



State of the Satellite Industry Report

June 2010

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*Prepared by
Futron Corporation*





Study Overview

- The latest comprehensive satellite industry statistics in SIA's series of annual studies
- Based on year-end 2009 annual statistics from key players representing four satellite industry segments:
 - Satellite Services
 - Satellite Manufacturing
 - Launch Industry
 - Ground Equipment
- Performed by Futron Corporation, the report includes surveys more than 70 key companies and SIA members, augmented with publicly available data and research to derive industry revenues and statistics



Satellite Industry Sectors Surveyed

Satellite Services

- Consumer Services
 - Satellite Television
 - Satellite Radio
 - Satellite Broadband
- Fixed Satellite Services
 - Transponder Agreements
 - Managed Network Services
- Mobile Satellite Services
 - Mobile Data
 - Mobile Voice
- Remote Sensing



Satellite Manufacturing

- Satellite Manufacturing
- Component and Subsystem Manufacturing

Launch Industry

- Launch Services
- Vehicle Services

Ground Equipment

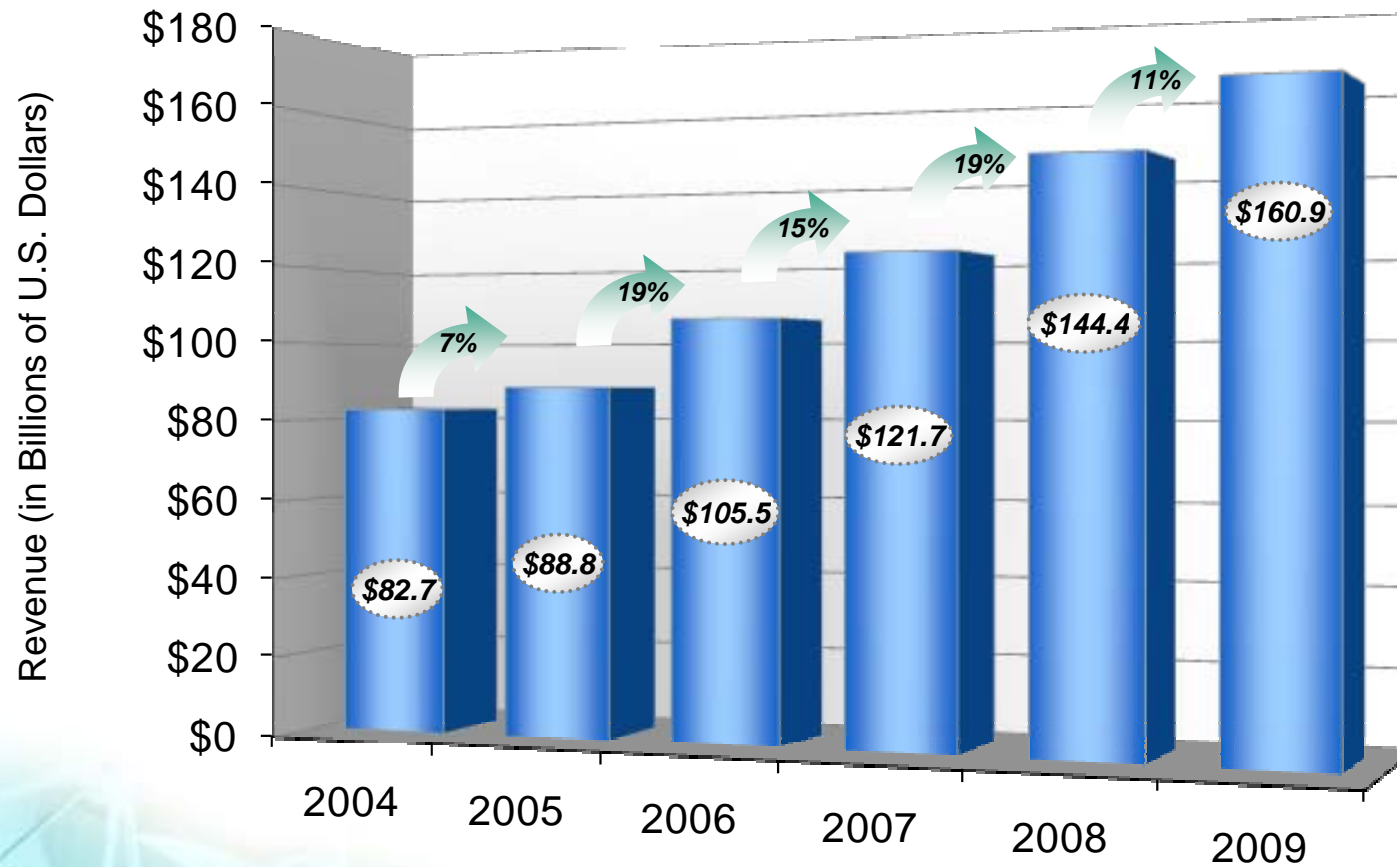
- Network Equipment
 - Gateways
 - Control Stations
 - Very Small Aperture Terminals (VSATs)
- Consumer Equipment
 - Direct Broadcast Satellite (DBS) Dishes
 - Handheld Satellite Phones
 - Digital Audio Radio Service (DARS) Equipment
 - Global Positioning System (GPS) Primary-Use Hardware



