CSC | Connectivity & Secure Communications

esa → THE EUROPEAN SPACE AGENCY

ARTES FINAL PRESENTATION DAYS

1-3 October 2024 I ESA - ECSAT I Oxfordshire, UK

DETAILED PROGRAMME

CONTENTS AND USEFUL INFORMATION

COURTESY BUS TIMETABLE LINK

CONTACT DETAILS

General questions during event: paul.greenway@esa.int or gemma.lavender@ext.esa.int
For organisational matters: ecsat.mvcc.ecb@esa.int

WELCOME TO ESA-ECSAT

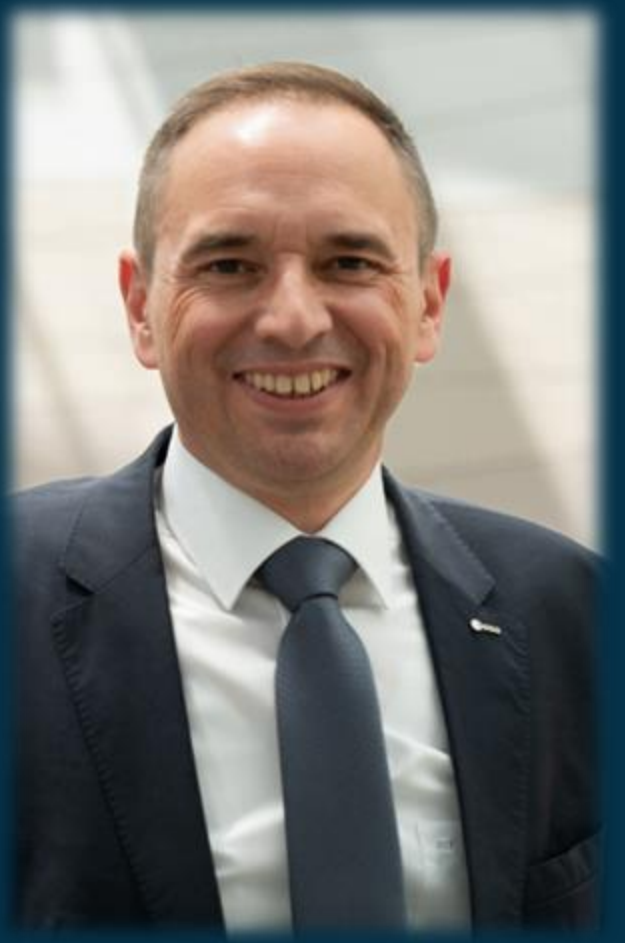
We are proud to welcome you to ESA's European Centre for Satellite Applications and Telecommunications (ECSAT). ECSAT is a unique ESA site as it's part of a thriving community of more than 100 commercial, public and academic enterprises that form Harwell's Space Cluster. The location of ARTES Final Presentation Days - ESA's Magali Vaissiere Conference Centre - is an exciting new addition to ECSAT, which opened in 2023. This fantastic new venue has enabled ESA to organise this event in the UK for the first time!

The ARTES Final Presentation Days focuses on the most recent activities performed by European and Canadian satellite communication industry, under the established Advanced Research in Telecommunications Systems (ARTES) programme within ESA's Connectivity and Secure Communications. You will have chance to learn about the current and future technology trends as well as the latest products, services and applications being developed in the sector.

Thank you for attending and we hope that you make the most of the networking opportunities over the three days.

Enjoy ARTES FINAL PRESENTATION DAYS 2024!

Laurent Jaffart, Director of Connectivity and Secure Communications & Head of ECSAT



HIGHLIGHTS: 1 OCTOBER

WELCOME SESSION, 14:00 – 15:30

This session will set the scene, introducing ECSAT and ESA's relationships with the Harwell Campus and Space Cluster. ESA's Directorate of Connectivity & Secure Communications (CSC), ARTES and the aims of this event will be outlined. You will also learn about CSC's vision for the future, followed by a satcom market analysis on the current and anticipated trends in the sector. Finally, the trends and priorities in satcom technologies will be addressed as well as the impact of sustainability on the sector.

