



State of the Satellite Industry Report

June 2008

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*Prepared by
Futron Corporation*



- The latest comprehensive satellite industry statistics in SIA's series of annual studies
- Performed by Futron Corporation, the report includes surveys of SIA members and key companies in the industry, augmented with publicly available data and research to derive industry revenues and statistics
- The study includes year-end data for four satellite industry segments:
 - Satellite Services
 - Satellite Manufacturing
 - Launch Industry
 - Ground Equipment

Satellite Manufacturing

- Satellite Manufacturing
- Component and Subsystem Manufacturing



Ground Equipment

- Network Equipment
 - Mobile Terminals
 - Gateways
 - Control Stations
 - Very Small Aperture Terminals (VSATs)
- Consumer Equipment
 - Direct Broadcast Satellite (DBS) Dishes
 - Handheld Phones
 - Digital Audio Radio Service (DARS) Equipment
 - Global Positioning System (GPS) Primary-Use Hardware

Satellite Services

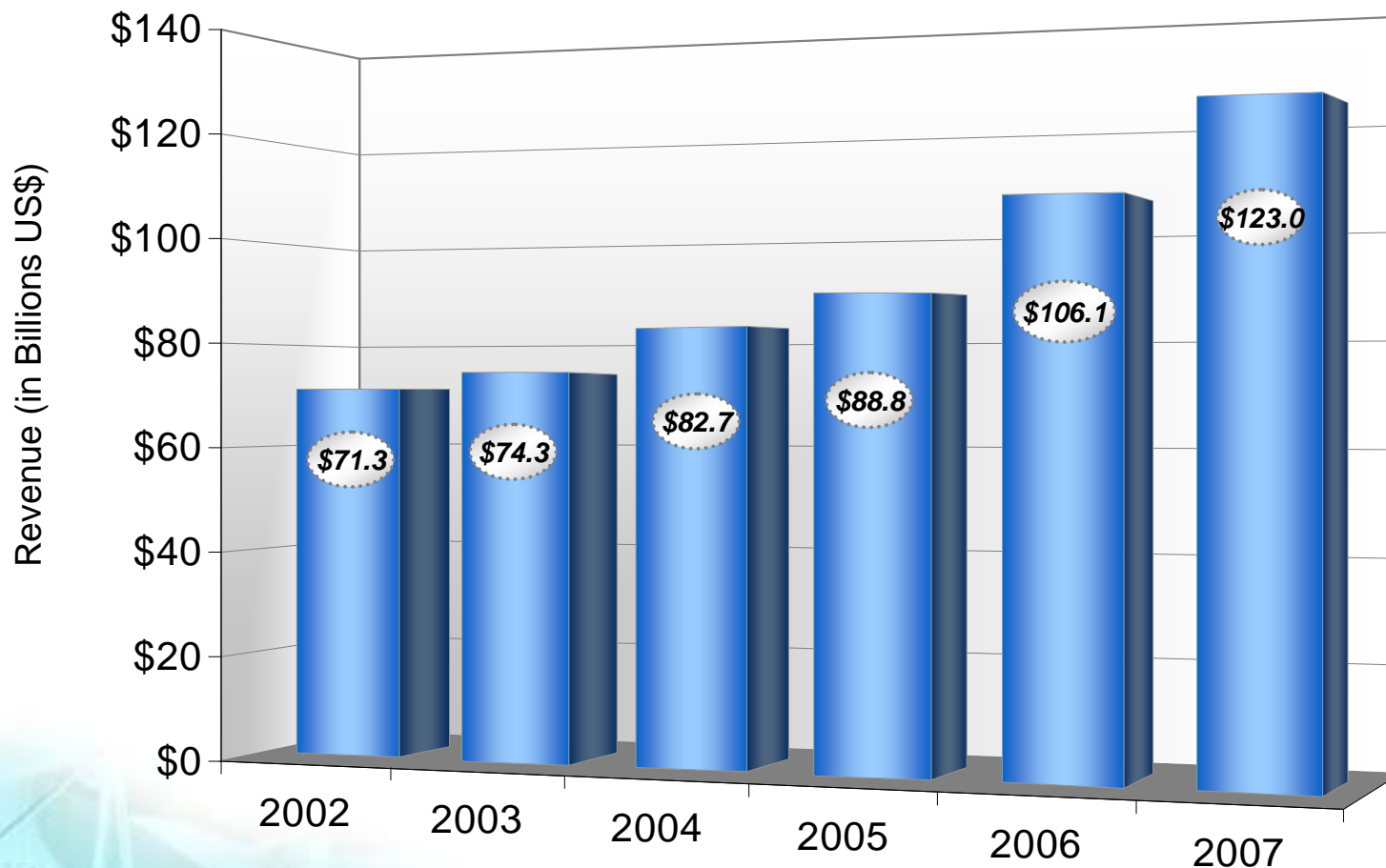
- Mobile
 - Mobile Data
 - Mobile Voice
- Fixed and Other
 - Broadband
 - Private Networks
 - Transponder Agreements
 - Remote Sensing
- Broadcasting
 - Satellite Television
 - Satellite Radio

