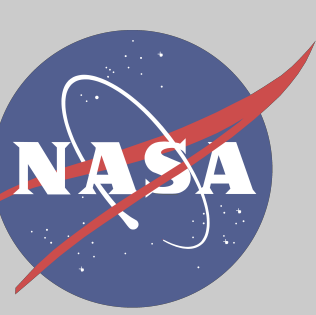


The Ultimate Project: 500 Years Until Phase E



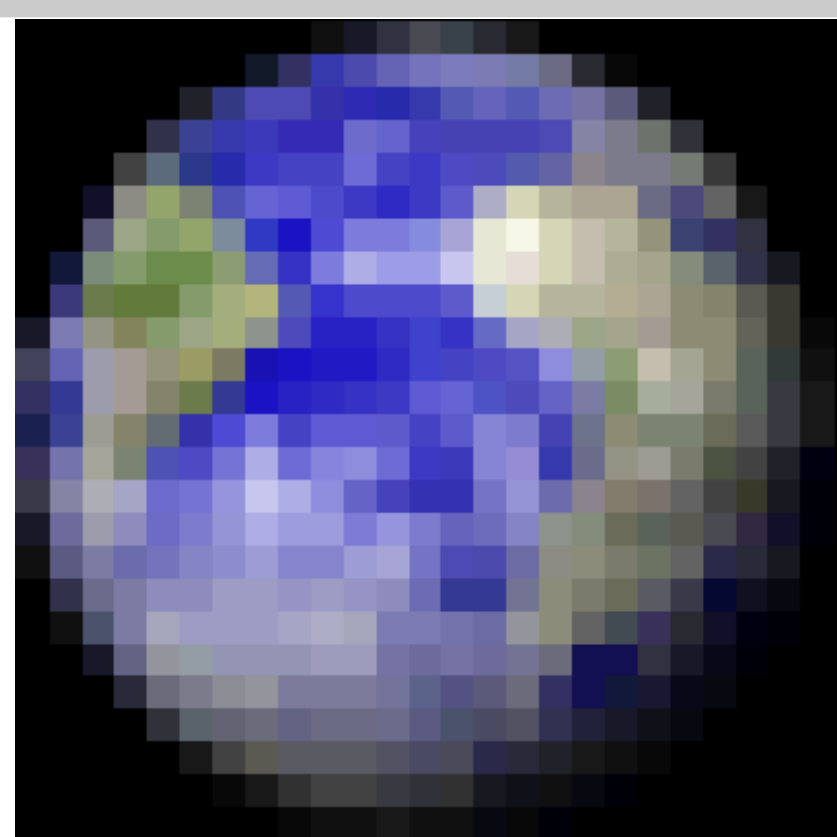
Sven U. Grenander -- The-UP.org
Steve Kilston -- Ball Aerospace & Technologies Corp.

Project Objective

- Extend human presence and scientific reach to a habitable terrestrial exoplanet
 - 100 year plan development
 - 100 years for detailed design
 - 100 years for prototyping
 - 100 years for construction
 - 100 year shakedown cruise

