

**Caltech/MIT Enterprise Forum**  
**Space Ventures: The Next Renaissance?**  
**December 6, 2003**

**KEYNOTE SPEAKERS**

**Dennis A. Tito**

**Founder, Chief Executive Officer and Chairman of the Board of Directors  
Wilshire Associates, Inc.**

As one of the founders of Wilshire in 1972, Mr. Tito was among the first to apply then new computing technologies to the investment industry. He had previously applied such computing technologies at Jet Propulsion Laboratory where he worked to help plot the trajectories for the Mariner spacecraft missions to Mars. Mr. Tito is credited with helping to develop the field of quantitative investment analysis that uses mathematical tools to analyze market risks. Under his direction, Wilshire developed the Wilshire 5000 index, the first asset/liability models for pension funds, the first U.S. equity style metrics work, and many other "firsts" as Wilshire grew and developed into a firm of over 300 employees serving the investment needs of institutional clients around the world.

Mr. Tito supports and is actively involved in many charitable and civic causes including the building of a new cancer research lab at the University of California, Los Angeles. He formerly served as President of Commissioners for the Department of Water and Power of Los Angeles.

In the Spring of 2001 Mr. Tito became the first paying traveler in space when he spent more than a week aboard the International Space Station.

Mr. Tito received a B.S. from New York University College of Engineering in astronautics and aeronautics, and an M.S. in Engineering Science from Rensselaer Polytechnic Institute. He also completed course requirements for a Ph.D. in Finance from the Anderson School, University of California, Los Angeles.

**Doug Holker**

**Systems Director, Development and Transformation Directorate  
The Aerospace Corporation**

Doug Holker is a Systems Director, Development and Transformation Directorate at The Aerospace Corporation. His responsibilities include: development, design, analysis and integration of future space systems projects. He leads several project teams, including the Small Launch Vehicle Study (SLV), the Commercial Planning Office (CPO), the Commercial Space Opportunities Study (CSOS), and the Commercial Architecture Study (CAS). Doug has participated in NSSA/DoDSA Architectural Development teams, the MILSATCOM IPT and Reinventing Space Study. Prior to 1992, Doug worked at BDM International as the program manager of the B2 structural engineering test bed fixture and integrating communication systems for the program office. Doug received a Bachelors and a Masters Degree, Specializing in Remote Sensing from the University of California, Los

Angeles. He is the Western Regional Vice President for the Armed Forces Communications and Electronics Association (AFCEA).

## ENTREPRENEURS

**Charles E. Miller**  
**Chief Executive Officer**  
**Constellation Services International, Inc.**

Mr. Miller is a co-founder, President and Chief Executive Officer of Constellation Services International, Inc. (CSI)

Prior to co-founding CSI, Miller founded ProSpace, the "Citizens' Space Lobby", where he served as Chairman and President from 1996 to 1999. Under Miller's vision and leadership, ProSpace was instrumental in the passage of vital space-related legislative initiatives, including:

- \* The "Commercial Space Act of 1998";
- \* \$941 million for NASA's X-33 program;
- \* \$37 million for NASA's "Future-X" reusable launch vehicle (RLV) program;
- \* \$25 million for the U.S. Air Force RLV Technology Development" program; and
- \* \$15 million for NASA's Space Solar Power program.

Prior to founding ProSpace in 1996, Mr. Miller served as Administrator and director of the National Space Society (1988-1992) and as Vice President for Development and director of the Space Frontier Foundation (1995-1999).

Because of the depth of his knowledge of space policy issues, Mr. Miller's advice is often sought by the leading firms in the commercial space industry. In addition, he has received several awards for his work in the field, including the "Exceptional Leadership" award from the California Space Development Council.

**Rex Ridenoure**  
**President and CEO**  
**Ecliptic**

Before becoming an entrepreneur in 1997, Mr. Ridenoure enjoyed a distinguished 20-year career as a space-mission engineer, space system architect and project engineer on more than a dozen successful missions at JPL, Hughes, and Lockheed.

His ties to Caltech reach back to 1976, when he served as an undergraduate student intern at JPL during the *Viking* landings on Mars. He returned to Caltech for a M.S. in Aeronautics during 1978-79 following his B.S. in Aerospace Engineering from Iowa State University (Ames).

For the past ten years he has been a champion of and leader in the emerging market sector of commercial deep-space missions, including recent pathfinding experiences at BlastOff! Corporation and SpaceDev. Last year he was a co-recipient of the AIAA's Space Systems Award for his role as Project Engineer on the ion-propelled *Deep Space One* mission, and in 1999 was co-recipient of a Laurel Award from Aviation Week and

Space Technology magazine for his catalytic role in the successful salvage of the *HGS-1* communications satellite, using an unprecedented trajectory method that made *HGS-1* the first commercial spacecraft to reach the Moon's distance en route to its desired destination at GEO.

Ridenoure enjoyed a distinguished career at JPL for 11 years as a mission and systems engineer, serving as System Architect and Project Engineer on *Deep Space One*, co-founder and original Program Architect on the New Millennium Program of advanced spacecraft, Mission Engineer on the *Lunar Observer* pre-project, Mission Planner on the *Voyager* Neptune encounter, and Project Manager for the ultra-low-cost Caltech/JPL *SURFSAT* project. Also at JPL, he managed several initiatives addressing low-cost deep-space missions using microspacecraft.