INDUSTRY PANEL – CURRENT AND FUTURE SATCOM TECHNOLOGY, 15:50 – 17:15

The invited panel will provide an industry snapshot and opinion on satcom technology trends and priorities. The panel will conclude and explore commonalities and divergencies between panellists and the Welcome Session ESA presentations. The goal is to identify future technologies that are important for the competitiveness of the European space industry.

Joel Grotz
Senior Manager
SES

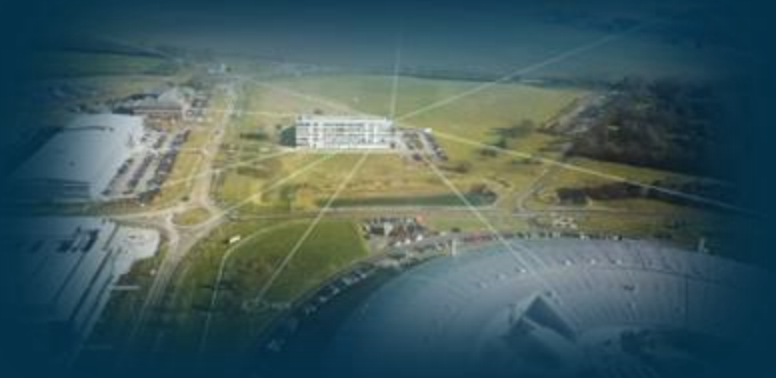
Stefano Vaccaro
Managing Director, Commercial Networks Europe
Viasat

Benoit Deper
CEO and Founder
Aerospacelab

Viney Dhiri
Head of Business Development - Advanced Services
D-Orbit

Siegbert Martin
CTO
TESAT

Eva Lagunas
Research Scientist
University of Luxembourg



ELEVATOR PITCHES, 17:25 - 18:25

Around 40 companies will take the challenge to pitch their company, product or idea in only 60 seconds!

HIGHLIGHTS: 2 & 3 OCTOBER

ARTES FINAL PRESENTATIONS

Over 90 presentations from industry in three parallel sessions detailing the results of each activity across 8 domains: Payload, Platform, Ground, Systems, Future Preparation, 5G/6G, Space Systems for Safety and Security (4S), and Optical & Quantum Communications. ESA keynotes from our technical experts will be interspersed among the final presentations.

MEET THE ARTES TEAM

Pre-booked meetings scheduled with our technical, programmatic and contractual experts.
If you were not able to book a place, please feel free to contact the team by introducing yourself to the final presentation moderators you will find in each domain/room.

5G/6G HUB TOURS

ESA's 5G/6G Hub is a place for collaboration and innovation, where industry will take advantage of the immense potential of converged satellite and terrestrial telecommunications networks to create advanced applications that benefit society and the environment. Benefiting from the support of the UK Space Agency (UKSA) the Hub fits into the UK Government's 5G and 6G strategy.

Hub tours are bookable on arrival on 2 & 3 October (see programme for timings), **please note there are limited spaces.**

HARWELL SPACE CLUSTER SHOWCASE

The following local organisations working under ARTES will be exhibiting; Oxford Space Systems, Astroscale, Open Cosmos, RAL Space, D-Orbit, MDA Space & Robotics, Lacuna Space, Deimos Space, Orbital Astronautics and EnSilica.

GALA DINNER (PRE-BOOKED), 2 OCTOBER, 19:00

Balliol College Dining Hall, in the heart of the University of Oxford's dreaming spires.

