State of the Satellite Industry Report
June 2013

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Prepared by

THE TAURI GROUP
The Satellite Industry Association: 18 Years as the Voice of the U.S. Satellite Industry
• This is SIA’s 16th annual comprehensive study of satellite industry data
• Performed by The Tauri Group
• Over 80 key companies were surveyed worldwide, including all SIA members, augmented by market analysis and financial reporting
• Based on year-end 2012 data from major players, representing four satellite industry segments
• All data reflect global revenues, unless otherwise noted
• Based on unclassified sources
• Revenue is expressed as then-year U.S. dollars (not adjusted for inflation)
Satellite Industry Segments Surveyed

- Satellite Services
- Launch Industry
- Satellite Manufacturing
- Ground Equipment
Global satellite industry grew 7% in 2012, outpacing both worldwide economic growth rate (2.3%) and U.S. growth (2.2%).
The Satellite Industry in Context

• The global satellite industry is a subset of both the global telecommunications and space industries
  » Satellite industry = 62% of space revenues (remainder primarily governmental space budgets)
  » Satellite industry = 4% of telecommunications revenues

• Satellite industry growth tracks with both the telecommunications and space industries in 2012
  » Telecommunications revenue growth = 14%
  » Space revenue = 5%
  » Satellite industry = 7%

 Operational Satellites by Function (as of 2012)

- Over 1,000 operating satellites as of year-end 2012
  - More than half are communications satellites
  - More than one third are commercial communications satellites
- More than 50 countries operate at least one satellite (some as part of regional consortia)

Source: Tauri Group database of spacecraft and launch activities.
Top-Level Global Satellite Industry Findings

• Satellite industry revenue was $189.5 billion in 2012
  » Growth of 7% worldwide in 2012, surpassing 6% in 2011

• All four satellite industry segments surveyed posted growth in 2012
  » **Satellite services**, the largest segment, grew by 5%
  » **Satellite manufacturing** revenues grew by 23%
  » **Launch industry** revenues rose by 35% in 2012
  » **Ground equipment** revenues increased by 4% in 2012
Global satellite industry revenues have nearly tripled since 2001, with an average 10% growth per year.
Satellite Industry Segments

Satellite Services
- Consumer Services
  - Satellite Television
  - Satellite Radio
  - Satellite Broadband
- Fixed Satellite Services
  - Transponder Agreements
  - Managed Network Services (including spaceflight management services)
- Mobile Satellite Services
  - Mobile Data
  - Mobile Voice
- Remote Sensing/Imaging Services
## Global Satellite Services Revenue

### Notes:
- Numbers may not sum exactly due to rounding.
- 1. Includes capacity for DTH satellite TV platforms.
- 2. Includes VSAT networks; Space Flight Management services included in Managed Services beginning in 2010.

### Tables

<table>
<thead>
<tr>
<th>Segment</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
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</thead>
<tbody>
<tr>
<td><strong>TOTAL</strong></td>
<td>$72.6</td>
<td>$84.0</td>
<td>$92.9</td>
<td>$101.3</td>
<td>$107.8</td>
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<td><strong>Consumer</strong></td>
<td>$57.9</td>
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<td>$55.4</td>
<td>$64.9</td>
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<td>$84.4</td>
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<td>Satellite Radio (DARS)</td>
<td>$2.1</td>
<td>$2.5</td>
<td>$2.5</td>
<td>$2.8</td>
<td>$3.0</td>
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<td>Satellite Broadband</td>
<td>$0.4</td>
<td>$0.8</td>
<td>$1.1</td>
<td>$1.2</td>
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<td><strong>Fixed</strong></td>
<td>$12.2</td>
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<td>$15.0</td>
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<td>Transponder Agreements (1)</td>
<td>$9.6</td>
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<td>$11.1</td>
<td>$11.4</td>
<td>$11.8</td>
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<td>Managed Services (2)</td>
<td>$2.6</td>
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<td>$3.4</td>
<td>$3.9</td>
<td>$4.3</td>
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<tr>
<td><strong>Mobile</strong></td>
<td>$2.1</td>
<td>$2.2</td>
<td>$2.2</td>
<td>$2.3</td>
<td>$2.4</td>
<td>$2.4</td>
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<tr>
<td>Voice</td>
<td>$0.9</td>
<td>$0.9</td>
<td>$0.7</td>
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<td>Data</td>
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<td>$1.5</td>
<td>$1.6</td>
<td>$1.7</td>
<td>$1.8</td>
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<tr>
<td>Remote Sensing</td>
<td>$0.4</td>
<td>$0.7</td>
<td>$1.0</td>
<td>$1.0</td>
<td>$1.1</td>
<td>$1.3</td>
</tr>
</tbody>
</table>

**Notes:** Numbers may not sum exactly due to rounding. 1. Includes capacity for DTH satellite TV platforms. 2. Includes VSAT networks; Space Flight Management services included in Managed Services beginning in 2010.
Satellite Services Findings: Consumer Services Highlights

- Satellite services revenues grew 5% worldwide in 2012 (slightly lower than the 6% growth in 2011) to $93.3 billion U.S. dollars
- The consumer services segment was the largest contributor to overall satellite services revenues and consists of satellite television, radio, and broadband

- **Satellite television services** (DBS/DTH) account for more than 80% of all satellite services revenues, and 95% of consumer revenues
  - Satellite pay TV subscribers up 4%, driven by growth in emerging markets
  - Over 160 million subscribers worldwide
  - 40% of global revenues attributed to the U.S.

