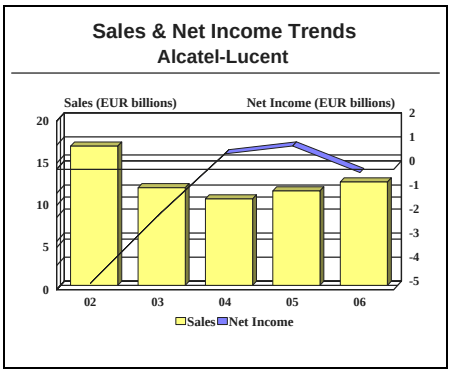
Alcatel-Lucent - Archived 10/2008

Outlook

- Alcatel completed its merger with Lucent in late 2006
- The new Alcatel-Lucent is primarily focused on telecommunications
- Space assets have been divested to Thales and are now part of Thales Alenia Space
- With minimal interest in aerospace and defense markets, this report will be archived in 2008



Headquarters

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Alcatel Alsthom was created as a result of a major 1990 reorganization of one of France's and Europe's largest companies, Compagnie General d'Électricité (CGE). CGE was established in 1898 in France for the purpose of generating and selling electric power. Over the following 50 years, CGE developed its power generation and distribution capabilities and added new capabilities in the areas of the production of related equipment, electrical contracting, cables, batteries, and telecommunications. The year 1946 heralded a significant milestone for CGE, when the activities of CGE were nationalized by the postwar government of France.

Alcatel was combined with the extant telecommunications unit of CGE, which was known as CIT; thus, the firm Alcatel CIT was founded. Further, in 1970, CGE acquired Alsthom, a move that strengthened the electromechanical businesses of CGE. A further strengthening of CGE's telecommunications business took place in 1983 when CGE acquired the commercial telecommunications business of France's Thomson Group. The strategy of CGE from the early 1980s focused on manufacturing and service activity related to two business sectors: communications and energy.

Another important development came in 1986 when CGE and ITT (U.S.) combined their respective telecommunications and cable manufacturing operations into the new entity called Alcatel NV. CGE's share was 61.5 percent, and ITT's share was 37 percent. ITT has since divested itself of its interest in Alcatel NV, and the balance of shares is now controlled by ITT in the hands of Alcatel Alsthom.

In 1998, the company changed its name from Alcatel Alsthom to simply Alcatel. The change was undertaken as part of a comprehensive refocusing of the company on its telecommunications interests.

In 2006, Alcatel acquired U.S.-based Lucent Technologies for $11.6 billion, forming a new organization called Alcatel-Lucent. Shortly after its formation, Alcatel-Lucent divested its transportation, security and space assets to Thales in early 2007.

Alcatel-Lucent employs approximately 79,000 people.

Structure and Personnel

Serge Tchuruk
Chairman
Patricia Russo
Chief Executive Officer
Olivier Baujard
Chief Technology Officer
Jean-Pascal Beaufret
Chief Financial Officer

Alcatel-Lucent

Mary Chan
Wireless Group
Cindy Christy
North America Region
Frank D'Amelio
Chief Administrative Officer and Integration
Janet Davidson
Chief Compliance Officer of Alcatel-Lucent
Hubert de Pesquidoux
Enterprise Group
Etienne Fouques
Carrier Business Group
John Giere
Chief Marketing Officer
Caroline Guillaumin
Corporate Communications
Elizabeth Hackenson
Information Technology
Jeong Kim
Bell Labs
Helle Kristoffersen
Corporate Strategy
Martin Lehnich
Worldwide Integrated Supply Chain and Procurement
John Meyer
Services Group
Claire Pedini
Corporate Human Resources and Communications
Olivier Picard
Europe and South
Mike Quigley
Science, Technology and Strategy
Michel Rahier
Wireline Group
Christian Reinaudo
Europe & North Region and Integration Team
Steve Reynolds
General Counsel of Alcatel-Lucent
Frederic Rose
Asia-Pacific Region
Marc Rouanne
Convergence Group

Product Areas

Alcatel-Lucent is focused on telecommunications and currently manages its large operations in the following manner:

1. Carrier Segment
1.1 Wireline
1.2 Wireless
1.3 Convergence
2. Enterprise Segment
3. Services Segment

Facilities

Alcatel-Lucent, 600 Mountain Ave, Murray Hill, NJ 07974. This location is Alcatel-Lucent's North American headquarters.