PROGRAMME: DAY 1

WELCOME SESSION

TIME	TITLE	SPEAKER	ROLE	ORGANISATION
14:00 – 15:30	**WELCOME**	Laurent Jaffart	DIRECTOR OF ESA CONNECTIVITY & SECURE COMMUNICATIONS (CSC), HEAD OF ECSAT	EUROPEAN SPACE AGENCY
	INTRODUCTION TO THE HARWELL CAMPUS AND SPACE CLUSTER	Barbara Ghinelli	DIRECTOR, INNOVATION CLUSTERS AND HARWELL CAMPUS	SCIENCE AND TECHNOLOGY FACILITIES COUNCIL (STFC)
	INTRODUCTION TO ESA CONNECTIVITY & SECURE COMMUNICATIONS, ARTES AND AIM OF FINAL PRESENTATION DAYS	Domenico Mignolo	ACTING HEAD OF TECHNOLOGY AND PRODUCTS DIVISION, CSC	EUROPEAN SPACE AGENCY
	TOWARDS ESA MINISTERIAL 2025	Cecilia Blacker Sy	HEAD OF PROGRAMME PLANNING, STRATEGY AND MANAGEMENT COORDINATION OFFICE, CSC	EUROPEAN SPACE AGENCY
	CURRENT AND FUTURE SATCOM MARKET TRENDS	Clement Cesbron	BUSINESS INTELLIGENCE ANALYST, CSC	EUROPEAN SPACE AGENCY
	SATCOM TECHNOLOGY TRENDS AND PRIORITIES	Christoph Ernst	ARTES ADVANCED TECHNOLOGY COORDINATOR, CSC	EUROPEAN SPACE AGENCY
	SPACE SUSTAINABILITY TRENDS AND IMPACT ON FUTURE SATCOM	Tiago Soares	CLEAN SPACE LEAD ENGINEER	EUROPEAN SPACE AGENCY
15:30 – 15:50	**COFFEE BREAK**			

PROGRAMME: DAY 1

INDUSTRY PANEL AND ELEVATOR PITCHES

TIME	TITLE	SPEAKER	ROLE	ORGANISATION
15:50 – 17:15	**INDUSTRY PANEL – CURRENT AND FUTURE SATCOM TECHNOLOGY**	Christoph Ernst (Chair)	ARTES ADVANCED TECHNOLOGY COORDINATOR, CSC	EUROPEAN SPACE AGENCY
		David Gomez Otero (Co-Chair)	HEAD OF SPACE SEGMENT SECTION, CSC	EUROPEAN SPACE AGENCY
		Siegbert Martin	CTO	TESAT
		Benoit Deper	CEO AND FOUNDER	AEROSPACELAB
		Joel Grotz	SENIOR MANAGER	SES
		Viney Dhiri	HEAD OF BUSINESS DEVELOPMENT – ADVANCED SERVICES	D-ORBIT
		Eva Lagunas	RESEARCH SCIENTIST	UNIVERSITY OF LUXEMBOURG
		Stefano Vaccaro	MANAGING DIRECTOR, COMMERCIAL NETWORKS EUROPE	VIASAT
17:15 – 17:25	**DAY 1 ROUND-UP AND EVENT ORGANISATION**	Dietmar Schmitt	ACTING HEAD OF SYSTEMS, STRATEGIC PROGRAM LINES & TECHNOLOGY DEPARTMENT, CSC	EUROPEAN SPACE AGENCY
		Paul Greenway	SPACE SEGMENT ENGINEER, CSC	EUROPEAN SPACE AGENCY
17:25 – 18:25	**ELEVATOR PITCHES**			
18:30 – 19:30	**WELCOME COCKTAIL**			
19:30	**END OF DAY 1**			