- **Satellite radio** (DARS) revenues grew by 13% in 2012
  - Satellite radio subscribers grew 9% in 2012 to nearly 24 million
  - Primarily U.S. customer base

- **Satellite broadband** service revenues increased from $1.2 billion in 2011 to $1.5 billion in 2012
  - Subscribers grew 10% in 2012, with over 1 million subscribers (mostly in the U.S.)
  - Subscriptions grew for established services, and several new services entered operations in 2012
Satellite Services Findings

- Fixed satellite services grew 4%
  - Transponder agreements revenues grew 3%, continuing the steady trend of recent years
  - Managed services revenues grew 7%, slightly slower than last year’s 10% growth

- Mobile satellite services grew 3%
  - Mobile satellite voice revenues were flat
  - Mobile satellite data revenues grew 5%

- Remote sensing revenues grew 20%
  - U.S. government spending drove growth, along with better-than-expected performance from industry leaders
Increasing numbers of High Definition Television (HDTV) and cable distribution channels continued to drive revenues for satellite pay TV.

HDTV contributes to retail and wholesale services revenue by increasing transponder agreement revenues and consumer satellite TV revenues.

HDTV also drives ground equipment purchases.

Nearly 60% of HDTV channels serve the Americas, with emerging growth in Europe and Asia.

Source: LyngSat database.
Satellite Industry Segments

Satellite Manufacturing
Satellite Manufacturing Revenues

- Worldwide 2012 revenues totaled $14.6 billion
- U.S. market share neared 60% of global revenues

Note: Satellite manufacturing revenues are recorded by this study in the year the satellite is launched.
Satellite Manufacturing Findings

- While revenue grew, fewer satellites were launched in 2012 (81) than in 2011 (90)
- Revenue growth was driven by a greater number of higher value satellites

Spacecraft Launched by Mission Type (2012)*

- Commercial Communications: 30%
- Remote Sensing: 15%
- Navigation: 11%
- Meteorological: 4%
- Military Surveillance: 6%
- Scientific: 7%
- R&D: 7%
- Civil/Military Communications: 20%

* Does not include government-built, university-built, and/or research satellites

- U.S. satellite manufacturing revenues increased 31%
- U.S. firms built one third of the spacecraft launched in 2012, and earned nearly 60% of global satellite manufacturing revenues
- 61% of U.S. satellite manufacturing revenues from U.S. government

Spacecraft Launched by Country/Region of Manufacturer (2012)

- USA, 32%
- Russia, 16%
- China, 23%
- Europe, 22%
- Japan, 2%
- All other, 4%

Based on unclassified sources
Orders for 18 commercial GEO satellites were placed in 2012.

12 orders were won by U.S. manufacturers.

This represents the largest share of announced orders won by U.S. manufacturers in over a decade.
Case Study: Manufacturing Trends - Innovation in Spacecraft

• High throughput satellites (HTS) combine the use of several technologies for far greater efficiency, including frequency re-use, spot beams, and on-board processing to maximize available spectrum
  » 22 HTS ordered and/or being manufactured
  » 18 currently on orbit

• All-electric propulsion provides a significant reduction in satellite weight, but requires more transit time to reach final orbit
  » For the first time, orders were placed for all-electric propulsion commercial GEO communications satellites in 2012
Satellite Industry Segments

Launch Industry
- Launch Services
- Launch Vehicles
• $6.5 billion global revenues in 2012 from commercially-procured launches
• U.S. market share was 35% of global revenues; derived almost entirely from government launches

Note: Launch Industry revenues are recorded by this study in the year the launch is conducted.
Satellite Launch Industry Findings

- Satellite launch industry revenues increased by 35% globally in 2012, compared with 10% in 2011
  » Despite fewer satellite launches in 2012, revenues grew due to more launches of larger and more expensive vehicles
  » Government customers remained the major satellite launch revenue driver in 2012, accounting for 64% of commercially-procured satellite launch revenues
  » This marked a slight increase from the 59% government share in 2011
- The U.S. had the largest share of all commercially-procured launches, nearly all from launching U.S. government satellites
- The number of commercially-procured launches remained relatively stable. 52 launches occurred in 2012, compared to 56 launches in 2011

2012 commercially-procured launches by orbit:
- GEO 58%
- LEO 34%
- MEO 8%
Orders to launch 25 commercial payloads were placed in 2012

- 8 payload launch orders were won by U.S. companies, up from 3 ordered in 2011
- Europe retained the largest share of commercial launch orders
Satellite Industry Segments