Bell Labs, 600 Mountain Ave, Murray Hill, NJ, 07974-0636. Telephone: + 1 (908) 582 8500. A research and development facility, Bell Labs designs communications technology products and services.

LGS, 8000 Towers Crescent Dr, Suite 400, Vienna, VA 22182. Telephone: + 1 (866) 547-4243. An independent subsidiary of Alcatel-Lucent's North American operations, LGS is the sole sales and contracting channel for all Alcatel-Lucent business supporting the U.S. government.

Web site: http://www.lgsinnovations.com

Alcatel CIT, 7-9, Avenue Morane Saulnier BP 57, F-78141 Velizy Cedex, France. Telephone: + 33 1 30 77 30 77. This location is the headquarters of the company's public telecommunications operation. Other programs that this location manages include transmission equipment for land and submarine cable links, Earth stations, and video communications systems.

Alcatel-Lucent Deutschland AG (formerly Alcatel SEL), Lorenzstrasse 10, Postfach 400749, D-70435 Stuttgart, Germany. Telephone: + 49 711 821 0. This company manufactures advanced digital switches, transmission systems, broadband products, access products, testing systems, radio mobile communications systems, and business systems.

Corporate Overview

Alcatel-Lucent is a telecommunications company that provides solutions that enable service providers, enterprises and governments worldwide to deliver voice, data and video communications services to end-users. In addition, the company operates a research and development facility, Bell Labs.

New Products and Services

No new aerospace- or defense-related programs have been announced by Alcatel-Lucent in the past two years.

Plant Expansion/Organization Update

North American Reductions. In June 2001, as part of its ongoing efforts to reduce costs within its North American operations, Alcatel consolidated some of its facilities and operations into other areas of the company. The primary Alcatel facilities and operations involved in the consolidation efforts were located in Andover, Massachusetts; Milpitas, California; and Portland, Oregon. As a result, product development and some employees of the Andover and Milpitas sites were transferred to other locations, while the activities at the Portland facilities were ended. Approximately 900 positions were eliminated. Specific cost savings figures were not released.

Mergers/Acquisitions/Divestitures

LGS Formed. In January 2007, LGS, a subsidiary of Alcatel-Lucent dedicated to serving the U.S. government, announced it was fully operational and serving its customers. LGS, headquartered in Vienna, Virginia and with offices in California, Colorado, Maryland, New Jersey and North Carolina, was created by joining the Lucent and Alcatel government business units and Bell Labs. LGS is the sole sales and contracting channel for all classified and unclassified business contracted from U.S. federal agencies and departments, both military and civilian.

Satellite Operations Merged into Thales. In April 2007, the European Union approved Thales' acquisition of Alcatel's satellite subsidiaries, its railway signaling business, and its integration and services activities for mission-critical systems. In return, Alcatel received a cash payment of EUR673 million and increased its stake in Thales to 21.6 percent. Groupe Industriel Marcel Dassault keeps its 5 percent share in Thales and the French state remains the majority shareholder with 27.1 percent. Thales received Alcatel's 67 percent stake in Alcatel Alenia Space (now Thales Alenia Space) and its 33 percent share in the capital of Telespazio, jointly held at 67 percent by Finmeccanica. Together, Thales Alenia Space and Telespazio are known as the Space Alliance.