Recent Activities

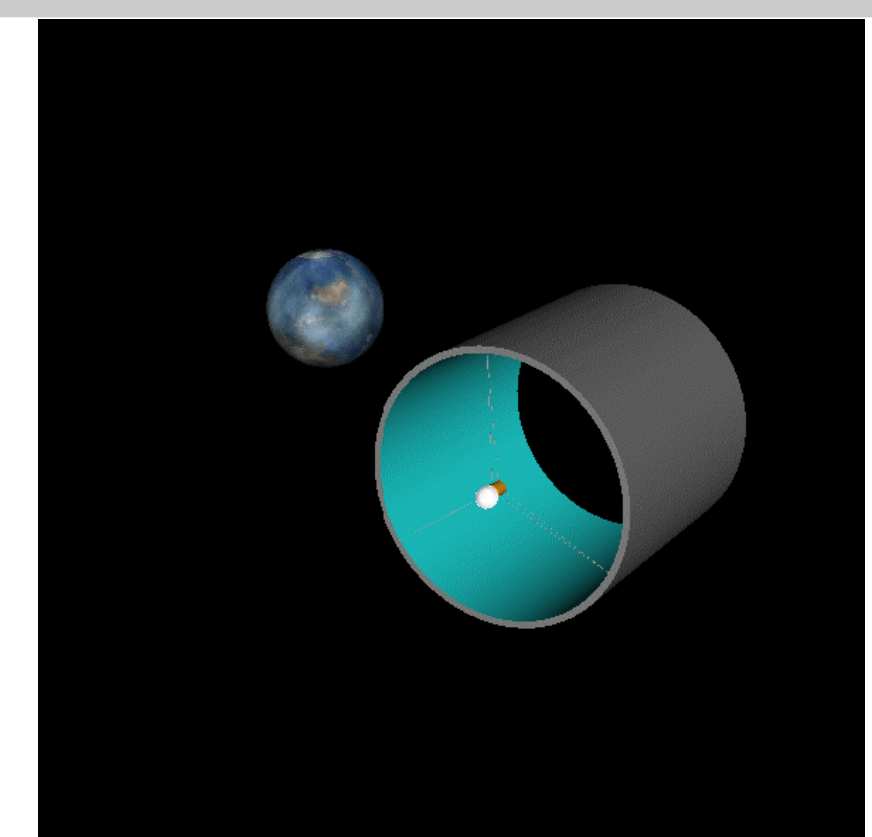
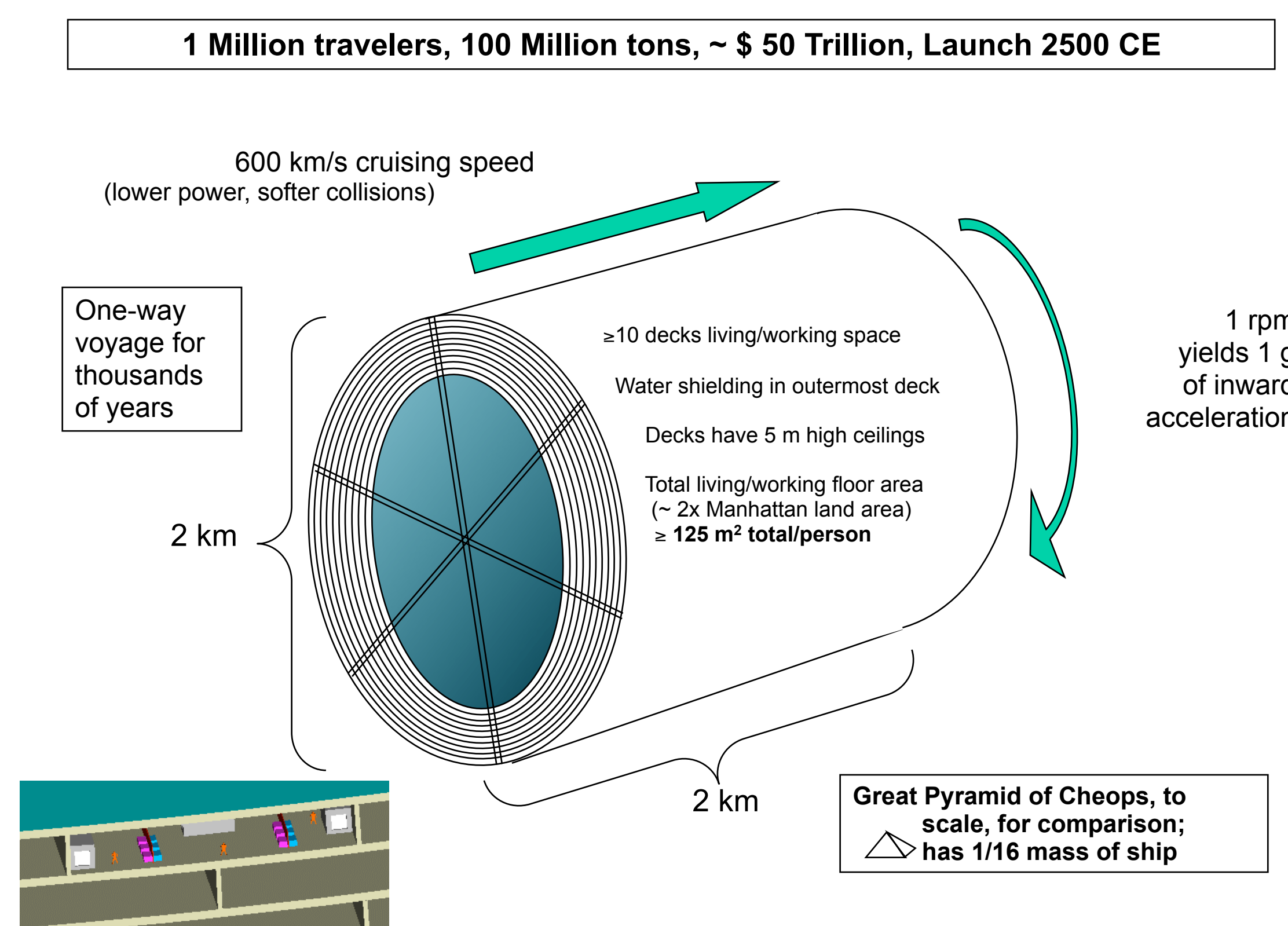
- Vision presented here in von Karman during SMC-IT '06 banquet keynote
 - Steve Kilston "The Ultimate Project, A Plausible Path to the Stars"
- Discussions about projectizing the vision through the winter of '06-'07
- Project formed during the spring of 2007
 - Initial scoping of effort and conceptual plan
 - Installation of collaboration server hardware
 - Atlassian donated Confluence and JIRA Enterprise collaboration software
- The-UP retreat planned for the summer of 2008
 - Inquiries welcome