Launch Industry

- Launch Services
- Vehicle Manufacturing
- Component and Subsystem Manufacturing

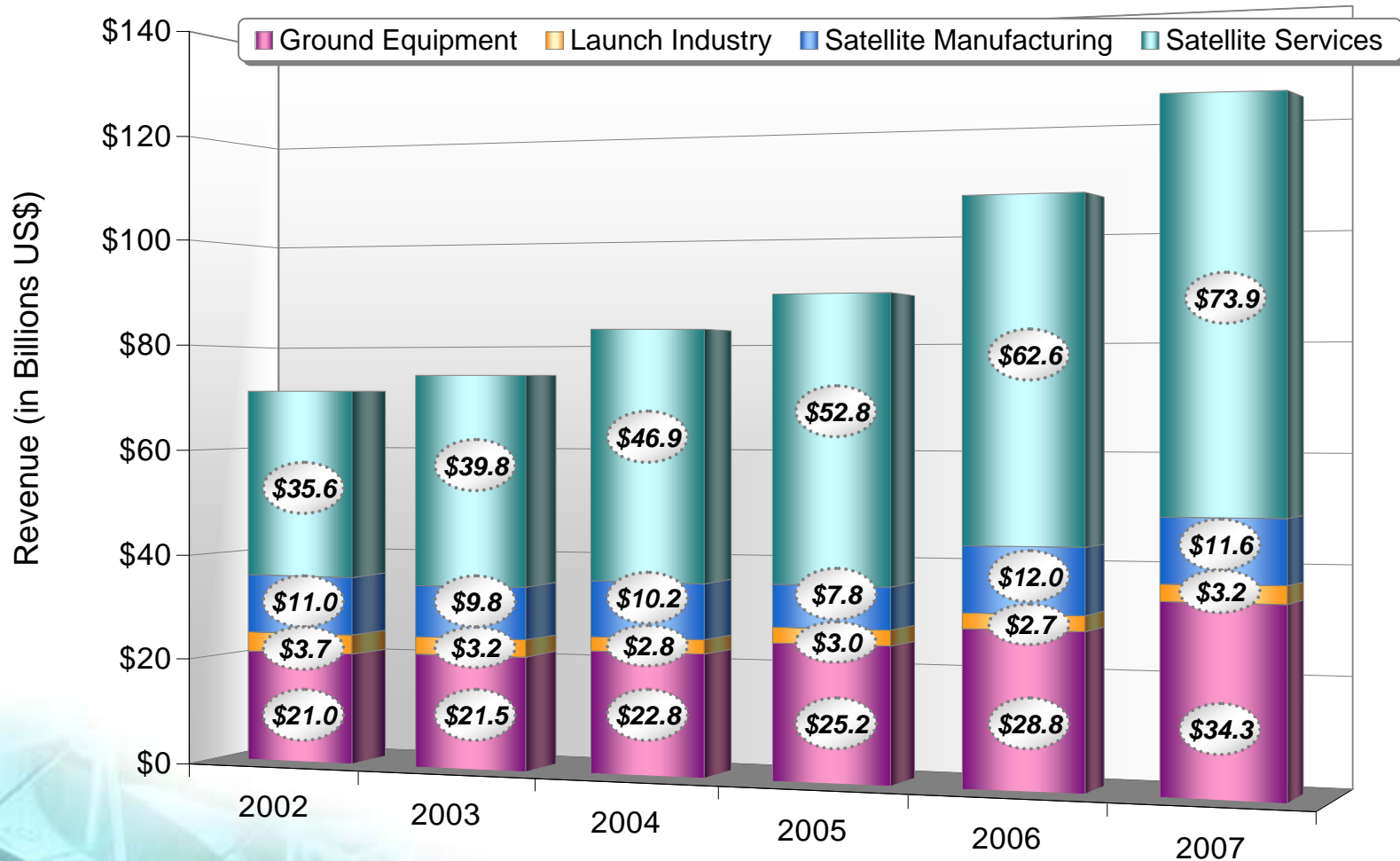
- Satellite Manufacturing data
 - Include commercial manufacturing activity for both commercial and government customers
- Launch Industry data
 - Include services provided by private companies for both commercially-owned and government-owned payloads
 - Do not include government launches, such as Shuttle launches or ISS missions
- All Launch Industry and Satellite Manufacturing revenues are recognized in the year of launch
- Revenue is expressed in real-year U.S. dollars (not adjusted for inflation)

World Satellite Industry Revenues



World satellite industry revenues had average annual growth of 11.5% for the period 2002-2007