In the security systems domain, Thales acquired the Transport Systems unit, a producer of signaling solutions for rail transport and urban metros. It also acquired the Systems Integration activities not dedicated to telecoms operators, and covering mainly the transport and energy sectors.

The total 2005 revenues of these activities amounted to EUR2 billion. The workforce represents approximately 11,000 people, mainly in France, Germany, Italy, and Canada.

Alcatel Acquires Lucent. In April 2006, Alcatel and Lucent Technologies entered into an $11.6 billion merger agreement to create a global communications solutions provider with the broadest wireless, wireline and services portfolio in the industry. The deal was completed in late 2006. Talks between the two firms over such a move have been ongoing since 2001.

Teaming/Competition/Joint Ventures

In April 2007, Thales acquired Alcatel space assets, including its 67 percent shareholding in Alcatel Alenia Space and Telespazio. As a result, all of its space-related joint ventures now fall under the auspices of Thales Alenia Space.

Thales Alenia Space. This joint venture, as mentioned above, was formed in July 2005 by combining the activities of Alcatel Space (now Thales) and Alenia Spazio. Thales holds 67 percent and Finmeccanica 33 percent of the venture. The operation focuses on the design, development, and manufacture of space systems, satellites, payloads, orbital infra-structures and space transportation systems, instruments, and associated ground systems for civilian and military applications. The operational headquarters of Thales Alenia Space are located in Cannes, France, with plants in France, Italy, Belgium, and Spain. The operation employs about 7,200 personnel. Together, Thales Alenia Space and Telespazio are known as the Space Alliance.

Web site: http://www.thalesaleniaspace.com

Bolivar*Sat. In October 1999, Alcatel Spacecom and Andesat SA EMA signed shareholder agreements establishing Bolivar*Sat, a new satellite services joint venture based in Venezuela that will target a potential market of over 600 million people. The new company will be owned by Alcatel Space (49 percent) and Andesat, as majority shareholder (51 percent). In addition to traditional telecommunications and television broadcasting, Bolivar*Sat will offer broadband Internet services and rural telephony to the Andean countries and to other countries stretching from Canada to South America. To provide these services, Bolivar*Sat has received from Andesat the rights to procure, launch, and commercialize a satellite system to

be located at Andesat's 61° W and 67° W orbital slots, all in compliance with the Andesat license.

Eurasiasat. In July 2000, Eurasiasat, a joint venture of Turk Telekom (75 percent) and Alcatel Space (25 percent), signed a $166 million non-recourse project financing contract, which completes the financing of the satellite project. Eurasiasat was incorporated in Monaco for the development and operation of satellite-based TV broadcasting and telecommunications services. Alcatel Space's manufacturing subsidiary, Alcatel Space Industries, is the prime contractor for the construction of the satellite.

Galileo Industries. Created in May 2000, with headquarters in Brussels, Galileo Industries is a joint venture of Alenia Spazio, Alcatel Space, and EADS Astrium. The company will manage the European Galileo satellite navigation program. One of the main objectives of Galileo Industries is to assist the European Commission and ESA in all activities related to the ongoing program, coordinating industrial and institutional actions, and becoming the driving element for the industrial spin-offs of the Public-Private Partnerships.

In July 2003, Galileo Industries added Thales to the group. Thales acquired an equity share of 12 percent in the joint venture for an undisclosed sum. The founding members – Alcatel Space, Alenia Spazio, Astrium GmbH, and Astrium Ltd – each hold 19 percent, with the Spanish group GSS (Galileo Sistemas y Servicios) holding 12 percent.