Methodology Notes

- All data reflect global revenues unless otherwise noted
- Satellite Manufacturing data
 - Include spacecraft built by commercial arms of government entities (such as ISRO's Antrix of India)
 - Exclude university-built satellites
- Actual satellite manufacturing revenues for research and development, procurement, and construction are accrued throughout the life-cycle of satellite programs; however, they are captured in this report only during the year of launch
- Launch Industry data
 - Include all launches by commercial launch companies, including those that primarily launch government payloads
 - Exclude launches conducted by government entities for government customers outside of commercial procurement processes
- Revenue is expressed as in-year U.S. dollars (not adjusted for inflation)

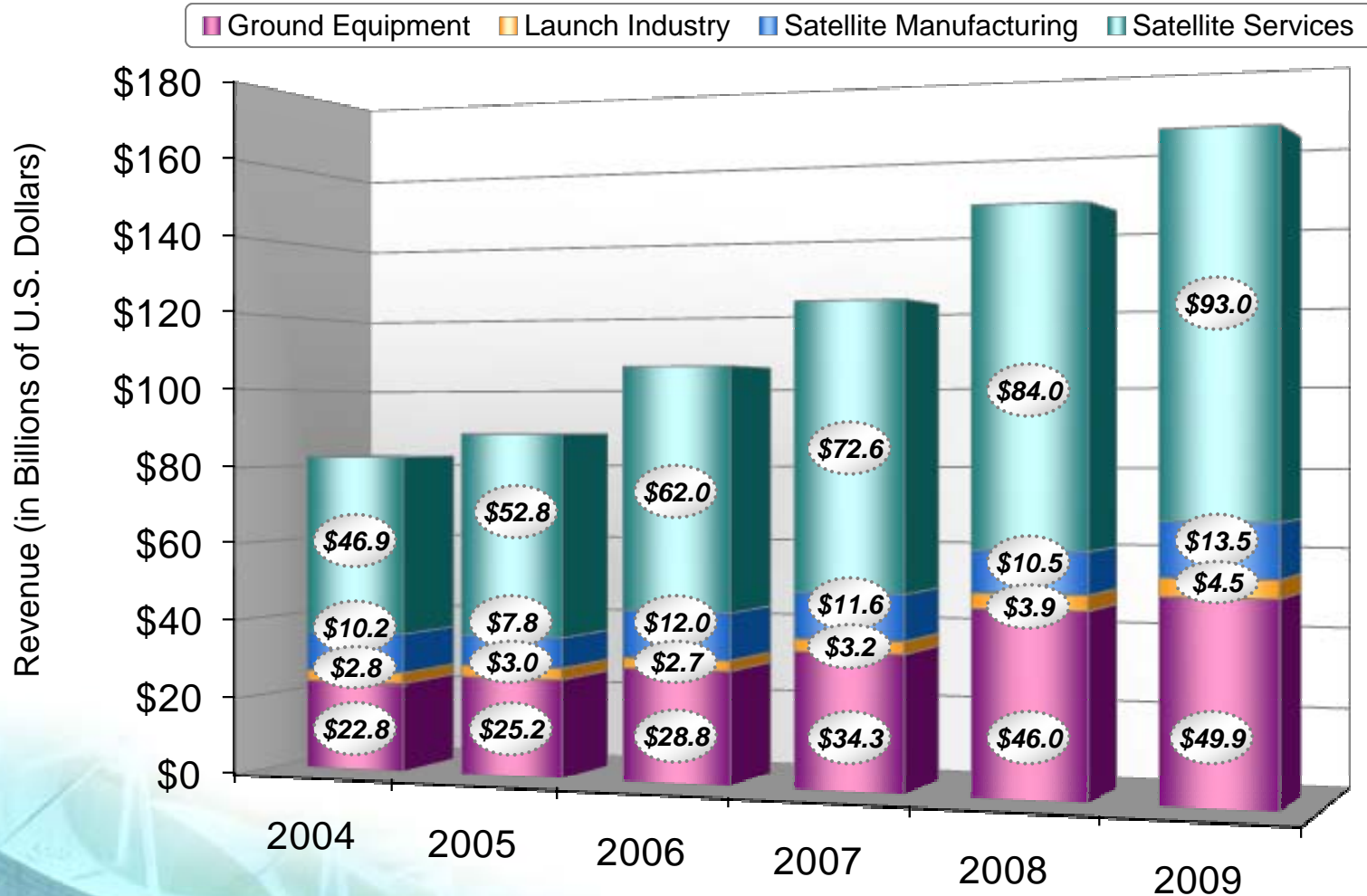
World Satellite Industry Revenues



World satellite industry revenues posted average annual growth of 11.7% for the period from 2004 through 2009



World Revenues By Sector



Revenues for all four sectors surveyed grew from 2008 to 2009, led by Satellite Manufacturing (29% growth), followed by the Launch Industry (18%), Satellite Services (11%), and Ground Equipment (8%)