Before JPL, he was a research engineer at Utah State University on small, low-cost satellites, a mission and systems engineer in mission operations and attitude control systems at Hughes Space and Communications on several telecommunications satellites, and a Crew Systems engineer at Lockheed on the *Hubble Space Telescope*. In the latter capacity, he was co-organizer of a proposed Lockheed corporate astronaut office and also served as a space-suited test subject for Hubble in-orbit servicing simulations.

He is currently President and CEO of Pasadena-based Ecliptic Enterprises Corporation, founded in early 2001 to produce onboard imaging systems and related data-transport systems and for use with rockets, spacecraft and other remote platforms. Its popular RocketCam™ onboard imaging systems are used routinely on U.S. launch vehicles to provide dramatic engineering- and PR-quality color video.

Ecliptic pursues and supports projects involving aerospace electronics/avionics, telecommunications/ground systems and small payloads/instruments, and during the past year has successfully expanded its RocketCam line from strictly rockets to new applications involving spacecraft and various air-, land- and sea-based platforms.



**Andrew Quintero**  
**Director of the Office of Intellectual Property Management**  
**The Aerospace Corporation**

Andrew Quintero is the Director of the Office of Intellectual Property Management in the Office of the General Counsel at The Aerospace Corporation. The functions of his office include technology transfer and commercialization; technology discovery for spin-in opportunities, and facilitation of technology research and development collaborations.

Previously the new business representative in the Electronic Programs Division of Aerospace, he developed strategic plans for improving Aerospace's role in support of civil and commercial activities, which included the early developments of intellectual property licensing. Prior to this, he was a Senior Analyst for the Strategic Awareness Planning Directorate / Commercial Exploitation Planning Office (CEPO) for assessing commercial opportunities for military use that included technical support to the NRO, Air Force and other DoD customers. He was also the lead architect of the Space Systems

Engineering Database, which he used to perform research and analysis on space vehicle risk and test methodologies. Prior to joining Aerospace, he worked for Hughes Space and Communications supporting failure investigations. He has published a number of reports and papers on risk assessment and test effectiveness and received numerous awards and honors for his efforts. He received his BS in Electrical Engineering Technology from Cal Poly San Luis Obispo in 1988.

**Edward F. Tuck**  
**Principal**  
**Falcon Fund**

Ed Tuck specializes in starting and managing young companies and in funding early-stage companies in telecommunications, software and specialized aerospace. Among the companies he founded or co-founded are:

- Applied Digital Access, Inc. (NASDAQ:ADAX) (network management equipment and software)
- Endgate Technology Corporation (millimeter-wave equipment) Now Endwave (NASDAQ:ENWV)
- Kebby Microwave Corporation (microwave link systems) (acquired by ITT Corporation)
- Magellan Corporation (personal GPS navigators) (acquired by Orbital Sciences, Inc.)
- Teledesic Corporation (low-Earth-orbit satellite system) (privately held)

He is also a Director of several companies, including:

- High Tower Software Corporation (Chairman)
- TriQuint Semiconductor, Inc. (NASDAQ:TQNT) (Gallium Arsenide semiconductors) (Audit Comm.)

He was a founding Director of American Telecom, Inc., a joint venture between American Telecommunications Corporation and Fujitsu, Ltd., and has served on over 25 boards of directors including those of four public companies, and on the Boards of entities in such diverse fields as tableware, forged metal, and the Mt. Everest Peace Climb.

He has been Principal of the Falcon Fund, a private seed and early-stage venture fund, since 1982. He has been a General Partner of Kinship Partners II (fully-invested) since 1990, and was a General Partner of The Boundary Fund from 1986 until its liquidation in 1995. He also has a relationship with Hallador Partners III, a seed and early-stage fund, in which he initiates and manages certain investments.

He was born and grew up in Memphis, Tennessee. He worked full-time as a radio operator and announcer for country-music stations in the Midwest while attending high school and college. He began his professional career at Delco Division of General Motors Corporation, and after service in the US Army was employed by Lenkurt Electric Company, before and after its acquisition by General Telephone Corporation in 1958. In 1964, he co-founded Kebby Microwave Corporation, which developed the first fully solid-state FM microwave link system. That company was acquired by ITT Corp., where he had worldwide technical responsibility for wireless products, and later was Vice

President and Technical Director of the ITT's North American Telecommunications Group. He was Vice President of Marketing and Engineering at American Telecommunications Corporation until its sale in 1979. He was a private investor and consultant between 1979 and 1986.

He is named sole or co-inventor on several patents in the telecommunications field. He has published articles on management of consensual organizations and on various technical subjects.

He holds a Bachelor of Science in Electrical Engineering degree from the University of Missouri at Rolla, where he was later awarded honorary Professional Engineer and Doctor of Engineering degrees. He served on its Board of Trustees and is a member of its Academy of Electrical Engineering. He served on the Commercialization Advisory Panel at Jet Propulsion Laboratories, and on the Alfred E. Mann-USC medical device commercialization committee. He is a Senior Member of the Institute of Electrical and Electronics Engineers, a Fellow of the Institution of Engineers (Australia), a Senior Member of the American Institute of Aeronautics and Astronautics, a Member of the American Association for the Advancement of Science, an Independent Telephone Pioneer and a Registered Professional Engineer. He holds a Commercial Pilot certificate, with multi-engine, instrument, and helicopter ratings.