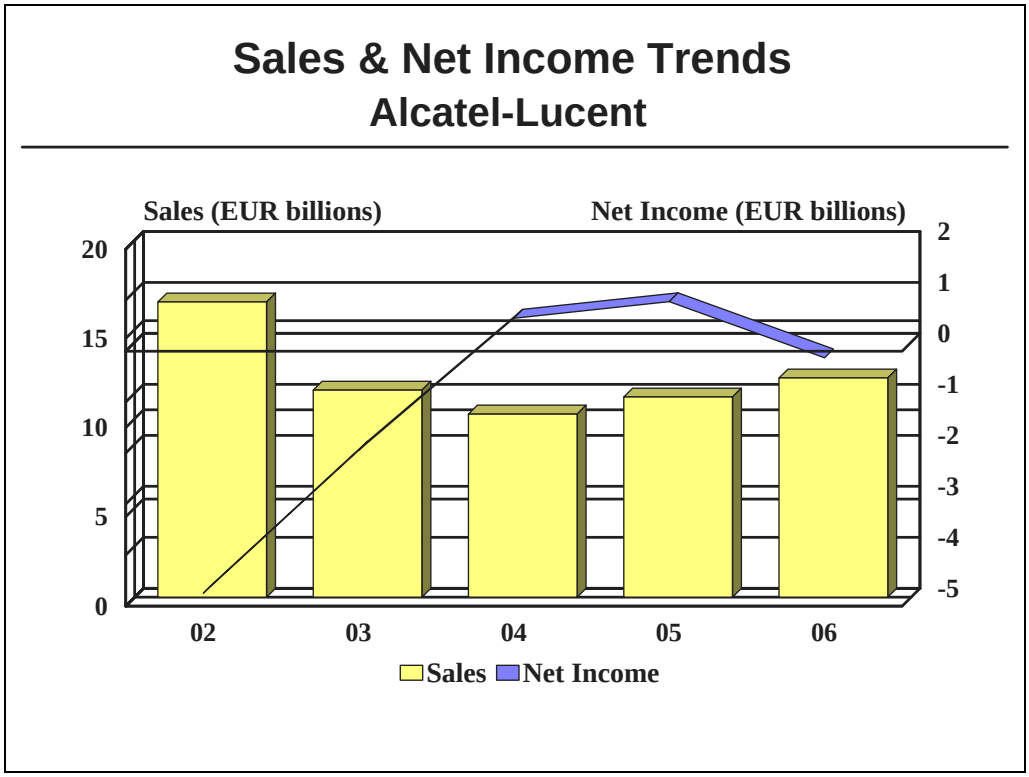
Telespazio. Created in July 2005, Telespazio was originally held by Finmeccanica (67 percent) and Thales (33 percent). The operation originally combined Telespazio with Alcatel Space Services and Operations activities. It concentrates the exploitation of space systems for networking, multimedia purposes, and Earth observation. It is headquartered in Rome, Italy, with plants in Italy, France, and Germany. The venture had estimated 2004 sales of EUR350 million and around 1,400 employees.

Web site: http://www.telespazio.it

Financial Results/Corporate Statistics

Alcatel's 2006 sales fell 9 percent to EUR12.3 billion from EUR11.2 billion in 2005. The company posted a loss of EUR131 million compared to net income of EUR971 million in 2005. The losses in the early part of the decade were due to an economic slowdown, which hit the high-tech telecommunications industry especially hard. Latest-year statistics, restated to the company's current presentation, are provided below. The U.S. dollar figure is translated as of December 31, 2006, at the rate of EUR1 = USD1.3193

Y/E December 31	2002	2003	2004	2005	2006	2006
(EUR millions)						**USD**
Net Sales	16547	11606	10263	11219	12282	16204
Net Income	-4745	-1944	645	971	-131	-173
R&D Expenditures	2226	1593	1320	1298	1466	1934



Strategic Outlook

With Alcatel's successful merger with Lucent complete, the new Alcatel-Lucent moved to consolidate its operations such that the company's sole focus would be on telecommunications. The key part of this move was the divestiture of the company's satellite subsidiaries, railway signaling business, and integration and services activities for mission-critical systems to Thales.

In return for its satellite operations, Alcatel is now a major shareholder in Thales. The deal is expected to be the first step in turning Thales into a strong satellite technology producer. Speculation is now focused on the possible incorporation of EADS Astrium operations into Thales in exchange for a holding in the company.