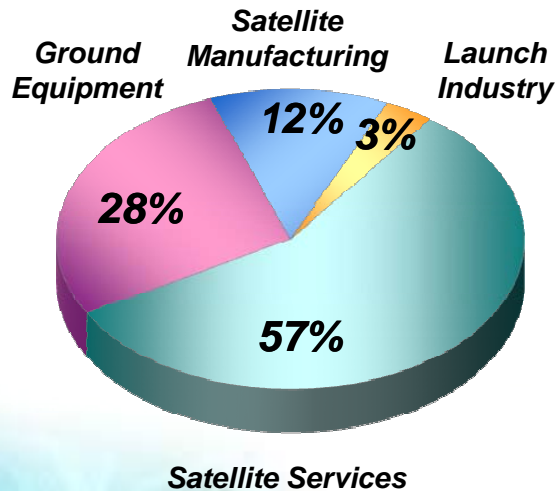


Top-Level Satellite Industry Findings

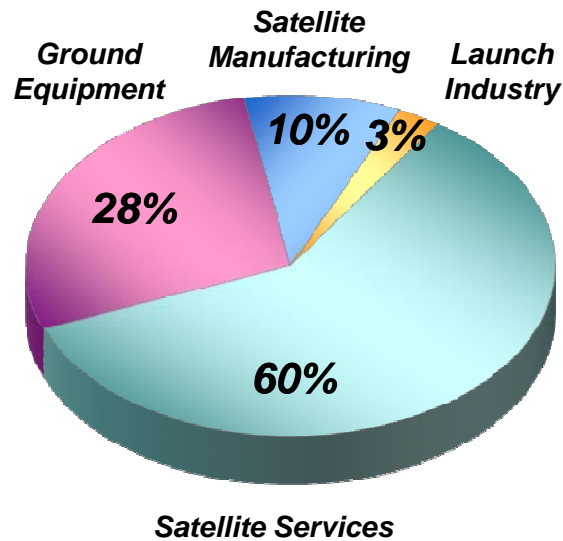
- Overall worldwide industry revenue growth was 11% from 2008 to 2009, down from a 19% increase from 2007 to 2008
- Importantly, all four industry sectors' revenue grew in 2009
- Despite slightly slower growth in subscriptions for consumer services, Satellite Services revenues grew 11% from 2008 to 2009
- Satellite Manufacturing revenues increased by nearly one-third between 2008 and 2009, as greater numbers of high-value spacecraft were completed and launched
- Launch Industry revenues grew by 18% from 2008 to 2009; 11 more orbital launches occurred in 2009 than in 2008
- Ground Equipment revenues grew by 8% in 2009, driven by slower but steady growth in both consumer and network equipment
- As of 3Q 2009, U.S. satellite industry employment was down 5.5% from 4Q 2008, with losses seen in all four sectors

