critical mass of airship development capability

An airship technology development prize provides the motivation for teams to compete in the development of modern cargo airships to meet growing needs

Airship Z-Prize

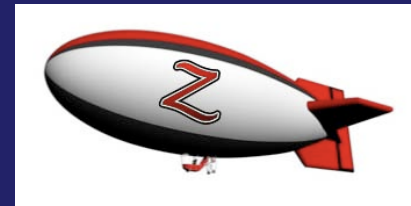


History of technology inducement prizes

- Prizes have historically been used to advance technology
 - ✓ Longitude prize - offered by British Parliament in 1714 for accurate determination of a ship's longitude
 - ✓ Food preservation - offered by French government in 1795 for development of a practical food preservation method
- Aerospace technology has benefited greatly from prizes
 - ✓ First flight across the English channel in 1909
 - ✓ First flight across the North Atlantic in 1919
 - ✓ First nonstop flight from New York to Paris in 1927 (Spirit of St. Louis)
 - ✓ In 2004 the first privately-funded craft to reach 100 km twice within two weeks (X-Prize)



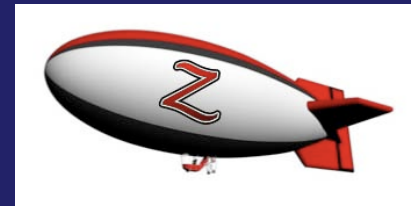
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Merits of technology prizes

- Prizes promote an efficient investment strategy
 - ✓ Sponsors pay winners only when and if the goal is achieved
 - ✓ Performance-based investment, not “best effort”
 - ✓ Competitors invest their own resources on tech development
- Prizes stimulate innovation
 - ✓ Competitors develop unexpected and unconventional concepts
 - ✓ Multiple technological approaches are developed
 - ✓ Competition produces one or more workable technologies
- Prizes inspire advancement
 - ✓ Prizes shift expectations from “can it be done” to “when will it be done”
 - ✓ Reshape markets more rapidly than prevailing market forces
 - ✓ Potential to establish new industry base for participant countries

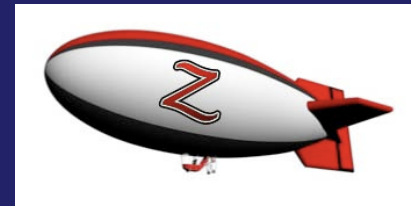
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How should the prize be administered?

- **Technical competence**
 - ✓ Need leaders in aviation and space technology
 - ✓ Require a reservoir of talent and expertise to design competition criteria and judge contestant entries
- **Infrastructure**
 - ✓ Need solid administrative and legal competence to manage prize organization and donor funding
 - ✓ Require professional experience to approach potential sponsors, contestant teams, supporters, government, and the general public
 - ✓ Must have experience with managing large international technical events spanning multiple aviation and space disciplines

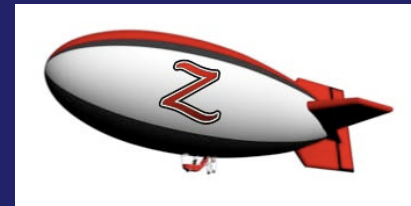
Airship Z-Prize



How can the Z-Prize be funded?

- Donations of funds should come from private industry and the user communities that will benefit most from the development of heavy lift transport airships
- Obtaining initial funding required to begin Z-Prize preparations and donation development process is the critical first milestone
- Initial list has been drawn up of potential contest sponsors to be approached but resources/expenses required to engage
- Initial donors may request exclusive privileges
 - ✓ Prize naming rights or advertising privileges
 - ✓ Endorsement by lead sponsors should make the fund raising challenge more manageable

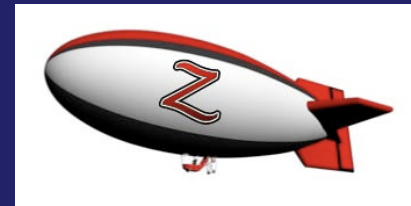
Airship Z-Prize



Z-Prize Foundation's roles

- Daily management of the competition
 - ✓ Mapping of participants roles, responsibilities and resources
 - ✓ Identify time scales for all activities
 - ✓ Develop a rational prize criteria, rules and procedures
- Conduct technical workshops and conferences to educate stakeholders, airship teams, investors, government representatives, and aviation students