World Revenues By Sector



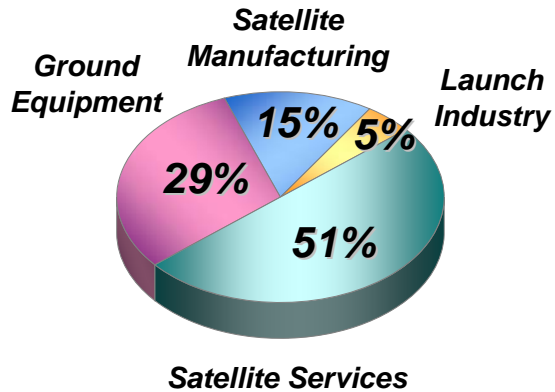
Satellite Services showed continued strong growth of 18%, solidifying its role as the driver of this industry

- Overall worldwide industry revenue growth was 16% from 2006 to 2007, compared with a 19.5% increase from 2005 to 2006, led by the Satellite Services sector
- Satellite Services increased slightly more than 18% from 2006 to 2007, largely due to growth in satellite television revenues
- Although more satellites launched in 2007 than in 2006, Satellite Manufacturing revenues declined slightly, reflecting an increase in the number of micro-satellites launched
- Launch Industry revenues grew nearly 19% from 2006 to 2007—an improvement over 2005 to 2006
- Ground Equipment revenues, driven by strong sales of consumer hardware for a range of applications, grew 19% over 2006 levels