World Revenues By Sector

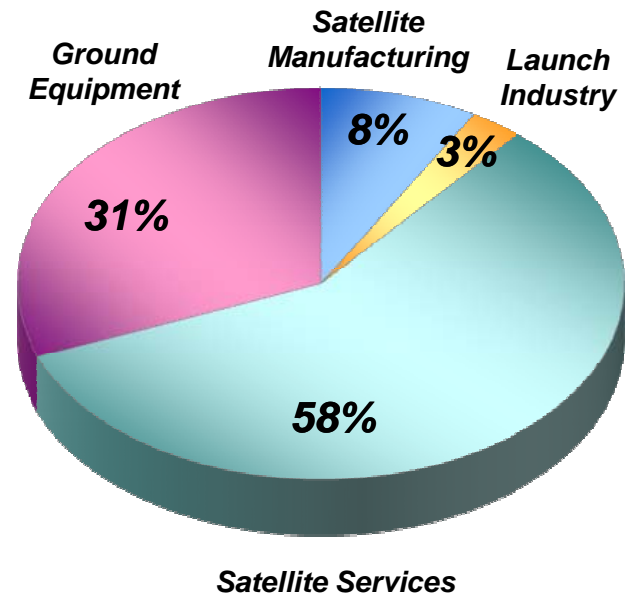
2004
US\$82.7 Billion



2007
US\$121.7 Billion



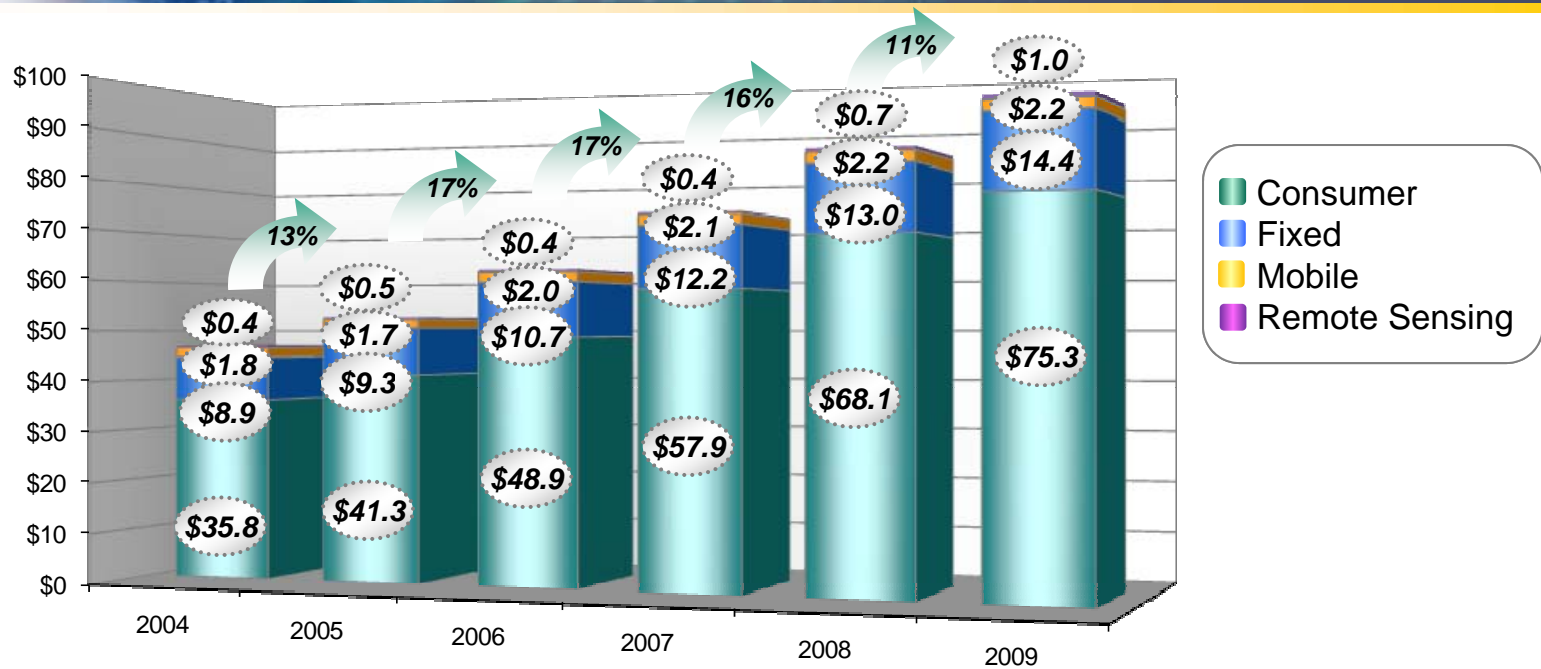
2009
US\$160.9 Billion



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

World Satellite Services Revenue

Revenue (in Billions of U.S. Dollars)



	2004	2005	2006	2007	2008	2009
Consumer	\$35.8	\$41.3	\$48.9	\$57.9	\$68.1	\$75.3
- Satellite TV (DBS/DTH)	\$35.3	\$40.2	\$46.9	\$55.4	\$64.9	\$71.8
- Satellite Radio (DARS)	\$0.3	\$0.8	\$1.6	\$2.1	\$2.5	\$2.5
- End-User Broadband	\$0.2	\$0.3	\$0.3	\$0.4	\$0.8	\$1.0
Fixed	\$8.9	\$9.3	\$10.7	\$12.2	\$13.0	\$14.4
- Transponder Agreements	\$7.0	\$7.3	\$8.5	\$9.6	\$10.2	\$11.0
- Managed Network Services ²	\$ 1.9	\$2.0	\$2.2	\$2.6	\$2.8	\$3.4
Mobile ³	\$1.8	\$1.7	\$2.0	\$2.1	\$2.2	\$2.2
Remote Sensing	\$0.4	\$0.5	\$0.4	\$0.4	\$0.7	\$1.0
Total	\$46.9	\$52.8	\$62.0	\$72.6	\$84.0	\$93.0

Note: Numbers may not sum exactly due to rounding

1. Includes capacity for DTH platforms 2. Includes VSAT services 3. Includes mobile satellite telephony and data



Satellite Services Findings

- Despite a worldwide economic slowdown, overall Satellite Services revenue expanded at 11% in 2009—albeit lower than the 17% and 16% growth posted in 2007 and 2008, respectively
- Consumer Satellite Television services (DBS/DTH), representing three-quarters of total Satellite Services revenues in 2009, also grew 11%, from \$64.9 billion to \$71.8 billion
 - 8 million satellite pay TV subscribers were added between 2008 and 2009—mainly in Asia—bringing the world total to over 140 million
 - U.S. satellite pay TV subscribers exceeded 30 million, representing one quarter of the world total
- Transponder agreement revenues, the core of the fixed satellite services sector, increased from \$10.2 billion in 2008 to \$11 billion in 2009—a 7.8% growth rate, exceeding the 6% growth posted from 2007 to 2008
- Broadband satellite internet revenues reached \$1 billion globally
 - The U.S. constituted approximately 70% of these revenues