The formation of such a mega-company can only bode well for Europe's space industry, and in the long run will help the continent vie more aggressively in space markets against U.S. competitors.

As Alcatel-Lucent no longer possesses a dedicated interest in aerospace and defense, this report will be archived in 2008.

Program Activity

Some important aerospace and government programs currently under way at Alcatel are listed below. The briefs are intended to provide a listing of programs that are of major importance to the company. For detailed information or analysis of specific aerospace and defense programs or equipment, please refer to the appropriate Forecast International binder (for example, *Aircraft, Military Vehicles, Warships, Missiles, Electronic Systems,* and *Space Systems*). The following are the company's business interests:

- Telecommunications
- Space Systems

Electronics Programs

Deltamobile (Tadkom)

This is a tactical battlefield automatic trunk communications system. Deltamobile is a complete tactical communications system for radio link or four-wire telephone cable. The system was produced by Alcatel SEL AG.

RITA

Reseau Integre de Transmissions Automatique (RITA) is an automated battlefield mobile subscriber network. ValoRITA is an upgraded, all-digital distributed version of RITA. The Advanced Communications System is a next-generation version of RITA. RITA is fully operational with the French and Belgian armed forces. ValoRITA is in development and scheduled for operational service in 1999. ACS apparently is still under development. RITA is fully operational with the French and Belgian armed forces. Alcatel Bell (Hoboken, Belgium) and Thales were contractors on this program.

Space System Programs

In April 2007, Thales acquired Alcatel space assets, including its 67 percent shareholding in Alcatel Alenia Space and Telespazio. As a result, all space programs now fall under the auspices of Thales Alenia Space.

1300

The 1300 (formerly FS-1300) is a high-power satellite intended to meet current and future civilian communications requirements; its largest application will be for the Intelsat telecommunications consortium. Space Systems/Loral is the prime contractor. Additional contractors include Alcatel Space (communications repeaters, Europe*Star prime contractor, MTSAT-1R aeronautical communications payload); Astrium (advanced gallium arsenide solar arrays); Thales (traveling wave tubes); Mitsubishi Electric Corp (major structural, thermal, and electronic components); Pressure Systems Inc (propellant tanks); Tecstar Inc, now part of Emcore (solar panels); and Toshiba Corp (solar array panels for Sirius satellites).

Alphabus

The Alphabus is a telecommunications satellite platform. The Alphabus is a top-end satellite platform designed through a joint prime contractorship between EADS Astrium and Alcatel Alenia Space. The platform is expected to compete with the Lockheed Martin A2100X, Boeing-702, and Space Systems/Loral 1300. EADS Astrium and Alcatel Alenia have established work shares as well as joint marketing strategies. EADS Astrium will design and build the electrical power, solar array, and chemical propulsion, as well as handle assembly, integration, and testing. Alcatel Alenia Space will design and build the mechanical and thermal subsystems and avionics, and the optional electrical propulsion.

Amos

Amos (Affordable Modular Optimized Satellite) is a family of small communications satellites for deployment in geosynchronous orbit. The Amos satellite provides telecommunications services to Israel. Israel Aerospace Industries Ltd, MBT Systems & Space Technology Electronics Division, Yehud, Israel, is the program's prime contractor. Additional contractors include Alcatel Space (communications payload), Astrium (electrical supply system, propulsion, and Ku-band antenna), Goodrich Aerospace, Barnes Engineering (Earth sensors), and Space Systems/Loral (batteries). The first Amos satellite was launched on an Ariane 4 rocket in May 1996.