World Revenues By Sector

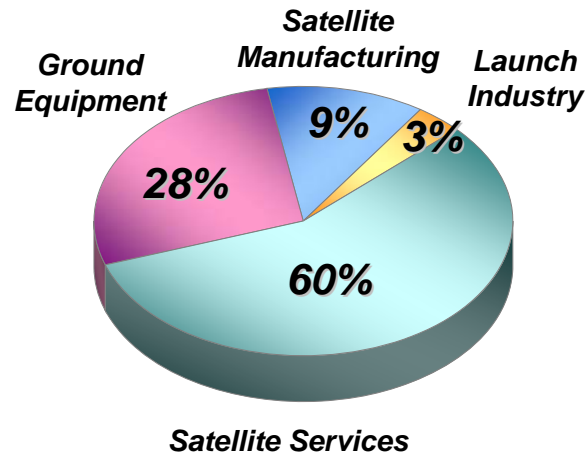
2002

US\$71.3 Billion



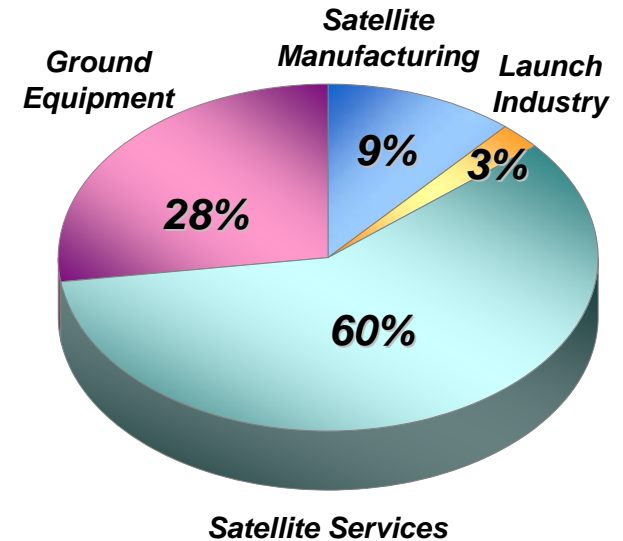
2005

US\$88.8 Billion



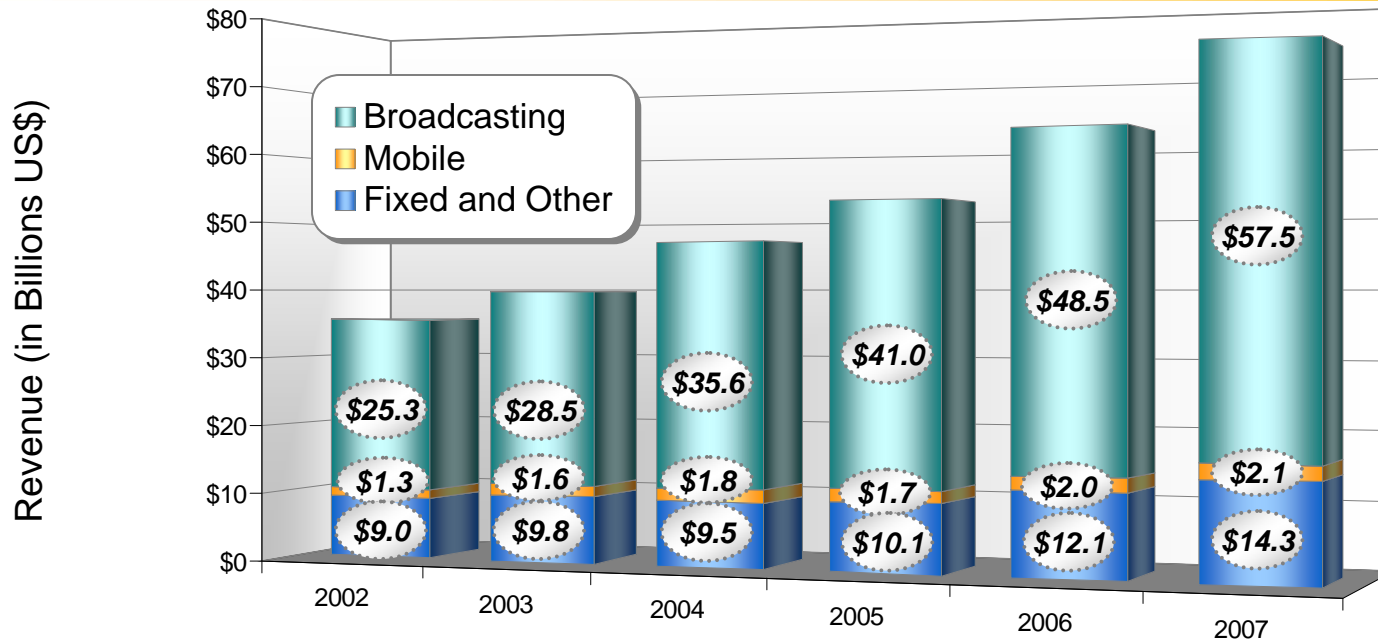
2007

US\$123.0 Billion



■ Ground Equipment
 ■ Launch Industry
 ■ Satellite Manufacturing
 ■ Satellite Services

World Satellite Services Revenue



	2002	2003	2004	2005	2006	2007
Broadcasting	\$25.3	\$28.5	\$35.6	\$41.0	\$48.5	\$57.5
- Satellite Radio (DARS)	\$0.0	\$0.1	\$0.3	\$0.8	\$1.6	\$2.1
- Satellite TV (DBS/DTH)	\$25.3	\$28.4	\$35.3	\$40.2	\$46.9	\$55.4
Mobile¹	\$1.3	\$1.6	\$1.8	\$1.7	\$2.0	\$2.1
Fixed and Other²	\$9.0	\$9.8	\$9.5	\$10.1	\$12.1	\$14.3
- End-User Broadband	\$0.2	\$0.3	\$0.2	\$0.3	\$0.3	\$0.4
Total	\$35.6	\$39.8	\$46.9	\$52.8	\$62.6	\$73.9

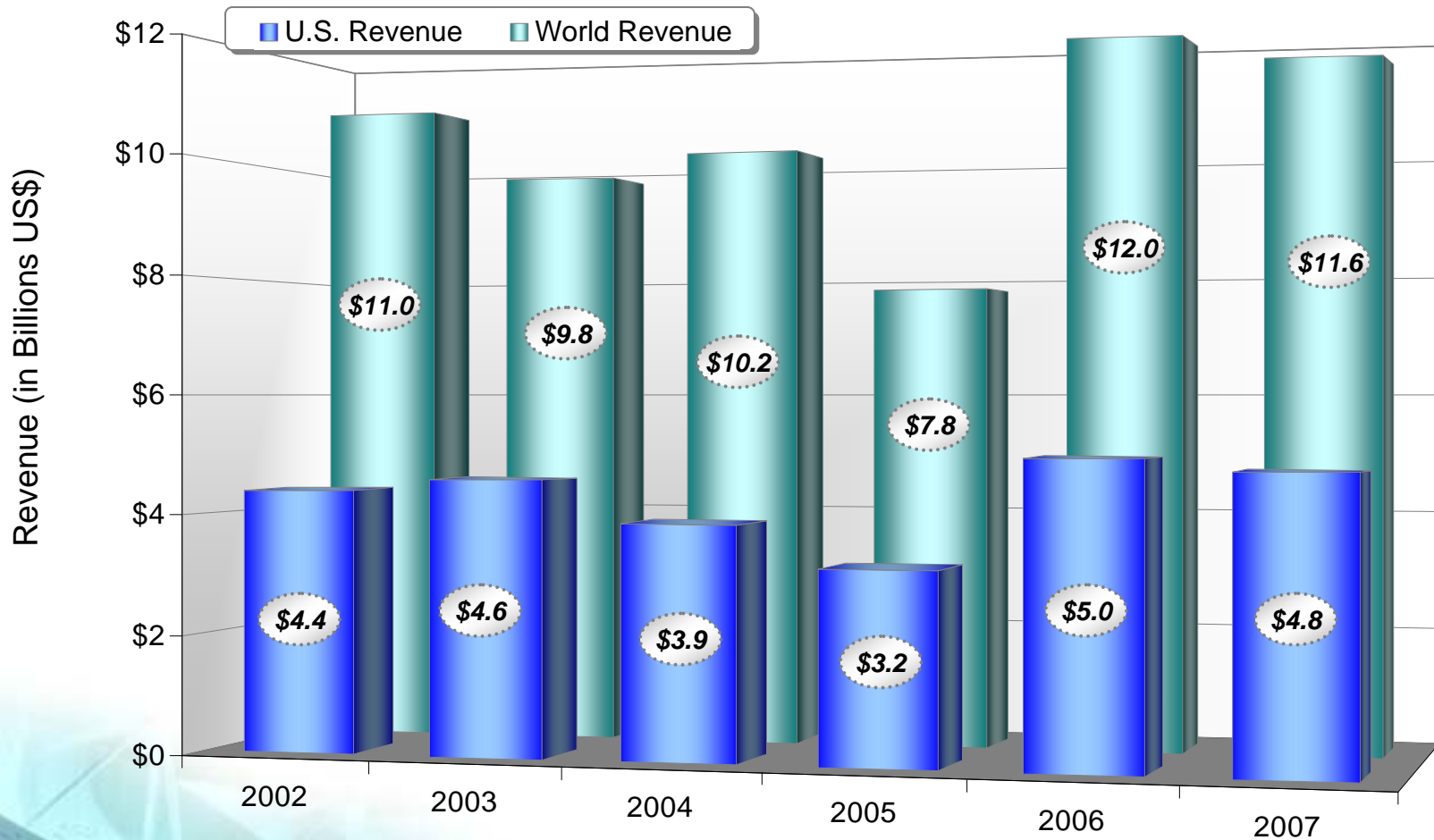
1. Mobile Satellite Services: telephony and data