Now what ?

- A project without borders or nationalities
- Plans will be overtaken by events
- Project draws upon and drives progress in every human discipline
 - Science
 - Technology
 - Philosophy
 - Legal
 - Financial
 - ...
- Founded on web-based collaboration infrastructure
 - IT and knowledge management are critical
- Current project organization
 - Discussion forums running phpBB software
 - Confluence wiki for project documentation
 - JIRA collaboration SW for project management
- Project participation is open
 - Members must be able to collaborate effectively
 - No political or religious divisions can be allowed

The-UP.org Project Description



A plan & design

- Trade spaces
 - Start now or only when world is ready to go
 - Speed vs. energy requirements and risk
 - Active vs. passive collision management
 - Crewed or robotic
 - S/C size vs. number
- Examples of prior multi-generation projects
 - Great Wall of China
 - Cathedrals
- Current multi-generation projects
 - Long Now Foundation
 - Svalbard Global Seed Vault
- Cost
 - No major costs for the first 200 years
 - \$50 trillion total
 - 10 times US nuclear weapons program to date
 - A TOTAL of ~1 year's gross product for the world
 - \$200 billion/year at peak, beginning 2250 CE
 - \$50M/traveler

<http://The-Up.org>

Significance

- The concept originated as the answer to the question:
"If Terrestrial Planet Finder discovers a habitable exoplanet, what should we do about it ?"
- The-UP seeks to make plausible a human presence in other solar systems and on exoplanets
- The project is the ultimate justification for exoplanet science, research and development
 - Brings compelling scientific, technical and societal needs of extrasolar travel into strikingly sharp focus
 - Lays out a roadmap for future research, planning and development in numerous fields

Original Paper

1999 "The Project: An Observatory/Transport Spaceship for Discovering and Populating Habitable Extrasolar Terrestrial Planets". American Astronomical Society Paper 97.09 (Austin, TX). - Steve Kilston.