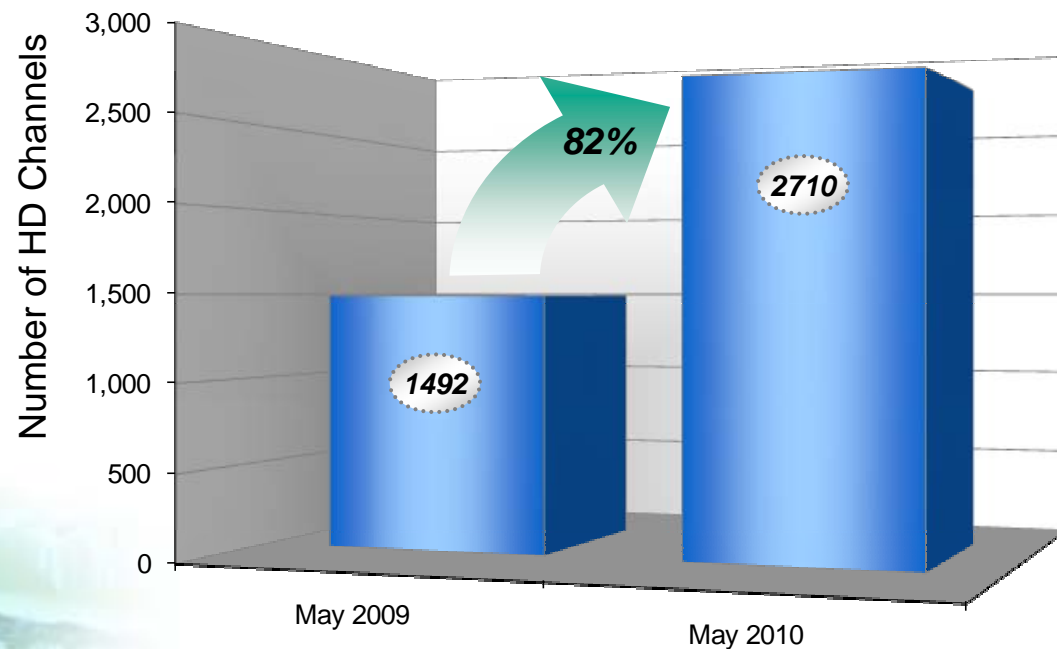
Satellite Services Findings (2)

- Mobile satellite services growth continued to be driven by data applications
 - Mobile data services revenues grew by 13%, and now represent three-quarters of all mobile satellite services revenues
 - Mobile voice revenues declined by 23% in 2009, with most providers reporting slightly lower revenues year-on-year
- Satellite radio (DARS) continued to grow, although the pace of growth was slower
 - Subscription revenues increased 4%, from \$2.45 billion to \$2.54 billion (reflecting 32,000 net subscribers added), versus the 18% growth from 2007 to 2008
- Revenues from remote sensing imagery products and services surged 37% to \$1 billion in 2009, reflecting higher-resolution offerings from newly launched satellites, as well as value-added services