2. Fixed Services/Other: Transponder agreements, network management services; Remote Sensing; and end-user broadband

- Satellite Services growth of 18% in 2007 was almost as robust as the 19% growth in 2006
- Satellite television and DBS, representing three-quarters of total satellite services revenues in 2007, increased 18% overall to \$55.4 billion
 - Satellite pay TV subscribers increased by about 13% over 2006 levels, surpassing 100 million globally
- Transponder agreement revenues represent the core of the fixed satellite services sector, and continued to grow, increasing 21% in 2007
 - Includes contracts for full or partial transponders and occasional use services

- Data applications drove mobile satellite services growth
 - Mobile data services revenues grew by 14%, compared to 10% in 2006, and now represent almost 60% of all mobile satellite services
 - While satellite mobile telephony remains a key enabler of emergency communications around the world, revenues for this sector declined by 4% in 2007
- Satellite radio (DARS) continued to experience strong growth
 - Revenues increased by almost one-third, from \$1.58 billion in 2006 to \$2.1 billion in 2007
 - Subscribers increased by 27%, from 14.2 million in 2006 to approximately 18 million in 2007

Satellite Manufacturing Revenues



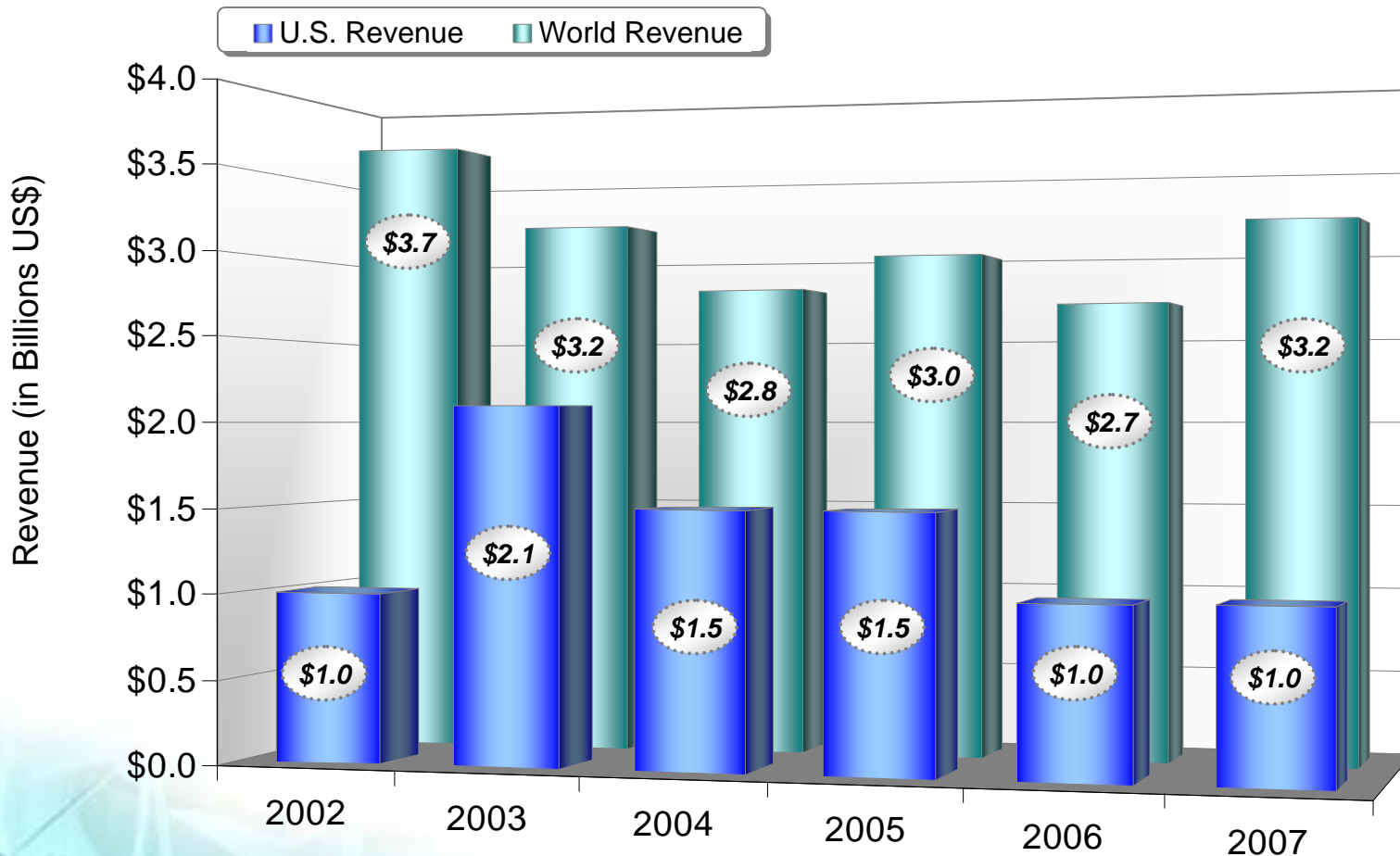
Note: Satellite Manufacturing revenues are recorded in the year the satellite is delivered/launched, not when contract is awarded. World revenue includes U.S. revenue.