Brasilsat/Star One

Brasilsat and Star One satellites are two related series of geostationary communications satellites serving Brazil and Latin America through Embratel. Boeing Satellite Systems (BSS) was the Brasilsat B1, B2, B3, and B4 program prime contractor, supplying the BSS-376 and BSS-376W satellite buses and communications payload. São Paulo-based Promon Engenharia contributed to the ground-based portion of the system. Star One C1 is being built under a $122 million contract with Alcatel Alenia Space. The total cost, including ground segment, Ariane 5 launch, and insurance, was expected to total $240 million to $250 million. Star One C2, being built by Alcatel Space under a $150 million contract, will be launched by an Ariane 5.

COSMO-SkyMed/Pleiades

An international dual-use civil/military constellation of four COSMO-SkyMed low-Earth-orbiting radar satellites and two Pleiades remote sensing satellites. COSMO-Pleiades is a dual-use Franco-Italian satellite system designed to provide valuable information on environmental damage, topography, the agricultural industry, and law infringement within the Mediterranean Basin. Alcatel Alenia Space is the primary contractor, as well as an investor in COSMO-SkyMed. ASI awarded the company three contracts. The first involves the design of the Prima satellite platform. The second contract is for the design of the X-band SAR imager, and the third contract is based on an overall system design. Alcatel Alenia Space will coordinate an industrial team made up of several companies, including some from the Finmeccanica group, such as Telespazio, responsible for the development of the ground segment and management in orbit, and Galileo Avionica and Laben, responsible for the technologically advanced parts of the platform and radar. Astrium is prime contractor for the Pleiades satellite bus, including all functions dedicated to satellite control and monitoring as well as payload data handling and transmission, and is responsible for software development and satellite validation. Alcatel Alenia Space is providing the payload optical components.

DFH

Dong Fang Hong (The East is Red) spacecraft are Chinese communications satellites. The China Aerospace Science and Technology Corporation (CASC), Beijing, is the prime contractor for DFH-3 and DFH-4 satellites. DFH-3 subcontractors include EADS, Munich (system definition, antennas, and attitude control); Teldix GmbH, Heidelberg, Germany (solar-array drive assemblies); and Officine Galileo SpA, Florence, Italy (IRES IR Earth sensor). The manufacturing arm of CASC, China Academy of Space Technology (CAST), provides the DFH-4 satellite bus. Alcatel Alenia Space is supplying the payload for the Sinosat-2 satellite, which will be built on the DFH-4 bus.

ESA Polar Platform

The Polar Platform series of spacecraft will provide continuous Earth observations, including monitoring of the terrestrial environment for cartographic, resource prospecting, meteorological, and hazard identification purposes. Secondary operations will include space science disciplines research. Astrium is the prime contractor for the Envisat spacecraft (which uses the Polar Platform bus). Alcatel Space is providing radar antenna panels for the system. The program is in production. Envisat was launched in March 2002.

Earth System Science Pathfinder

The Earth System Science Pathfinder (ESSP) program comprises four missions and one mission in formulation (HYDROS). Each mission involves a remote sensing satellite that will take images of the Earth. Alcatel Space produces the Proteus Satellite Bus for this system.

Eutelsat

Eutelsat is a European commercial communications satellite system. The Eutelsat system provides regional telecommunications in Europe: full-time transponder leases, telephony, occasional TV, VSAT, and land-mobile communications by way of the Euteltracs system. Alcatel Alenia Space is the prime contractor for the Eutelsat 2, Hot Bird 1 and Hot Bird 6, W2/3/4/5, Atlantic Bird 2, and Eurobird. Astrium was selected for Hot Birds 2/3/4/5/7, Europesat 1B, and W1/3A. NPO Prikladnoi Mekhaniki (NPO-PM) developed the Sesat spacecraft, with Alcatel Space contributing the communications payload. Thirty Eutelsat satellites have been produced.

GAIA

The GAIA spacecraft will operate in Lissajous-type, eclipse-free orbit around the L2 point of the Sun-Earth system. The GAIA mission will determine the composition, formation, and evolution of our galaxy through three-dimensional mapping of over one billion stars. Alcatel Space is providing service module design and system level technical assistance on this effort. Launch is planned for mid-2011.