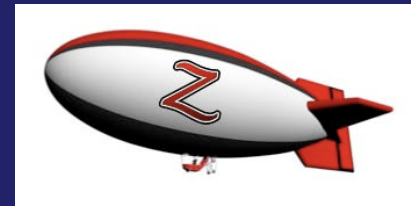
Airship Z-Prize



Prize Establishment Tasks

- **Define competition scope, criteria, and objectives**
 - ✓ Set competition timelines and award amounts
 - ✓ Define entrance criteria
 - ✓ Establish judging criteria and conditions for prize award
- **Establish Z-Prize administrative mechanism**
 - ✓ Establish an independent Z-Prize Foundation
 - ✓ Assess IP and liability issues
- **Identify and approach potential sponsors**
 - ✓ Determine what are the prize objectives of the sponsors
 - ✓ Develop “business plan” presentation to show how prize will be administered, and how it meets sponsor objectives
- **Establish information resources**
 - ✓ Develop prize information packages for airship teams and media
 - ✓ Approach aviation and space industry with briefings on how they can participate in prizes and how contests will benefit them

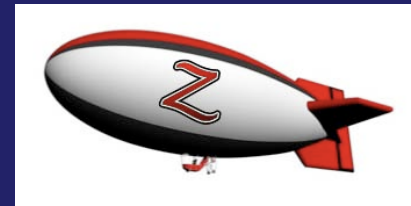
Airship Z-Prize



Next Steps and Required Support

- Commence first stage Z-Prize preparations under auspices of established ISO Polar non profit entity
- Engage resources and incur expenses required to develop industry donations for the Z-Prize foundation fund
- Preparations, scheduling and 2009 execution of Z-prize Criteria Development Workshop
- Fund Canadian participation and co-leadership of this joint US/Canadian Z-prize initiative
- Execute completed Z-Prize Fund Development Plan

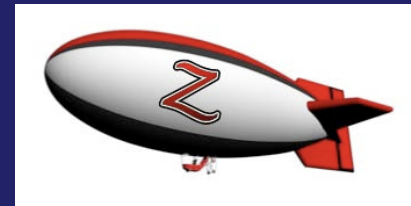
Airship Z-Prize



Benefits of Z-prize Project to Canada

- Reduce cost of delivering humanitarian assistance (stretch budgets)
- Improve lead time efficiency of reaching hard hit areas
- Leverage large private investments to solve humanitarian logistics transport problem
- Positive risk/reward proposition
- Favourable international publicity
- Solution to chronic northern transportation problems
- Establish a new sustainable freight transport mode
- Potential to create new manufacturing industry

Airship Z-Prize



Recent Positive Developments

- US Military Joint Forces Taskforce Announced LEMV Project
 - ✓ September 1st meeting in Washington
 - ✓ Want working model in 18 months for Afghanistan
 - ✓ Will rapidly accelerate development process
- Airship Z-Prize submitted for NASA Centennial Challenge
 - ✓ Proposal submitted September 18th by NASA Ames
 - ✓ Prize range is \$3 to \$5 million
 - ✓ Enough for preliminary Z-Prize version/step

The Airship Z-Prize

To develop a freight transport airship for humanitarian logistics support and as a green transport solution

Support



Z-Prize



Oct
02
2009

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Z-Prize at NCDC "One Mind, One Heart, One Corridor"

The Northwest Corridor Development Corporation's 2009 Conference and Annual General Meeting (AGM) is being held in Prince George, British Columbia, Canada. This year's event will be staged from the evening of Monday, October 5 through the morning of Wednesday, October 7, 2009. All Conference proceedings and related events will take place at the Prince George Civic Centre, 808 Civic Plaza, Prince George, BC. **[Airship Z-Prize to Present at NCDC "One Mind, One Heart, One Corridor"](#)**

Written by admin in: [Airship News](#), [Events](#), [General](#) | [Edit This](#)

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Dynalifter Airship Goes Where Trucks Can't

From ABC WTVG Toledo: "A new company that will build giant airships is getting off the ground here and it could mean hundreds of jobs! The company is called Ohio Airships and it's built a prototype of what's called a Dynalifter aircraft. Right now employees are working on the prototype at Toledo Express Airport. The full scale models will be capable of hauling incredible amounts of cargo." **[\(more...\)](#)**

twitter

Note as Z-Prize is not a registered charity no tax receipts will be issued.

Donate



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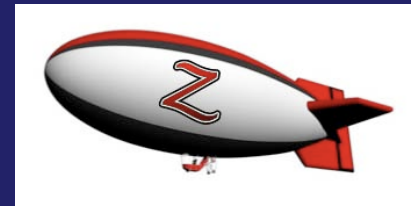
Airship Z-Prize

www.airshipzprize.org



THANK YOU!

Airship Z-Prize



Z-Prize Potential Risks

- Difficulty in raising the large donations required
- Difficulty in finding initial and continuing supporters
- Tepid interest from commercial companies
- Excessive time frame for agreeable ROI to investors
- Locating, organizing, and managing teams and skill sets needed
- Managing large, international development team in new endeavour
- Establishing IP agreements between parties
- Litigation and insurance coverage
- FAA and European aviation regulations
- Unanticipated airship technical or operational limits
- Unanticipated additional costs