- Global Satellite Manufacturing revenues decreased marginally from \$12 billion in 2006 to \$11.6 billion in 2007
- U.S. manufacturing revenues, which account for 41% of the worldwide total, also declined slightly, from \$5 billion in 2006 to \$4.8 billion in 2007
- One cause of the minor revenue decline was the higher proportion of micro-satellites* launched, each representing lower revenue than would larger spacecraft
 - 102 satellites were launched in 2007—one more than in 2006
 - Of these 102 satellites, 16 were micro-satellites, compared to 9 such satellites in 2006

* For this study, micro-satellites are defined as payloads weighing 50 kilograms or less. Micro-satellites manufactured by universities or non-profits were excluded.

- Satellite Manufacturing revenues from commercial customers grew from by 27%, from \$3 billion in 2006 to \$3.8 billion, in 2007
 - The proportion of manufacturing revenues from commercial customers increased from 25% of total manufacturing revenues in 2006 to 33% in 2007
- 21 new commercial geosynchronous orbit (GEO) satellite orders were announced in 2007, four fewer than in 2006
 - U.S. manufacturers received 52% of these orders, up from 42% in 2006
 - European manufacturers received 43% of these orders, down from 46% in 2006
 - Rest of world manufacturers earned 5% of these orders, down from 12% in 2006