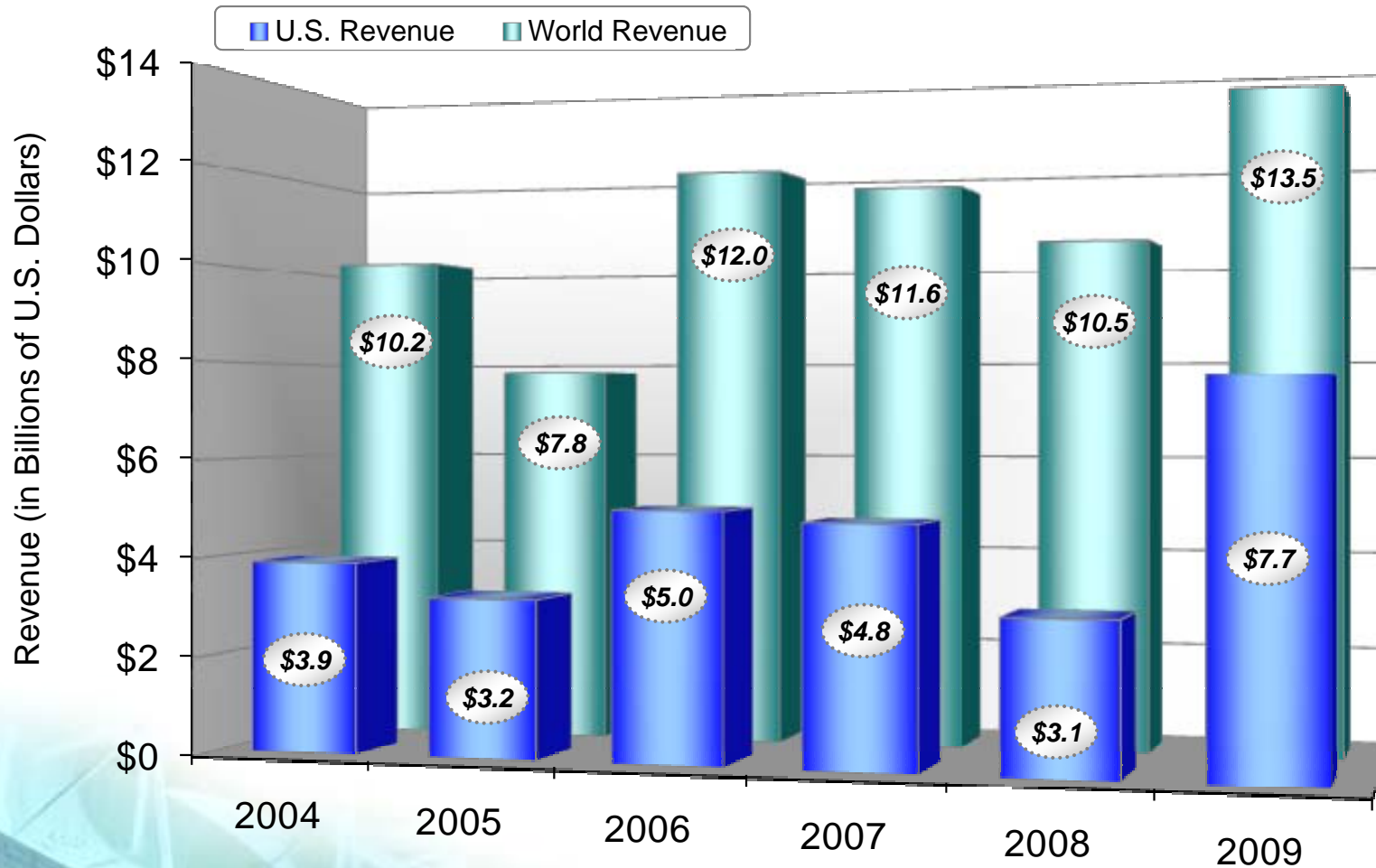
Impact of HDTV on Satellite Industry

- Growth in the numbers of High Definition Television (HDTV) and cable distribution channels continued both to drive demand for transponder capacity and to increase revenues for satellite pay TV
 - The number of HDTV channels worldwide nearly doubled from May 2008 to May 2009
 - Almost 80% of HDTV channels currently serve the Americas
 - Remaining HDTV channels primarily serve Europe and Asia-Pacific, yet the gap between these markets and the Americas indicates potential for further growth





Satellite Manufacturing Revenues



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



Satellite Manufacturing Findings

- Global Satellite Manufacturing revenues grew by nearly one-third, from \$10.5 billion to \$13.5 billion, between 2008 and 2009
- While worldwide Satellite Manufacturing revenues tend to vary year-on-year, they have shown steady growth in the longer term
 - From 2004 through 2009, Global Satellite Manufacturing revenues increased by 61% overall
- Commercially-procured satellites for government missions were the primary driver of growth
 - Several large and high-value satellites serving a variety of civil, scientific, and military missions were built and launched in 2009
 - The value of commercially-procured government satellites launched in 2009 was \$9.8 billion, up from \$5.3 billion in 2008



