

- SPECIAL EDITION – THE TOP-10 SPACE BUSINESS STORIES OF 2012 -

#1 – All-Electric Satellites Take Charge

Electric propulsion satellites - a new trend? **Asia Broadcast Satellite Holdings Ltd.** and **Satélites Mexicanos, S.A. de C.V.** jointly procured from **Boeing** a total of 4 new **702 SP** satellites, featuring an all-electric xenon-ion propulsion system, and **SES S.A.** and the **European Space Agency** (ESA) formed a partnership to develop a European all-electric propulsion satellite platform, with **OHB-System AG** serving as prime contractor.

#2 – Launch Services Ups and Downs

24 commercial satellite launch missions: **Arianespace** rolled on: ASTRA 2F, EchoStar XVII, EUTELSAT 21B, Galileo IOV-1 (2 satellites), GSAT-10, HYLAS 2, Intelsat 20, JCSAT-13, Mexsat Bicentenario, MSG-3, Skynet 5D, Star One C3 and VINASAT-2; **China Great Wall Industry Corporation:** Chinasat 12/SupremeSAT 1 and VesselSat 2; **ILS International Launch Services:** EchoStar XVI, Intelsat 22, Intelsat 23, Nimiq 6, SES-4 and SES-5, then suspended **Proton Breeze-M** missions to improve industrial quality control; **Mitsubishi Heavy Industries, Ltd.** assumed full **H2-B** launch operations; **Sea Launch AG** resumed operations with the launches of Eutelsat 70B and Intelsat 21; and **Space Exploration Technologies Corp.** added commercial customers to its burgeoning **Falcon 9** manifest.

#3 – Whither ATC?

Seeking time to resolve its spectrum use, in May, **LightSquared Inc.** filed for protection under Chapter 11 of the U.S. Bankruptcy Code. In December, the **Federal Communications Commission** granted **DISH Network L.L.C.** authority to use S-band spectrum holdings originally intended for satellite use for a terrestrial wireless network instead. Will integrated satellite and terrestrial mobile broadband blossom in 2013?

#4 – Imaging Eye-to-Eye

DigitalGlobe and **GeoEye** combined in a stock and cash transaction valued at roughly \$900m. Motivated in part by U.S. Department of Defense spending cuts, the merger was intended to result in greater revenue certainty and lower capital expenditures.

#5 – Space Systems/Loral Finds a Suitor

MacDonald Dettwiler and Associates Ltd. (MDA) acquired **Space Systems/Loral, Inc.** in a transaction valued at approximately \$1.1b, transforming MDA into a commercially-focused global communications company and affording it an important foothold in the U.S. market.

#6 – Broadband Ku- or Ka-? HTS?

Avanti Communications announced its **HYLAS 3** Ka-band payload; **Hughes** launched **EchoStar® XVII** with **JUPITER** Ka-band High-Throughput technology; **Intelsat** announced its new **Epic^{NG}** platform with innovative multi-band, spot beam and frequency reuse technology; **Inmarsat's Global Xpress** marched on; **NBN Co. Limited** procured 2 satellites for its planned broadband service to rural and remote areas of Australia.

#7 – Public Equity To Be Continued ...

Intelsat filed for an IPO on the **New York Stock Exchange** to raise roughly \$1.75b, **NewSat Ltd.** prepared for new equity funding and **Telesat Canada** passed on the opportunity to go public. What's next in 2013?

#8 – Hosted Payloads Evolve

2012 witnessed significant growth for hosted payloads. **NASA** and **ESA** took steps to further develop hosted payloads with commercial partners; **Intelsat-22** was launched with a UHF communications payload for the **Australian Defence Force**; **NAV CANADA** and **Iridium Communications Inc.** established the **Aireon LLC** joint venture to support air traffic management globally; and the **U.S. Air Force** will be requesting funding in 2013 for a follow-on to **CHIRP**.

#9 – 2012 Commercial Satellite Orders

Boeing: ABS-3A, Intelsat 29e, Satmex 7, SES-9 and two other satellites (for ABS/Satmex); **EADS Astrium:** Express AM4R and Express AM7; **Israel Aerospace Industries:** AMOS-6; **Orbital Sciences:** Amazonas 4A and 4B; **Space Systems/Loral:** NBN Co 1A and 1B; and **Thales Alenia Space:** EUTELSAT 8WB.

#10 – Global Positioning Goes Global

Global competitors to the **GPS** system took major steps forward in 2012: **OHB-System AG** was selected to build 8 additional satellites (14 satellites under construction) for the **Galileo** constellation; China launched commercial and public services across the Asia-Pacific region on its **Beidou** system, which is expected to provide global coverage by 2020; and Russia pressed forward with further development of its **GLONASS** system.

Plus – Breaking News – ITAR Reform

On Dec. 21st the **U.S. Congress** approved **ITAR** reform legislation authorizing the President to determine export jurisdiction for satellites and related components – stay tuned for additional details in January.