PROGRAMME: DAY 2

ARTES FINAL PRESENTATIONS

TIME	EARTH 1	EARTH 2	EARTH 3	MOON	MARS	5G/6G HUB TOURS
09:00 – 11:00	FUTURE PREPARATION	SPACE SYSTEMS FOR SAFETY AND SECURITY (4S)	5G/6G & SUSTAINABLE CONNECTIVITY	MEET THE ARTES TEAM	MEET THE ARTES TEAM	
11:00 – 11:30	**COFFEE BREAK**					
11:30 – 13:00	FUTURE PREPARATION	PAYLOAD	5G/6G & SUSTAINABLE CONNECTIVITY	MEET THE ARTES TEAM	MEET THE ARTES TEAM	
13:00 – 14:00	**LUNCH**					
14:00 – 15:40	FUTURE PREPARATION	PAYLOAD	OPTICAL & QUANTUM COMMUNICATIONS - SCYLIGHT	MEET THE ARTES TEAM	MEET THE ARTES TEAM	14:15 – 15:00 15:30 – 16:15
15:40 – 16:10	**COFFEE BREAK**					
16:10 – 17:50	FUTURE PREPARATION	PAYLOAD	PLATFORM	MEET THE ARTES TEAM	MEET THE ARTES TEAM	
17:50	**END OF DAY 2**					
19:00 – 22:15	**GALA DINNER, BALLIOL COLLEGE, UNIVERSITY OF OXFORD**					

PROGRAMME: DAY 2

FUTURE PREPARATION (EARTH 1)

SLOT	ACTIVITY	PRESENTER	ORGANISATION
9:00-9:20	ARTES FUTURE PREPARATION - HELPING DEFINE NEXT GENERATION SATCOM	Andrew Murrell	EUROPEAN SPACE AGENCY
9:20-9:40	ESA KEYNOTE - WHAT DOES THE WORLD RADIO CONFERENCE MEAN FOR THE SATCOM SECTOR?	Frank Zeppenfeldt	EUROPEAN SPACE AGENCY
9:40-10:00	EMBEDDING SATCOM IN FUTURE MOBILE NETWORKS THROUGH THE 3GPP	Nicolas Chuberre	THALES ALENIA SPACE
10:00-10:20	ESA KEYNOTE - AI - REVOLUTIONISING THE WAY SATCOM SERVICES ARE DELIVERED	Tomas Navarro	EUROPEAN SPACE AGENCY
10:20-10:40	WEARABLE SATCOM TECHNOLOGIES AND OPPORTUNITIES	Jonas Mrazek	FRAUNHOFER IIS
10:40-11:00	SATNEX - LINKING THE SATCOM INDUSTRY AND ACADEMIA	Miguel Vasquez	CTTC
11:00-11:30	COFFEE BREAK		
11:30-11:50	WHAT DO THE NEW 'SUPER-HEAVY' LAUNCH VEHICLES MEAN FOR SATCOM MISSIONS?	Rasmus Flytkjaer	LONDON ECONOMICS
11:50-12:10	WHAT DO THE NEW 'SUPER-HEAVY' LAUNCH VEHICLES MEAN FOR SATCOM MISSIONS?	Federico Trovarelli	NOVASPACE
12:10:12:30	FLAT SATELLITES - THE FORM FACTOR OF THE FUTURE?	Vincenzo Schiavo	NOVASPACE
12:30-12:50	FLAT SATELLITES - THE FORM FACTOR OF THE FUTURE?	Jérome Tronc	AIRBUS DEFENCE AND SPACE
13:00-14:00	LUNCH BREAK		
14:00-14:20	MULTI-ORBIT SATCOM SYSTEMS - THE BEST OF BOTH WORLDS?	Mikko Majanen	VTT
14:20-14:40	FEEDER LINK SOLUTIONS FOR CONSTELLATIONS - FREEING UP SPECTRUM FOR USERS?	Jérome Tronc	AIRBUS DEFENCE AND SPACE
14:40-15:00	FEEDER LINK SOLUTIONS FOR CONSTELLATIONS - FREEING UP SPECTRUM FOR USERS?	Lucas Brewster	KEPLER
15:00-15:20	STANDARDISING ISL SOLUTIONS - A NEW PRODUCT OPPORTUNITY	Paul Thompson	QINETIQ
15:20-15:40	NEW SATCOM OPPORTUNITIES FOR DRONES AND HELICOPTERS	Ilias Christofilos	INTRACOM DEFENSE
15:40-16:10	COFFEE BREAK		
16:10-16:30	FULL DUPLEX TECHNIQUES TO BOOST SPECTRUM THROUGHPUT	Eva Lagunas	UNIVERSITY OF LUXEMBOURG
16:30-16:50	DVB OR 3GPP - WHEN AND WHERE EACH IS RIGHT FOR SATCOM	Henrik Martikainen	MAGISTER
16:50-17:10	CYBER SECURITY APPROACHES FOR SMALL SATCOM MISSIONS	Ernest Silvestre Costa	NTT DATA
17:10-17:30	ARTES FUTURE PREPARATION - WHAT'S NEXT AND HOW CAN I PARTICIPATE?	Andrew Murrell	EUROPEAN SPACE AGENCY
17:30-17:50			