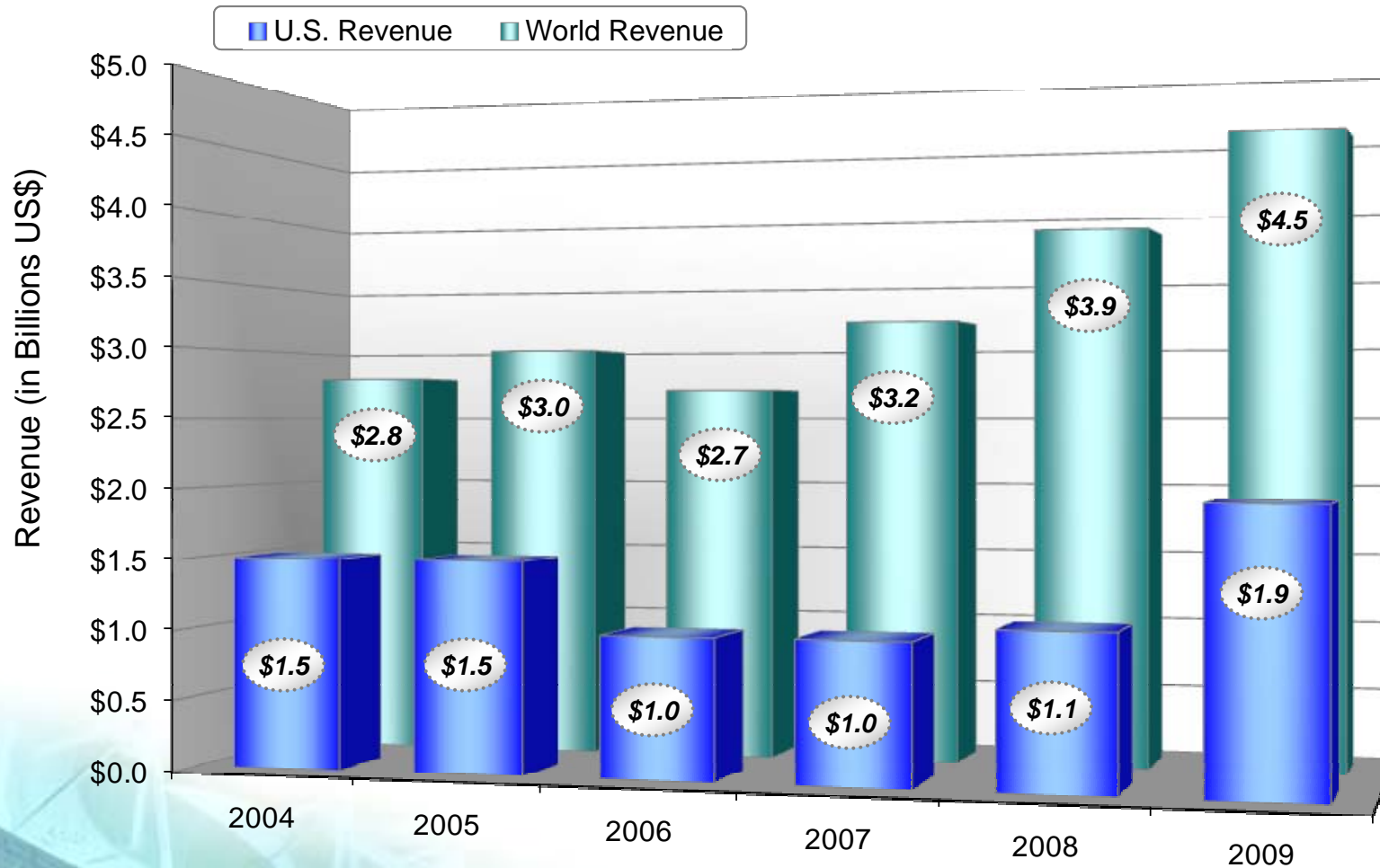


Satellite Manufacturing Findings (2)

- U.S. Satellite Manufacturing revenues more than doubled, increasing the U.S. share from 30% in 2008 to 57% in 2009
 - Major NASA, NOAA, and DoD satellites were completed and deployed
 - 41% of commercially-manufactured spacecraft launched in 2009 were built by U.S. firms, compared with 22% in 2008
- Future commercial spacecraft orders:
 - 41 commercial geosynchronous orbit (GEO) satellite manufacturing orders were announced in 2009 for future delivery, almost double the orders announced in 2008
 - U.S. manufacturers received 19 of these orders, or 46%—down slightly from the 52% of orders announced for U.S. firms in 2008
 - European manufacturers received 12 of these orders, or 29%—a slight decrease compared to 33% won by European firms in 2008
 - The remaining 10 orders were split among Russian, Chinese, Canadian, and Japanese manufacturers
 - The combined share of orders won by firms from these countries rose from 14% in 2008 to 24% in 2009



Launch Industry Revenues



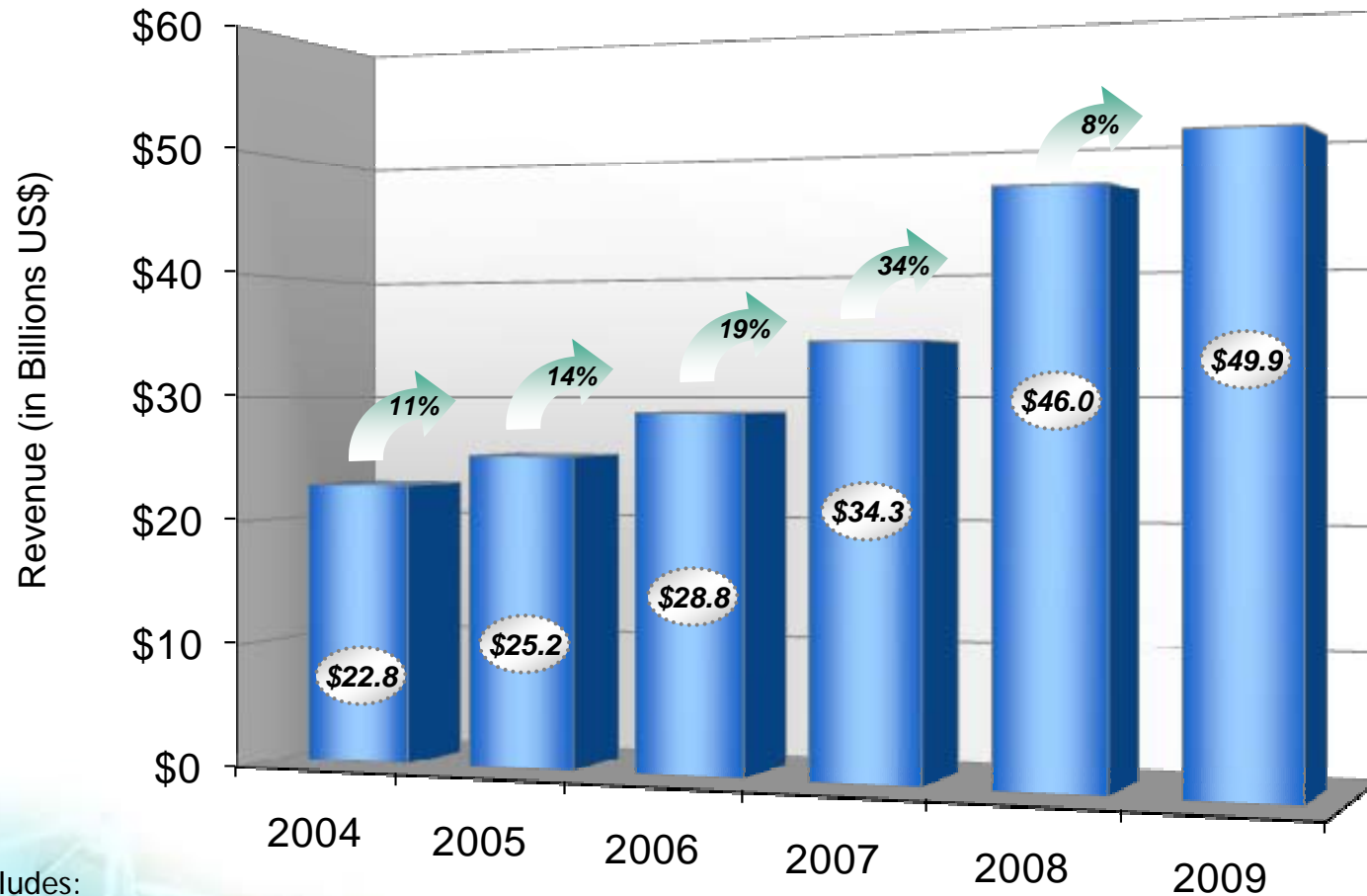
Note: Launch Industry revenues are recorded in the year the launch occurs, not when contract is awarded or interim payments are transacted. World revenue includes U.S. revenue.