Galileo Satellite Navigation System

Galileo is a European navigational satellite constellation similar to the U.S. NAVSTAR Global Positioning System (GPS). The Galileo system is intended to provide secure civil navigation and positional data to all of Europe, relieving it of its independence on the U.S. GPS. Galileo will be used mainly for emergency, search-and-rescue, and security applications. It will be an independent civilian system that is compatible with both GPS and Glonass. Interoperability among the three systems is being discussed, and would require only minor adaptations to the ground systems software.

Globalstar

Globalstar is a satellite-based mobile communications system. Space Systems/Loral, Palo Alto, California, is responsible for Globalstar satellite production. Additional Globalstar contractors include Astrium (satellite structures and part of the thermal control system; solar arrays and propulsion and attitude systems); Alcatel Space (communications payloads); Alenia Aerospazio (active antennas and payload integration); Goodrich Aerospace, Barnes Engineering (Earth and Sun sensors); Honeywell Satellite System Operations (reaction control wheel assemblies); Hyundai (major electrical subsystems and spacecraft structure); Qualcomm (ground control stations); and Raytheon (transmit and receive modules). Thanks to the acquisition by Thermo Capital, Globalstar managed to avoid being forced to de-orbit its 48-satellite constellation. Their new owners have also made it clear that they are ready to make a strong investment in Globalstar.

Helios

Helios is a military imaging reconnaissance satellite. Helios satellites provide military optical reconnaissance data from low-Earth polar orbit. Helios 1 systems are based on the SPOT 4 Earth resources satellite bus but have a higher resolution of 1 to 5 meters. Similarly, Helios 2 satellites are based on the SPOT 5 spacecraft platform and will offer a 50-centimeter resolution. EADS Astrium is the prime, with Alcatel Alenia Space providing the system's high-resolution instruments.

Herschel and Planck

The Herschel (formerly called FIRST) observatory is a giant space telescope. Planck is an observational science mission. Alcatel Alenia Space is leading a European industrial team organized for the development of the Herschel and Planck missions. Alcatel is also

responsible for the Planck payload module. Astrium will be responsible for the Herschel Payload Module (cryostat) development, spacecraft assembly, and testing. Alenia Spazio, Italy, is responsible for the development of the service modules for both missions. The Herschel and Planck spacecraft are scheduled for launch in 2007 aboard an Ariane 5 launcher.

Intelsat

Intelsat (International Telecommunications Satellite consortium) is an international satellite telecommunications system. Intelsat satellites provide a range of international satellite telecommunications services, including voice, TV, and data transmissions. Intelsat approved creation of an independent, global satellite communications company called New Skies Satellites NV, which is incorporated in the Netherlands and operates five former Intelsat spacecraft. The new company began service in December 1998. The current Intelsat 9 satellites are produced by Space Systems/ Loral, Palo Alto, California. Intelsat 7 satellites were also built by SS/L. The Intelsat 7 team consisted of Alcatel Space, principally responsible for the communications repeater, and Mitsubishi Electric of Japan, which provided major structural, thermal, and electronic components.

International Space Station

The International Space Station is an orbiting crewed research and work center. A variety of scientific activities are planned for the International Space Station. Basic research will be carried out in medicine, astronomy, space physics, and solar studies. Technological and scientific experiments will be conducted. Alcatel Alenia Space is one of numerous contractors involved in this project.

Jason-1/OSTM

Jason-1, the follow-on to the Topex/Poseidon mission, is an oceanographic program to study the surface topography and other physical characteristics of the global ocean. It maps the circulation of the world's oceans in conjunction with major international experiments in oceanography. The COROT (Convection, Rotation, and Planetary Transits) mission will study astroseismology and search for planets outside the solar system. Alcatel Space provides the Proteus satellite bus for this system.

