



THE SUCCESS STORY OF AUSTRIA'S SPACE INDUSTRY

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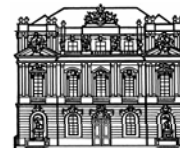


AUSTROSPACE

AUSTROSPACE, the association of Austrian space industries and research institutions, is a non-profit organization focusing on:

- Comprehensive information about Austrian space activities
- Representation of common interests of Austrian suppliers and users of space technologies vis-à-vis Austrian authorities and international organizations

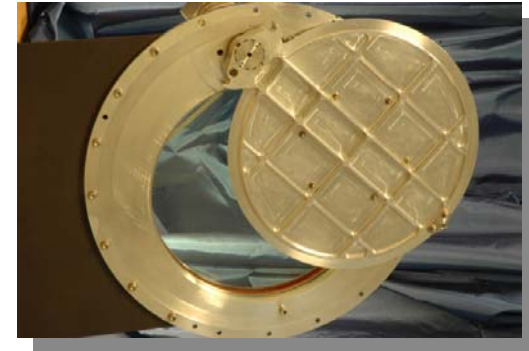
The members of AUSTROSPACE account for the predominant part of Austrian contributions to space programs.



AUSTRIAN
ACADEMY OF
SCIENCES

EARLY INDUSTRIAL SPACE ACTIVITIES IN AUSTRIA

- 1977: Contract for development of SPACELAB-1 Viewport Adapter to Österreichische Klimatechnik GmbH (ÖKG)



- 1983: Foundation of ORS, with first contracts in the area of Mechanical Ground Support Equipment (MGSE)
- 1984: First contract for development of Electrical Ground Support Equipment (EGSE) in the frame of ERS-1 program to SCHRACK ELEKTRONIK AG



MAJOR MILESTONES

- 1987: Austria becomes full member of ESA
- 1988: Contract for ISO Sunshield to ORS
- 1989: Contract for feed lines of Ariane-5 cryogenic main stage to STEYR DAIMLER PUCH, now MAGNA STEYR
- 1990: Contract for ERS-2 Microwave Radiometer to SCHRACK AEROSPACE and ORS
- 1997: EUTELSAT contract for Satellite Carrier Monitoring and Content Monitoring to SIEMENS
- 1998: Contracts for Digital Signal Processing Hardware & Software for three METOP equipments to *Austrian Aerospace*, the company resulting from the merger of ORS and SCHRACK AEROSPACE



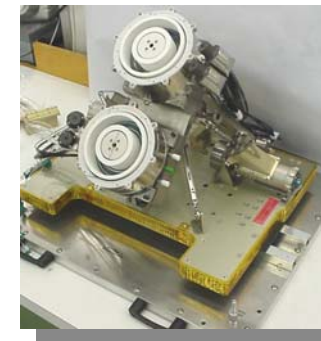
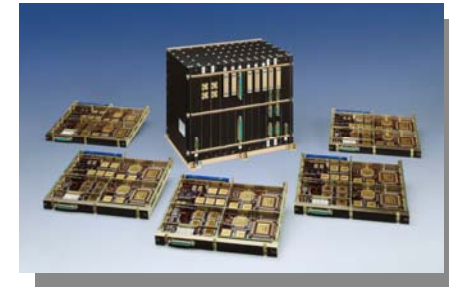
TODAY'S SITUATION

- The three major Austrian space companies, *Austrian Aerospace*, SIEMENS and MAGNA STEYR, have become well-recognized partners in satellite and launcher programs of ESA and have successfully entered commercial markets.
- A number of smaller companies, like gcs in Salzburg, and research institutions, like JOANNEUM RESEARCH, focus on the development of highly innovative satellite communication concepts and applications.
- In the field of remote sensing applications GeoVille, Geospace, JOANNEUM RESEARCH, the Austrian Research Centers Seibersdorf, and a number of university institutes have established a broad range of activities.



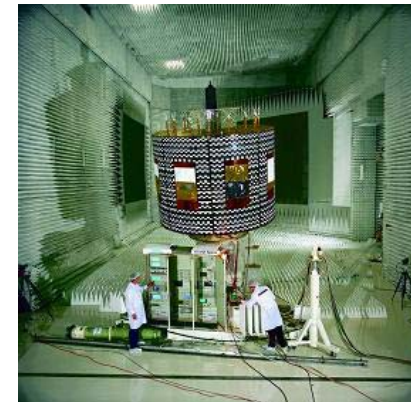
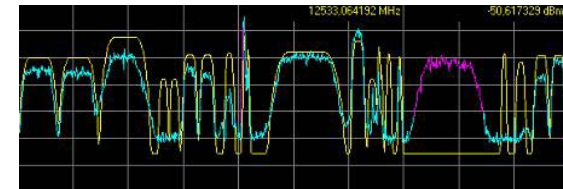
Austrian Aerospace

- Leading supplier of On-Board Digital Signal Processing solutions (METOP, INMARSAT-4, GalileoSat)
- Well-recognized supplier of advanced mechanisms for satellites
- European market leader for Satellite Thermal Insulation Products



SIEMENS

- Well-recognized long term development partner and supplier of Space Craft Operating System SCOS 2000
- Leading supplier of Satellite Communication Monitoring Solutions with more than 30% of transponders monitored by SIECAMS incl. world first patented EasyLineUp solution for Satellite Terminals
- European market leader for RF / TT&C SCOE and end-to-end solution provider for EGSE infrastructure