Launch Industry Findings

- Worldwide Launch Industry revenues increased by 18% in 2009, slightly lower than the previous year's growth
- In 2009, there were 46 commercially-procured launches, compared to 49 in 2008—but average revenue per launch increased
- Government demand for commercial launches was the main growth driver in 2009, representing 55% of all commercially-procured launch revenues
- U.S. launch revenues surged 78%, from \$1.1 billion to \$1.9 billion, based on commercially-procured launches for U.S. government clients
 - The U.S. share of global launch revenues rose to 42% in 2009
- Announced commercial launch orders in 2009 declined by 10 to 35
 - Geosynchronous (GEO) launch orders increased 25% to 25 in 2009, none U.S. but two for China (APT Satellite Company and NIGCOMSAT)
 - Non-Geosynchronous (NGSO) launch orders declined from 25 to 10 in 2009

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 and broadband dishes, satellite radios, satellite phones, and select GPS devices



Ground Equipment Findings

- Overall revenue in the Ground Equipment sector grew by 8% from 2008 to 2009
 - This was a significantly lower expansion than the 34% growth between 2007 and 2008
- Consumer equipment sales of satellite phones, satellite TV dishes, and satellite radios remained steady
- Sales of satellite network equipment (including VSATs and other terminals) grew by 3%
- While sales of primary-use GPS equipment (personal navigation devices, in-vehicle navigation systems, shipment tracking devices, and precision measurement instruments) continued to grow, the industry emphasis is shifting toward handsets and chipsets, which are not included in this report



Ground Equipment Findings (2)

- The number of end-user ground equipment terminals in service grew across all sectors, although at a slower rate than in the previous year

Terminals in Service (Millions)	2008	2009
Satellite TV	133.6	141.3
Satellite Radio	20.4	20.5
Mobile Satellite Services	1.9	2.0
End-User Broadband	1.0	1.1
Mobile Satellite TV	1.3	1.5

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

- Global growth of end-user broadband between 2008 and 2009 occurred primarily in the U.S.
 - U.S. satellite broadband subscribers grew from approximately 842,000 in 2008 to approximately 942,000 as of year-end 2009
- Mobile Satellite TV (S-DMB) revenues derive from new hand-held video services available primarily in Asian markets



U.S. Satellite Industry Employment (As of Year-End 2009)

- Between year-end 2008 and year-end 2009, the U.S. satellite industry shed 12,219 jobs, or 4.6%, linked to the global economic downturn
- All four satellite industry segments were impacted
 - The Ground Equipment sector had the largest decline, losing 7,816 jobs, or 7.9%
 - Satellite Manufacturing employment contracted by 1,161 jobs, or 4.1%
 - Satellite Services shed 3,220 jobs, or 3.8%
 - The Launch Industry was most resilient, losing only 23 net jobs, a negligible percentage

Satellite Industry Sector	Estimated U.S. Personnel (2008) *	Estimated U.S. Personnel (2009) *
Satellite Services	84,267	81,047
Satellite Manufacturing	28,014	26,854
Launch Industry	52,007	51,984
Ground Equipment	98,663	90,848
Total Estimated U.S. Employees *	262,952	250,733

* Includes launch tracking and telemetry services

Source: U.S. Bureau of Labor Statistics (BLS). All figures as of year-end 2009 – the most recent complete data as of August 2010

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)



2009 Global Trend Summary

- Overall satellite industry growth of 11% reflected strength in 2009 despite a worldwide economic recession
- Size of the four industry sectors' revenues analyzed in relation to each other indicates balanced consistency of revenues over time
- Satellite services remained the single largest satellite industry segment, led by satellite TV growth
- Launch Industry and Satellite Manufacturing revenues posted the most robust growth in 2009
 - Government demand surged in 2009, with more launches carrying higher-value spacecraft
 - The U.S. share of both global Launch Industry and Satellite Manufacturing revenues also rose significantly
- Ground Equipment revenue grew at a substantially slower rate, as the GPS sector shifted from primary-use GPS devices to secondary-use GPS chipsets



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