

Space Governance in Europe – German Perspective

Dr. Rolf Densing, DLR German Aerospace Center
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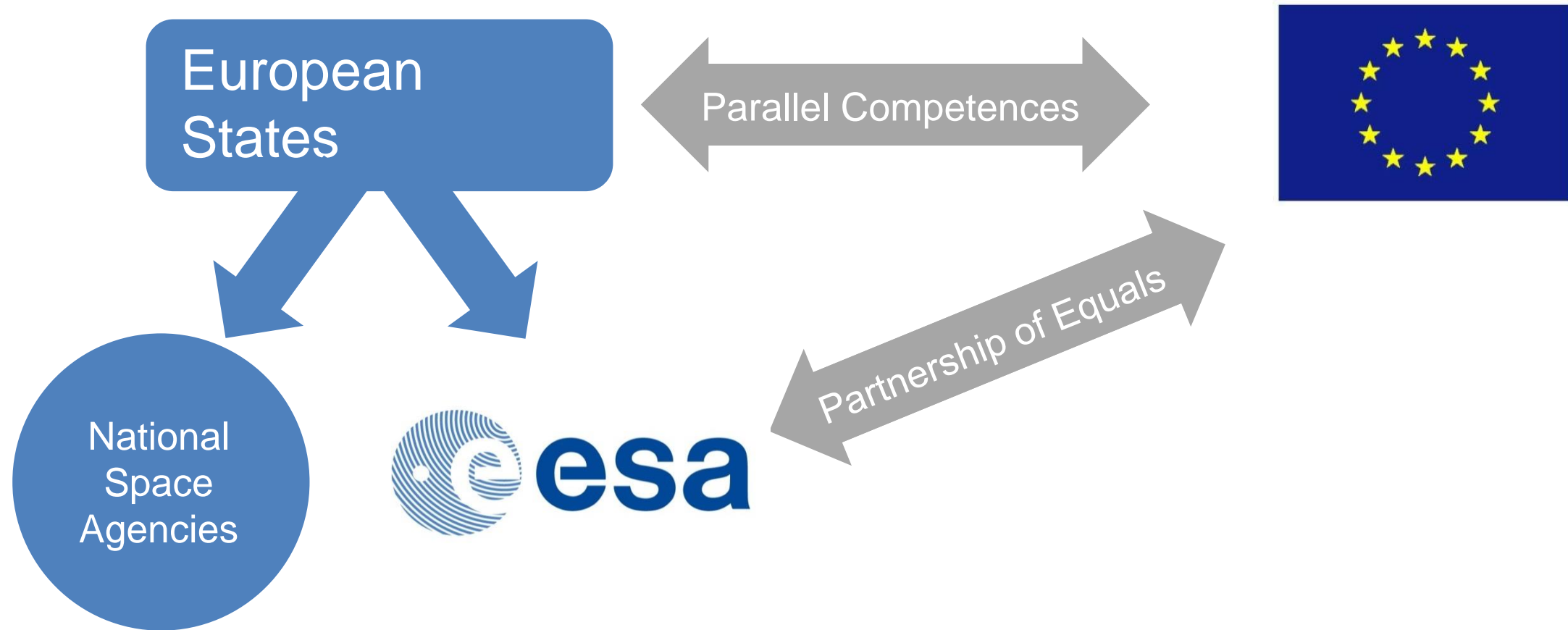


Knowledge for Tomorrow



I. The Main Actors in European Space Governance (1)

Schematic Overview



I. The Main Actors in European Space Governance (2) Relations



Parallel Competences (Lisbon Treaty)

- EU space competence, but **“the exercise of that competence shall not result in Member States being prevented from exercising theirs”** (Art. 4.3 TFEU)
- Applies i.a. to the **implementation of space programs and to relations of Member States *vis-à-vis* third States and international organizations**

ESA and EU independent international organizations, ESA as EU’s partner of choice for implementing EU space programs

- **ESA-EU Framework Agreement** (confirmed by ESA Ministerial Council 2014)
- Program-specific arrangements: **Delegation Agreements** for Galileo, Copernicus, H2020



I. The Main Actors in European Space Governance (3)

Different Approaches to Space Program Development

ESA

„Bottom-up“

Rationale: realization of scientific and application programmes

ESA programs are:

- driven by the scientific community and the objective to improve industry competitiveness
- supported by technology developments
- prepared by ESA General Studies Program
- carried out in Optional Programs

FEASIBILITY

DEFINITION

DECISION
(OPT. PROG.)

FUNDING



European Union

„Top-down“

Rationale: space as an enabler for EU sector policies

EU Programs driven by EU COM
(Galileo, Copernicus, H2020)

MFF: budget stability?

H2020: duplication with ESA programs (2nd rate proposals)? Better suited for academia?

FUNDING

CONTENT

Important to enforce the use of ESA's Technology Harmonization Process!