MAGNA STEYR

- Established Supplier of feed-lines for Ariane-5 main stage and new cryogenic upper stage
- Competence center for development of cryogenic subsystems for aerospace and automotive applications



- Broadband interactive satellite communications systems for emergency & security applications, tele-medicine and tele-education
- Signal monitoring systems developed with SIEMENS
- Propagation studies & experiments for satellite navigation (GALILEO)



Development of space-qualified hard- and software (ESA's Miller-Urey Experiment)



Close cooperation with

- Unique supplier of SkyPlex Digital Video Broadcasting Gateways



- Developed the ENVISAT Data Dissemination System that has now 64 GB daily throughput

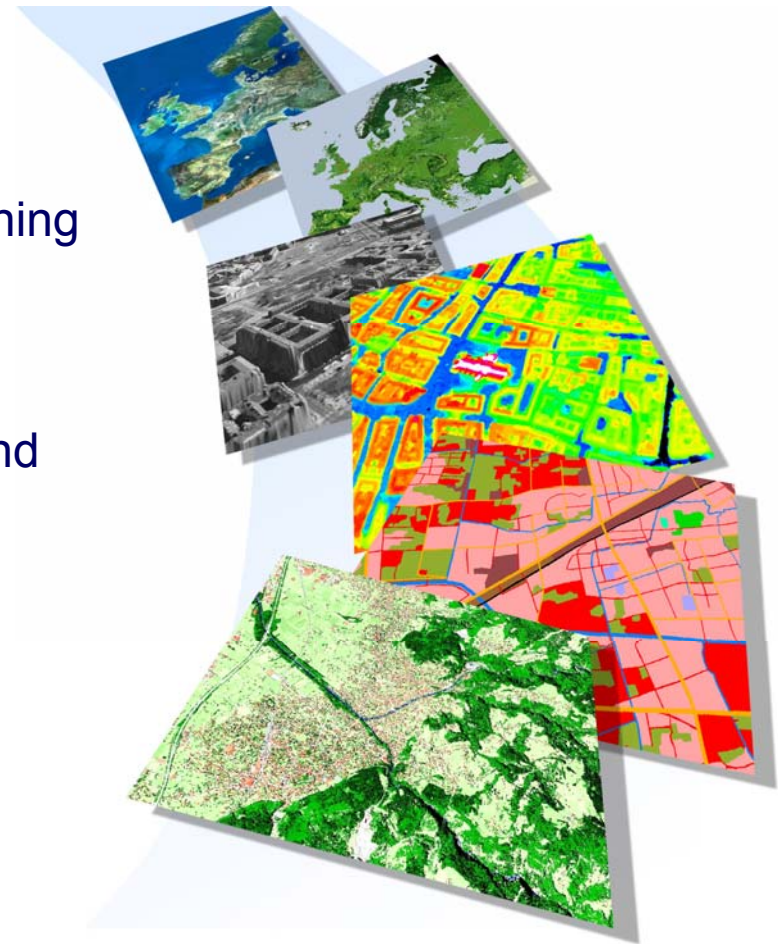


- Develops Internet Broadcast Solutions



GeoVille

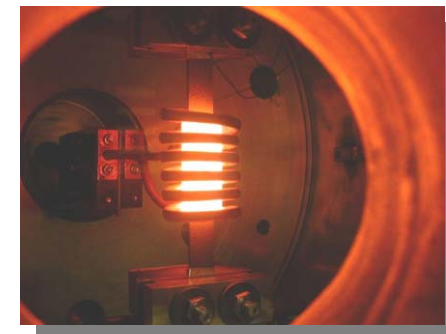
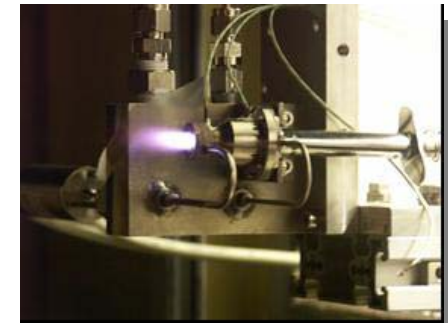
- European market leader for earth observation applications in spatial planning
- GMES “Land” – Austrian lead organisation and among European top-five
- Service contracts outside R&D funding representing 65% of business



seibersdorf research - Aerospace Technology

An Enterprise of the Austrian Research Centers.

- Coordinator of the competence network Austrian Aeronautics Research (Network for Materials and Engineering)
- Leading supplier of micro space propulsion systems (electrical and chemical propulsion systems)
- Developer and testhouse of aerospace composite materials (ceramics, polymers)



SUCCESS FACTORS

- Participation in ESA programs as indispensable basis for Austria's space industry, where an increase of the contribution to optional programs to GNP level should be the long-term goal.
- Complementary Austrian Space Program as key tool for selectively strengthening and expanding the existing technological basis, in order to secure future competitiveness.
- Efficient use of existing strengths and synergies in co-operation between industry and research institutions.
- Integration in European network and establishment of longer-term supplier relationships.

OUTLOOK

- The advent of Galileo and GMES constitutes major prospects for Austrian space industry in the coming years.

These programs will also create a variety of opportunities for other companies, focusing on the development of new services based on the Galileo and GMES infrastructure.

- Spin-off of technologies developed for space into other markets will play an increasingly important role for Austrian space industry in the future.