PROGRAMME: DAY 2

SPACE SYSTEMS FOR SAFETY & SECURITY (4S), PAYLOAD (EARTH 2)

SLOT	DOMAIN	ACTIVITY	PRESENTER	ORGANISATION
9:00-9:20	4S	FIRST PHASE FOR 4S SYSTEM SERVICES TEST BED	Erica Rapp	GMV
9:20-9:40	4S	CRYPTOGRAPHIC SECURITY MECHANISMS FOR CONTROL AND USER PLANES IN SATELLITE COMMUNICATIONS	Emna Amri	CYSEC
9:40-10:00	4S	PHYSICAL LAYER SECURITY FOR SATELLITE COMMUNICATION (4S)	Kai-Uwe Storek	NEOSAT
10:00-10:20	4S	RAPID AND RESILIENT CRISIS RESPONSE SYSTEM STUDY	Andrea Bucarelli	E-GEOS
10:20-10:40	4S	RAPID AND RESILIENT CRISIS RESPONSE SYSTEM STUDY	Alastair Pidgeon	STARION GROUP
10:40-11:00	4S	ESA KEYNOTE - SECURITY FOR NEXT GENERATION TELECOMMUNICATION SATELLITES	Antonios Atlasis	EUROPEAN SPACE AGENCY
11:00-11:30	COFFEE BREAK			
11:30-11:50	4S	SECURESAT	Mohammed Hassine	TISALABS
12:10:12:30	PAYLOAD	ESA KEYNOTE - CURRENT AND FUTURE TRENDS IN PAYLOAD ARCHITECTURES AND DESIGN	Salvatore D'Addio	EUROPEAN SPACE AGENCY
12:30-12:50	PAYLOAD	PERSISTENT LEO CONNECTIVITY SERVICE (PERSILS)	Quentin Van Overmeere	AEROSPACELAB
13:00-14:00	LUNCH BREAK			
14:00-14:20	PAYLOAD	A3M : ACTIVE ANTENNA AMPLIFIER MODULE	Jens Haala	TESAT-SPACECOM & CO KG
14:20-14:40	PAYLOAD	MESH AND ASSOCIATED CARRYING NET FOR DEPLOYABLE REFLECTOR	Peter Lindenmaier	HPS
14:40-15:00	PAYLOAD	METAL-MESH ANTENNA REFLECTOR SURFACE CAPABILITY	Amool Raina	OXFORD SPACE SYSTEMS
15:00-15:20	PAYLOAD	SATELLITE SIGNAL PROCESSING USING AN OFF-THE-SHELF AI CHIPSET	Steven Claessens	ANTWERP SPACE
15:20-15:40	PAYLOAD	HIGH VOLTAGE CABLE FOR Q-BAND TRAVELING WAVE TUBE AMPLIFIERS	Wolfgang Duerr	THALES DEUTSCHLAND GMBH
15:40-16:10	COFFEE BREAK			
16:10-16:30	PAYLOAD	LOW NOISE MASTER OSCILLATOR QUALIFICATION	Gérard Wagner	OROLIA SWITZERLAND SA
16:30-16:50	PAYLOAD	MODULAR AND FLEXIBLE KU BAND RECEPTION EQUIPMENT	Roger Vilaseca	SENER
16:50-17:10	PAYLOAD	HYBRIDS FOR NEXT GENERATION CONVERTERS/RECEIVERS	Dennis Kleén	BEYOND GRAVITY
17:10-17:30	PAYLOAD	MINIATURE BULK ACOUSTIC WAVE FILTERS	Sylvain Ballandras	FRECNSYS / SOITEC
17:30-17:50	PAYLOAD	FULLY ADAPTIVE RF LINEARISER FOR HIGH POWER AMPLIFIERS	Suat Ayoz	HONEYWELL INTERNATIONAL SRO