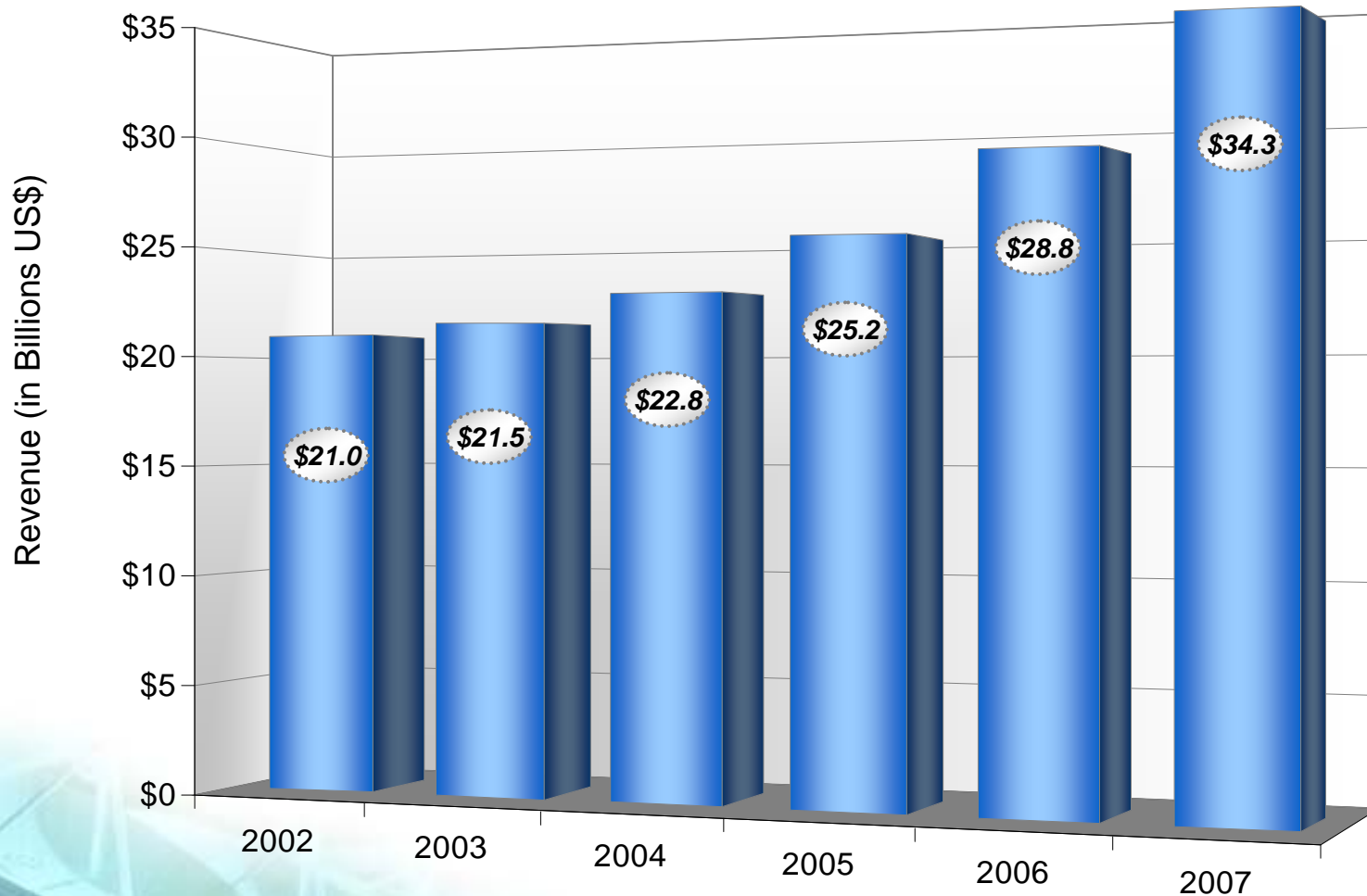
Launch Industry Revenues



Note: Launch Industry revenues are recorded in the year the launch occurs, not when contract is awarded.

- Worldwide Launch Industry revenues increased by 19% in 2007, reversing the 10% percent decline in the previous year
 - 47% of revenues came from launch procurements by commercial entities
 - 53% of revenues came from launches contracted on a competitive/commercial basis by governments
- 49 commercial launches took place in 2007, eight more than in 2006
 - 55% were conducted on behalf of commercial customers, compared with 44% in 2006
 - U.S. providers staged two fewer commercial launches in 2007 than in 2006, reducing the U.S. share from 44% to 33%
- While global commercial launch revenues rose in 2007, U.S. revenues remained constant at \$1 billion
 - As a percentage of worldwide launch revenues, the U.S. share continued to decline, from 37% in 2006 to 31% in 2007

World Ground Equipment Revenues



Includes: *Network Equipment* – Gateways, Network Operations Centers (NOCs), Satellite News Gathering (SNG) equipment, flyaway antennas, and Very Small Aperture Terminals (VSATs); and *Consumer Equipment* – Satellite TV dishes, satellite radios, satellite phones, and select GPS devices

- Overall revenue in the Ground Equipment sector grew 19% from 2006, continuing as the second largest segment of industry revenues
- Revenues for consumer equipment drove growth in this sector
 - Prices for consumer hardware (e.g., satellite TV and radio receivers) are increasing as more applications and bundled services are incorporated

- End-user terminal numbers grew across all sectors

Terminals in Service	End-2006	End-2007
Satellite TV	88,737,915	100,507,651
Satellite Radio	14,152,212	18,022,951
Mobile Satellite Services	1,773,729	1,833,126
Mobile Satellite TV	750,000	950,000
End-User Broadband	565,300	683,700

Note: For consumer services, terminal number estimates are based on reported subscriber numbers

- Growth of end-user broadband between 2006 and 2007 occurred primarily in the U.S.
- Mobile satellite TV is currently offered only in Korea and Japan, although service is pending in the U.S. and Europe

- Although the launch sector contributed the smallest proportion of total satellite industry revenues, it employed the second-highest number of satellite personnel in the U.S.