“For Germany, ESA remains the central framework for European cooperation in space.” (Space Strategy of the federal government)

ESA:

- Strengthen ESA as an independent intergovernmental organization with long years of experience and tried and tested instruments
- ESA remains the primary framework for European space policy and European space cooperation



EU:

- Clear demarcation of the tasks of the EU in accordance with the principles of complementary and subsidiarity
- Avoidance of duplicate activities and structures
- Introduction of necessary funding and procurement procedures
- Highest priority – completion of **Galileo** and **Copernicus**



German view on responsibilities in Europe - Three pillars of astronautics

National Agencies

- Promote and support national strategic goals
- Qualify national industries and scientific institutions for competition
- Prepare projects for ESA/EU programs



European Space Agency - ESA

- Peaceful purpose, cooperation of European states
- Implementing agency for the European space program
- Programs and activities beyond the scope of any single member



European Union - EU

- Lisbon-Treaty: Parallel responsibility of the EU for research & space policy
- Responsibility for flagship programmes:
 - Galileo - global satellite navigation
 - Copernicus - global monitoring of environment and security



Thank you for your attention!



Space Strategy of the federal government

Goals

- Achieving social, economic and scientific goals
- Addressing key global challenges
- Greater utilization of economic potential

New Challenges

- Globalization
- Knowledge society,
- Climate change, conservation of natural resources and global change
- Military and civil security

Guidelines

- Benefit and demand oriented
- Sustainability as a principle
- Intensifying international cooperation



Space Strategy of the federal government – spheres of activity

| - Spheres of activity - | - Project Examples - |
|-------------------------------------|---|
| Strategic space skills |       S-GEO Geo-LCT TerraSAR-X TanDEM-X EnMAP Galileo |
| Space Science |      eROSITA BepiColombo SIMBOX SOFIA AMS |
| New Markets |      GATE Indoor-Navigation Innovation DEM PPP |
| Whole-of-government security |     SSA Heinrich Hertz Copernicus EDRS |
| Exploration |      ExoMars Rosetta Philae ISS MPE |
| Technological Independence |     Ariane 6 NGL parts & components ground segment |

Space activities at national level

EDRS:

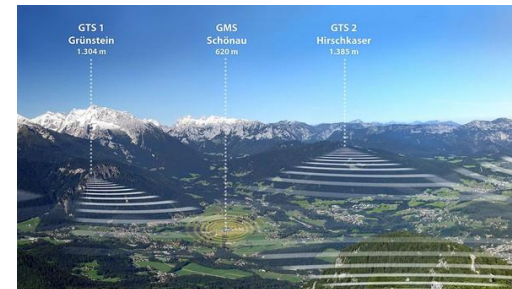
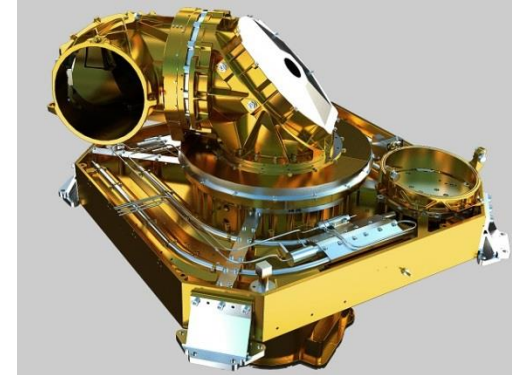
- System capabilities with regard to the building of laser based satellite communication technologies: **LCT (Laser communication terminal)** – data rate: 1.8Gbit/sec
 - A **precursor to EDRS** is the experimental laser communications terminal (LCT) carried onboard Inmarsat's Alphasat commercial communications satellite

Copernicus:

- **Earth observation center (EOP)** – Significantly involved in definition and build up of nearly all Copernicus components
- **Third party missions** beside the Copernicus satellite fleet (Sentinels): TerraSAR-X, TanDEM-X, EnMAP
- **Funding of about 30 projects** that cover a wide range of application (agriculture, forest management, water quality etc.)

Galileo:

- Test and development of innovative Galileo products at several test beds – **Galileo Test and Development environments – GATE** + Seagate, automotiveGATE, railGATE



III. 2015 Review Process of the European Space Policy

➤ Background is:

- the current version of European Space Policy from May 2007
- mandate from ESA Ministerial Council 2014 to ESA DG:
review the European Space Policy and submit proposals until the end of 2015
- joint process: in close consultation with Member States and EU COM

➤ Content should be:

- stronger commitment of the EU in the downstream sector, i.e. to creating the necessary boundary conditions for products deriving from EU space programmes
- foster technological independence: joint efforts for reducing European dependence
- new space programmes: e.deorbit (ESA), GOVSATCOM (EU)
- interlocking ESA and EU programmes: EDRS as role model (technology development nationally, system validation by ESA, exploitation by EU, partnership with industry)



IV. Items for Future Consideration

- Negotiation of a guaranteed number of launches being contracted per year by different institutional actors in Europe
- ESA's established role in space exploration and EU COM's ambition to coordinate European positions on space exploration (International Space Exploration Forum)
- Impact of US-EU Transatlantic Trade and Investment Partnership (TTIP) on the space sector

