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Mitsubishi Electric Corporation  
GS Yuasa Corporation

**FOR IMMEDIATE RELEASE**

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**LITHIUM-ION CELLS CO-DEVELOPED BY MITSUBISHI ELECTRIC  
CORPORATION AND GS YUASA CORPORATION ONBOARD  
THAICOM 4 (IPSTAR) PASSES FIRST ECLIPSE SEASON**

**Tokyo, December 22, 2005** – Mitsubishi Electric Corporation and GS Yuasa Corporation, jointly announced today the successful application and operation of its Lithium-ion (Li-ion) battery cells in the commercial GEO satellite THAICOM 4 (IPSTAR). The satellite was manufactured by Space Systems/Loral (SS/L) for Shin Satellite and was launched on August 11<sup>th</sup>, 2005 from the Kourou, French Guiana, Arianespace Spaceport.

An orbiting satellite must have a non-solar based power source, such as Li-ion cells, to maintain operations when entering the eclipse season of its orbit. Shin Satellite is currently handling monitoring and supervision of the on-board Li-ion batteries of the THAICOM 4 (IPSTAR) satellite and in October 2005, SS/L confirmed that the Li-ion batteries were operating nominally during the first eclipse season.

The 100Ah Lithium-ion cell used in THAICOM 4 (IPSTAR) has been available since late 1998, and was certified through qualification testing in 2000. For future commercial satellite programs, Mitsubishi Electric has been selected by SS/L as the sole supplier of Li-ion cells, a reflection of Mitsubishi Electric's sophisticated design approach and robust quality management system through its long heritage and commitment to space development since the 1960's.

The THAICOM 4 (IPSTAR) batteries are configured with 24 100Ah cells each, the world largest capacity for space-use Li-ion cells. Li-ion cells are well known for their low mass/volume and ease of

maintenance/handling at launch sites when compared to NiH2 cells. A 100Ah Li-ion cell can produce the same energy output as a NiH2 cell, while occupying one third less volume and half the weight, providing satellite manufacturers with an advantage in minimizing overall satellite size and mass. Li-on cells also provide safety features such as an elliptical shape that provides excellent thermal dissipation and robust structural design to battery modules.

Mitsubishi Electric and GS Yuasa have been bringing various models of Space-qualified Li-ion cells and batteries for low earth and geostationary orbit and other space applications to the market since 2000. Both companies will continue to expand mutual cooperation as strategic partners in order to bring about the highest levels of customer satisfaction.

Mitsubishi Electric has been a pioneer of space technology development in Japan since the 1960s, and is strongly committed to providing quality international commercial space products and satellite construction. The company has a long heritage in providing a wide range of high-performance payloads and bus onboard equipment for more than 270 programs worldwide.

#### **About Mitsubishi Electric**

With over 80 years of experience in providing reliable, high-quality products to both corporate clients and general consumers all over the world, Mitsubishi Electric Corporation (TSE:6503) is a recognized world leader of manufacturing, marketing and sales of electrical and electronic equipment used in areas from information processing and communications, space development and satellite communications, consumer electronics, industrial technology, energy, transportation and building equipment. The company's consolidated annual sales was 3,410 billion yen (US\$ 31.9billion\*) in the fiscal year ended March 31, 2005. For more information visit <http://global.mitsubishielectric.com>

\*At an exchange rate of 107 yen to the US dollar, the rate given by the Tokyo Foreign Exchange Market on March 31, 2005.

#### **About GS Yuasa Corporation**

Japan Storage Battery Co., Ltd. and YUASA Corporation have established a joint holding company, GS Yuasa Corporation to integrate business operations of the two companies, April 1, 2004. Our Group is comprised of the Company and 91 subsidiaries and 46 affiliates. Major businesses of our group are manufacturing and sales of batteries, power supply systems, lighting equipment, specialty and other electric appliances. The latest sales of our group during the period ended March 31, 2005 totaled US\$2,240 million. GS Yuasa Corporation will implement our corporate vision, "Innovation and Growth" and supply products and services from the viewpoint of customers by establishing efficient R&D, production and distribution systems worldwide. For more information visit <http://www.gs-yuasa.com/us>

#### **About Shin Satellite Plc**

Shin Satellite Plc is a satellite and telecommunications operator with customers throughout Asia, Africa, Europe

and Australasia. Shin Satellite operates four Thaicom satellites. Shin Satellite is listed on the Stock Exchange of Thailand. Visit our website [www.thaicom.net](http://www.thaicom.net). Shin Satellite's THAICOM 4 (IPSTAR) will deliver broadband services to millions of users over 14 countries in Asia-Pacific, with a bandwidth capacity of more than 45 gigabits per second (Gbps) (compared with a conventional satellite's capacity with 1-2 Gbps of broadband bandwidth capacity). The satellite was launched in August 2005.

### **Space Systems/Loral**

Space Systems/Loral, a subsidiary of Loral Space & Communications, is a premier designer, manufacturer, and integrator of powerful satellites and satellite systems. SS/L also provides a range of related services that include mission control operations and procurement of launch services. Based in Palo Alto, Calif., the company has an international base of commercial and governmental customers whose applications include broadband digital communications, direct-to-home broadcast, defense communications, environmental monitoring, and air traffic control. SS/L satellites have amassed more than 1,200 years of reliable on-orbit service. SS/L is ISO 9001:2000 certified. For more information, visit [www.ssloral.com](http://www.ssloral.com).