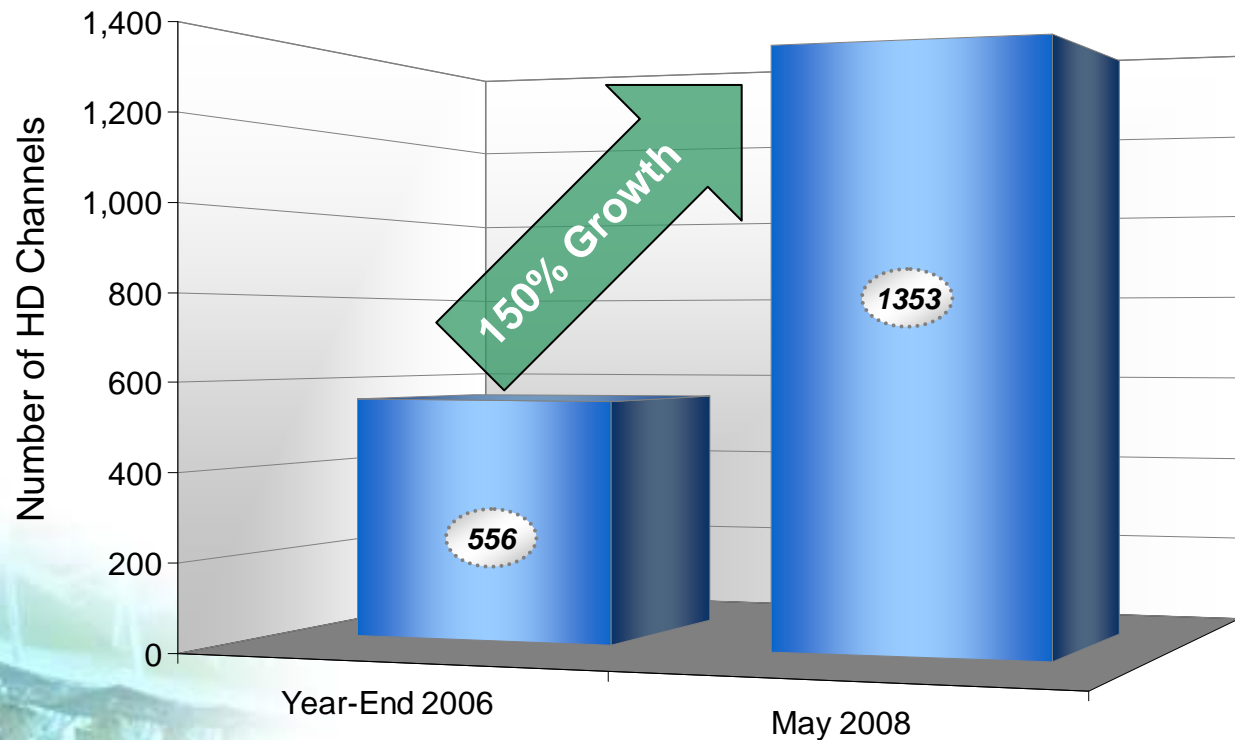
Satellite Industry Sector	Estimated U.S. Personnel (2006) *
Satellite Services	49,423
Satellite Manufacturing	16,184
Launch Industry	78,762
Ground Equipment	124,042
Total Estimated U.S. Employees (2006) *	268,411

* Source: U.S. Bureau of Labor Statistics (BLS). All figures 2006 — the most recent complete data as of May 2008

Figures derived from three inputs: BLS Current Employment Statistics Survey (CES); BLS Quarterly Census of Employment and Wages (QCEW); U.S. Census Bureau North American Industry Classification System (NAICS)

Global Satellite Carriage of HDTV

- Satellite carriage of High Definition Television (HDTV) continued to grow rapidly
 - The number of HDTV channels worldwide grew by 150% from 2006 to May 2008
- Satellite-delivered HDTV channels are forecasted to grow 350% by 2013



- Overall satellite industry growth of 16% indicates a fundamental robustness and flexibility to weather business cycles
- Proportional industry composition has remained constant in the past three years, reflecting a steady interdependence and maturity of each sector
- Consumer services, both satellite TV and satellite radio, continue to lead overall Satellite Services growth
- Ground Equipment growth, particularly in the consumer equipment side, will continue to be a major driver
- Overall Satellite Manufacturing revenues remained nominally unchanged in 2007, with commercial demand growing faster than government

- Some industry-wide trends continue
 - Commercial satellite operators continue to replace and realign their fleets
 - Robust global appetite continues for consumer satellite applications, mobility and convergence
 - Carriage of HDTV continues to reach critical mass in major markets globally

- Some questions remain
 - Will Satellite Manufacturing revenues be buoyed by the trend toward larger, more complex spacecraft or alternatively orders for multiple smaller satellites?
 - What role will government customers play as commercial applications compete for manufacturing, launch and services capacity?
 - How will government export policies affect future Satellite Manufacturing and Launch Industry trade?
 - Will new providers enter the commercial launch sector as global demand for launches increases?
 - How will changes in the financial structure of the industry affect advance planning and innovation for long-lead projects?
 - Will satellite-delivered broadband find an ongoing customer base in the U.S. and abroad?
 - Will new mobile voice, data and video applications capture consumer interest to enable growth rates similar to that of satellite TV and radio?