Ground Equipment
• Network Equipment
  » Gateways
  » Control stations
  » Very small aperture terminals (VSATs)
• Consumer Equipment
  » Satellite TV dishes
  » Satellite radio equipment
  » Satellite broadband dishes
  » Satellite phones and mobile satellite terminals
  » Satellite navigation stand-alone hardware
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)

- **Consumer Equipment** — Satellite TV, radio, and broadband equipment, mobile satellite terminals, and stand-alone satellite navigation devices, not including chipsets used in devices (such as smartphones) whose primary use is not satellite navigation

2011 – 2012 Global Growth

<table>
<thead>
<tr>
<th>Year</th>
<th>Network Equipment</th>
<th>Satellite Navigation Equipment</th>
<th>Satellite TV, Radio, Broadband, and Mobile Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>$20.8</td>
<td>$7.6</td>
<td>$12.8</td>
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<tr>
<td>2008</td>
<td>$29.4</td>
<td>$9.9</td>
<td>$12.2</td>
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<tr>
<td>2009</td>
<td>$31.1</td>
<td>$11.9</td>
<td>$12.2</td>
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<tr>
<td>2010</td>
<td>$31.9</td>
<td>$12.2</td>
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<tr>
<td>2011</td>
<td>$32.2</td>
<td>$12.2</td>
<td>$32.2</td>
</tr>
<tr>
<td>2012</td>
<td>$32.2</td>
<td>$12.2</td>
<td>$32.2</td>
</tr>
</tbody>
</table>
Ground Equipment Findings

- Ground equipment revenues increased 4% overall in 2012
- Network equipment revenues grew 17%, driven by VSAT sales
- Satellite TV, broadband, radio, and mobile voice and data equipment revenues grew 5%, and the number of terminals in service grew across all segments in 2012
- Satellite navigation equipment represents nearly 60% of overall ground equipment revenue, with a migration away from stand-alone to embedded chipsets

![Pie chart showing terminals in service (millions)]

- Satellite TV: 160.2
- Mobile Voice and Data: 2.6
- Satellite Radio: 23.9
- Broadband: 1.4
Satellite industry employment in the U.S. decreased by 1% in 2012, compared to a 2% loss in 2011.

U.S. satellite companies shed a little over 20,000 jobs between 2007 and 2012, an 8% loss.

Three of the four satellite industry segments experienced job losses in 2012:

- Satellite Services added 5,035 jobs, or +7% (2011: -2.4%)
- Satellite Manufacturing employment declined by 1,549 jobs, or -6% (2011: -3%)
- Launch Industry employment declined by 1,246 jobs, or -2.2% (2011: -2.2%)
- Ground Equipment employment decreased by 3,647 jobs, or -4% (2011: -0.7%)

Source: U.S. Bureau of Labor Statistics (BLS). All figures are preliminary estimates for 2012 based on figures through Q3 2012. Data will be updated for full-year 2012 in Fall 2013.
2012 Satellite Industry Indicators Summary

$189.5B
2012 Global Revenues

7%
Growth 2011 – 2012

Satellite Services $113.5
Ground Equipment $54.9
Launch Industry $6.5

Satellite Manufacturing $14.6

5%
Satellite Services $113.5B

Consumer $93.3
Mobile $2.4
Remote Sensing, $1.3
Fixed $16.4

Satellite Manufacturing $14.6B

23%
U.S. $8.2
Non-U.S. $4.3

Ground Equipment $54.9B

4%
Ground Equipment $54.9B

Consumer (GNSS) $32.2
Network $9.8

Launch $6.5B

35%
U.S. $2.2
Non-U.S. $12.8

2011 – 2012

Consumer (Non-GNSS) $12.8

7%
Satellite Services $113.5B

Consumer $93.3
Mobile $2.4
Remote Sensing, $1.3
Fixed $16.4

Satellite Manufacturing $14.6B

23%
U.S. $8.2
Non-U.S. $4.3

Launch Industry $6.5

35%
U.S. $2.2
Non-U.S. $6.4

Launch $6.5B

4%
Ground Equipment $54.9B

Consumer (GNSS) $32.2
Network $9.8
Satellite industry revenue was $189.5 billion in 2012:

- Growth of 7% worldwide in 2012
- Surpassed 6% growth rate in 2011
- The satellite industry fares well with tracking industries

All four satellite industry segments surveyed posted growth in 2012:

- **Satellite services**, the largest segment, grew by 5% - consumer services continues to be a key driver for the overall satellite industry

- **Satellite manufacturing** revenues grew by 23%, due to proportionally more expensive commercial GEO and government satellites in 2012

- **Launch industry** revenues rose by 35% in 2012, even with fewer overall launches, but with more commercial launches and more expensive heavy government launches than 2011

- **Ground equipment** revenues increased by 4% in 2012, with slowing growth in consumer equipment and increasing growth in network equipment
Contact

Previous reports are available at www.sia.org

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