Living Planet Program

The Living Planet program is divided into two missions: Earth Watch and Earth Explorer. According to the European Space Agency, both segments consist of smaller satellites on shorter, cheaper, focused missions specific to the advancement of earth sciences. Astrium has been chosen to provide the CryoSat platform. Alcatel Space will supply the SMOS platform based on its Proteus design. Astrium will also provide the ADM-Aeolus platform and Aladdin payload instrument. EADS CASA is supplying the SMOS payload. Alenia Spazio has been contracted to build the GOCE spacecraft. Two Core and two Opportunity missions are currently in development under the Earth Explorer program. The SWARM mission has been selected to proceed into full-scale development.

Meteosat

The Meteosat is a series of geosynchronous meteorological satellites. Meteosats provide weather observation of Europe, Africa, and the northeastern part of South America. Alcatel Alenia Space is the Meteosat prime contractor, responsible for system automated identification technology (AIT) and development of mutation dampers (with Onera). It is also head of the COSMOS industrial consortium, which consists of Astrium (structure, thermal controls, solar array, AOCS, EGSE, radiometers, and amplifier equipment), ETCA (power supply and conditioning), SAT (telemetry equipment and solar cells), Alenia Aerospazio (MSG payload), and Siemens (S/UHF transponders). The system is in production and operation. Alcatel has been tapped to supply and install MSG ground stations in 45 African states, revolutionizing the region's forecasting capabilities.

Rosetta

Rosetta is a mission to rendezvous with Comet Wirtanen. Rosetta will rendezvous with the comet, land on its surface, and conduct in-situ studies of the nucleus. It will be the first spacecraft to orbit a comet. Astrium is the Rosetta spacecraft prime contractor and is also responsible for the manufacture of the fuel tanks and attitude control system. Additional contractors include Alenia Spazio, Turin, Italy (tanks and spacecraft equipment installation, installation of structural and thermal models of the 12 scientific instruments and the lander); Alcatel Space and Sodern, Limeil-Brevannes, France (development of a miniature digital video camera); Logica, London (software for an automated control system); Max Planck Institute, Leipzig, Germany (RoLand anchoring system); Patria Finavitec Oy Systems, Naulakatu, Finland (power distribution units and platform structure); Saab Ericsson Space, Göteborg, Sweden (high-gain antenna; data-handling and solid-state memory systems); and Southwest Research Institute, San Antonio, Texas (ALICE). Rendezvous with Comet Wirtanen is planned for August 2011.

SAR Lupe

SAR Lupe satellites will provide the German military with all-weather, 24-hour synthetic aperture radar

(SAR) imagery of nearly every region on Earth. As prime contractor, OHB-System GmbH, Bremen, Germany, is responsible for system development, manufacture, implementation, and operation. Additional contractors include Alcatel Space, Toulouse, France; Tesat-Spacecom GmbH & Co, Backnang, Germany; Carlo Gavazzi Space, Milan, Italy; Saab Ericsson, Göteborg, Sweden; OHB Teledata, Bremen, Germany; RST (Radar system company), Salem, Germany; and EADS Dornier, Friedrichshafen, Germany.

SATCOMBw/Bundeswehrsat

Bundeswehrsat is a constellation of two small, geo-synchronous, military communications satellites with a network of mobile and static ground terminals. A third satellite is planned as an in-orbit spare. ADS/Alcatel team is the preferred bidder, although no contract has been signed.

Spacebus Series

The Spacebus satellite series is intended for use in telephone/data communications and direct broadcast television. Alcatel Alenia Space is the prime contractor. The Spacebus 2000, 3000 and 4000 models are in production.

Syracuse III

The Syracuse III system will provide French and NATO forces with transmission capabilities for secure military and government communications. Alcatel Alenia Space was awarded a contract in 2000 to supply Syracuse III military communications satellites. Thales will develop the Syracuse III ground segments and security-related equipment. The two are jointly developing the satellite's Modem XXI.

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