

Outer Space Development: Including Everyone in the Process

Written by Edythe E. Weeks

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EDYTHE E. WEEKS, JUL 9 2010

Recently we have seen news images of billionaires taking \$20,000,000 trips to outer space. Various entrepreneurs are developing fleets of private spaceships. In 2010, President Barack Obama announced that NASA's Constellation Program would be cancelled, yet NASA's budget would also be increased by \$6,000,000,000. Vast quantities of natural resources such as gold, iridium, osmium, platinum, helium 3 and many others have been found in abundant quantities in outer space. The International Space Station has been in Low Earth Orbit since 1998 and humankind has come to understand what it needs to know regarding human space habitats and living in outer space. Space laws and policies have existed for decades and are ever growing. Outer space is in the process of being developed. The first phase of outer space development has already taken place. This phase involved satellite telecommunications industries and the global widespread acceptance of cable television, cell phones, the Internet and a multitude of goods and services linked to these space technologies. Bill Gates and others became very wealthy as the result of the first phase of outer space development. The Geostationary orbit has been colonized and developed. Key thinkers are looking towards the development of other regions of outer space including, Low Earth Orbit, Near Earth Orbit, asteroids, Earth's Moon, Mars and elsewhere. Only a handful of experts and students are aware of the outer space development phenomenon. The vast majority of people around the world are still thinking of outer space as an elite field for government astronauts and scientists, not for them. Meanwhile, unemployment is high, inspiration is low, economies are crashing (even the United States'), job loss is increasingly common, school systems are failing, outdated school curriculum programs are unable to motivate students to lead, and people are searching for ways to create prosperous futures for themselves and their families. So, why not expose more people to outer space development?

The term used herein, "outer space development" involves a culmination of forces – historical, legal, ideological, institutional, political, economic, psychological and structural all operating together in the post Cold War era so that space commercialization and privatization are widespread accepted norms.[i] Recently, a new trend is being set by U.S. policy. In 2004 a new policy was instituted in accordance with the President's Commission Report which lays the foundation of U.S. development of the outer space territory[ii]. Also in 2004 a new U.S. law[iii] was passed facilitating the legality of private space travel as a new industry being called "space tourism". In addition the NASA Authorization Act of 2005 made funding available to carry out the New Vision U.S. Space Exploration Policy.[iv] This policy, to a large extent calls for more participation from the private-sector in space exploration and other programs. Already a critical number of space entrepreneurs have paved the way towards new space industries, as they did during the satellite telecommunications revolution during the 1980s and 1990s. This is only the beginning of a new trend towards further space commercialization and privatization.

The result so far has been millions of dollars are being offered through various prizes to spur increased privatization of space. For example the \$10,000,000 Ansari X Prize and many other cash prizes are being offered to spur space entrepreneurship/space privatization. Examples include, the NASA Centennial Challenges Prizes (\$100,000,000), the America's Space Prize (\$50,000,000 million), the Heinlein Prize for Practical Accomplishments in Commercial Space Activities (\$500,000) and the NASA Ralph Steckler/Space Grant Space Colonization Research and

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Technology Opportunity involved awards totalling \$1,000,000. Entrepreneurs have started developing private spaceship development firms and are selling tickets to trips to outer space.

The first step toward accomplishing this goal is to expose students, teachers, administrators, civic leaders and public officials to cutting-edge research which highlights emerging industries in the field of outer space development. Exposing students to this type of knowledge while it is being created, is cutting-edge and likely to have a seriously positive impact of their future careers. Preparing them now to lead in newly emerging industries at a time when outer space settlements are being constructed can serve as a powerful motivating force to enable them to want to excel in school. Budding abilities, gifts and talents can be recruited, nourished and developed.

Outer space development studies involves many disciplines including technology, physics, geology, science, engineering, business, law, politics, hotel and restaurant management, space stations, space hotels, life support systems, psychology, sociology, medicine, international law, physiology, chemistry, intergovernmental organizations, institutions and industries, computer science, astronomy, and many more subject areas. Applying problem solving techniques usually involves several fields being integrated. Usually space studies require that students be fluent in several disciplines and this is good practice for interdisciplinary studies. Math, chemistry, science, architecture and other subjects can take on new meanings for students as they are taught to help solve problems related to outer space development. Space has been known to engage and interest students, and it is time to take these possibilities to a place beyond mere fascination and engagement. It is time to take students to a new level – actual meaningful participation in outer space development resulting in tangible careers opportunities.

[i] See Dissertation of Edythe Weeks, *The Politics of Space Law in a Post Cold War Era: Understanding Regime Change*, Northern Arizona University, December, 2006.

[ii] See the Report of the President's Commission on Implementation of U.S. Space Exploration Policy: *A Journey to Inspire, Innovate and Discover*, ISBN 0-16-073075-9, (U.S. Government Printing Office, Washington, D.C.) (June 16, 2004). In February 2004, President Bush announced a New Vision for U.S. Space Exploration Policy. He also created a commission, the President's Commission on Implementation of United States Space Exploration Policy to advise him on matters of space travel including the Moon, Mars and other celestial bodies, and mandating the holding of a series of public hearings regarding the future of the U.S. space program in addition to creating a new U.S. Space Transportation Policy in January 2005.

[iii] The Commercial Space Launch Amendments Act of 2004, Public Law 108-492, December 2004.

[iv] National Aeronautics and Space Administration Authorization Act of 2005, Public Law 109-155 (109th Congress, 1st Session); former Senate Bill 1281 (and former House bill H.R. 3070) passed on 12/17/2005 was approved by the House with bipartisan support. In delivering a speech on the House floor in support of this bill, Representative Calvert indicated that the bill "represents the first time that the President's Vision for Space Exploration has been fully endorsed by both Houses of Congress . . .". See "NASA Authorization Act Headed to the President's Desk", December 22, 2005 press release by Representative Calvert at spaceref.com/news.

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