

Space Investment Summit

Tuesday, April 17, 2007

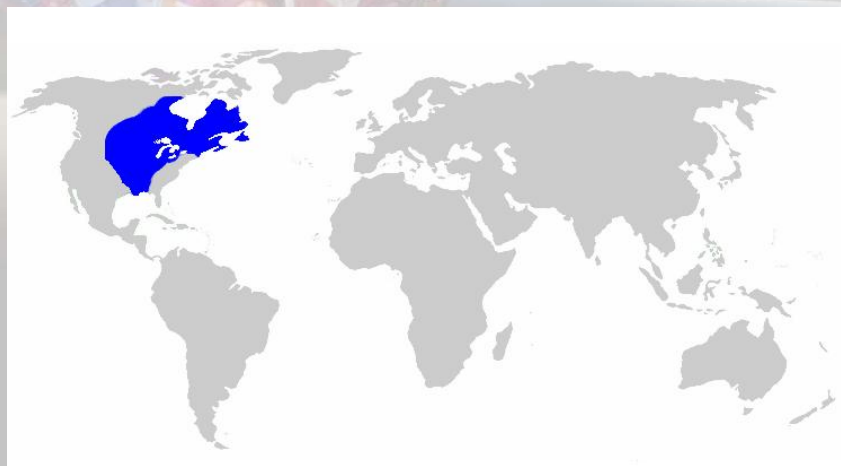
Other Opportunities: What is the Rest of the Universe Worth?

Hoyt Davidson

Near Earth LLC

Long-term Value is Not Always Obvious?

- **Treaty of Paris 1763 (End of Seven Years' War)**
 - England gave France the choice of either keeping:
 - Guadeloupe (source of sugar) or New France
 - France chose the sugar
 - Guadeloupe had a larger population, higher GDP and was easier to defend
- Earth orbit has hundreds of satellites, billions of dollars of commerce and is easier to get to, but is it worth more than the ROTU



Historical Perspective

New World Development

- **1492-1607**
 - Columbus to Jamestown
 - Government sponsored
 - National strategic & Western trade interests
 - Gold and unique trade (sugar, coffee)
 - Coastlines/islands + exploration
- **1607 – 1776**
 - Jamestown to Independence
 - Corporate & individual with government concessions and protection
 - Full land exploration/utilization
 - Replication of Old World

Space Development

- **1957 – 1984**
 - Sputnik to PanAmSat
 - Government sponsored
 - National strategic & international telecom
 - ICBMs and unique satcom (int'l telecom, TV to cable)
 - GEO + exploration
- **1984 – ????**
 - PanAmSat to
 - Corporate & individual with government concessions and protection
 - LEOs, MEOs, HEOs, Moon,
 - ???

Who Will Develop ROTU?

- **Answer: Private enterprise with government**
 - Exploration & technology funding, and
 - Commercial concessions
- **Historical Analogy**
 - “The first twelve of the English continental colonies, and all English Island colonies except Jamaica, were founded and settled by private enterprise, personal or corporate. The English crown....had neither the money nor the aptitude to found colonies. So it gave concessions to individuals and companies.” Samuel Eliot Morison, The Oxford History of the American People

When Will You Know Government Is Serious about Developing Space?

- **Answer: When major concessions and financing support are provided**
- **Historical Analogy: Pacific Railway Act of 1862**
 - “An act to aid in the construction of a railroad and telegraph line from the Missouri River to the Pacific Ocean, and to secure to the government the use of the same for postal, military, and other purposes.”
 - **Land Grants: 10 sq. miles each side of track every other mile**
 - 175 million acres, larger than Texas
 - **Financing: \$16,000-\$48,000/mile of U.S. Government Bonds, subordinated to an equal amount of company issued bonds**
 - **Regulatory:**
 - Superseded all previous land treaties
 - Allowed for massive immigration of cheap labor
 - Central Pacific & Union Pacific were virtual monopolies

What Investments are Worth Making?

Today

- **Earth Science Applications**
 - from Lagrange points or Moon
 - Global Warming should fund new projects
- **Support of New “Civil” Space Race**
 - China, India, Europe, others becoming more active
 - Strategic necessity and national pride
 - U.S. will need to respond regardless of administration
 - Return to Moon and then Mars

Tomorrow - The Super Anthropic Principal

- **We live in a universe uniquely capable of supporting human exploration and colonization**
 - **Materials:** over 1,000 asteroids of solid metal
 - **Water:** ice moons and clouds of comets
 - **Fuel:** entire planets of hydrogen and helium
 - **Destinations:** solar system plus 200+ extra solar planets