PROGRAMME: DAY 2

5G/6G, OPTICAL & QUANTUM, PLATFORM (EARTH 3)

SLOT	DOMAIN	ACTIVITY	PRESENTER	ORGANISATION
9:00-9:20	5G/6G	ESA KEYNOTE - SPACE FOR 5G/6G AND SUSTAINABLE CONNECTIVITY	Angelos Goulianos	EUROPEAN SPACE AGENCY
9:20-9:40	5G/6G	5G EMERGE PHASE 1	Bram Tullemans	EBU
9:40-10:00	5G/6G	5G SYSTEM INFRASTRUCTURE STUDY	Helmut Zaglauer	AIRBUS DEFENCE AND SPACE, GERMANY
10:00-10:20	5G/6G	DAWN	Adam Kapovits	EURESCOM GMBH
10:20-10:40	5G/6G	5G ENABLED GROUND SEGMENT TECHNOLOGIES OVER THE AIR DEMONSTRATOR (5G GOA)	Adam Kapovits	EURESCOM GMBH
10:40-11:00	5G/6G	OPENAIRINTERFACE EXTENSION FOR 5G SATELLITE LINKS (5G LEO)	Adam Kapovits	EURESCOM GMBH
11:00-11:30	COFFEE BREAK			
11:30-11:50	5G/6G	INN3SCO - INTEGRATION OF NON-3GPP SATELLITE NETWORKS WITH 5G CORE NETWORKS	Francesco Zampognaro	ROMARS S.R.L.
11:50-12:10	5G/6G	DEMONSTRATOR FOR SATELLITE TERRESTRIAL INTEGRATION IN THE 5G CONTEXT (SATIS5)	Bjoern Riemer	FRAUNHOFER-FOKUS
12:10:12:30	5G/6G	3GPP NTN ARCHITECTURE STRATEGY DEFINITION PHASE	Patrick Everart	NOKIA BELL N.V.
12:30-12:50	5G/6G	SAT-IAB - SATELLITE AND INTEGRATED ACCESS BACKHAUL (IAB) - AN ARCHITECTURAL TRADE-OFF	Eva Lagunas	UNIVERSITY OF LUXEMBOURG
13:00-14:00	LUNCH BREAK			
14:00-14:20	OPTICAL	ESA KEYNOTE - OPTICAL AND QUANTUM COMMUNICATION TRENDS	Kasia Balakier	EUROPEAN SPACE AGENCY
14:20-14:40	OPTICAL	TELCO-B	Guy Baister	THALES ALENIA SPACE
14:40-15:00	OPTICAL	100 GBPS FREE-SPACE EXPERIMENT USING FIBRE OPTICAL TRANSCEIVERS (FRESP)	Oliver Karl	TESAT
15:00-15:20	OPTICAL	FAST SWITCHING FOR OPTICAL INTER-SATELLITE DATA TRANSMISSION AND RANGING FOR SATELLITE COMMUNICATION AND RADIO NAVIGATION SYSTEMS	Vera Eklund	TESAT
15:20-15:40	OPTICAL	ROBOTIC OPTICAL LINK ACQUISITION, TRACKING AND DATA RECEPTION FOR OPTICAL GROUND STATIONS	Hilda Kinter	KONGSBERG SATELLITE SERVICES
15:40-16:10	COFFEE BREAK			
16:10-16:30	PLATFORM	ESA KEYNOTE - THERMAL CHALLENGES IN SATCOM PLATFORM DESIGN	Stephane Lapensee	EUROPEAN SPACE AGENCY
16:30-16:50	PLATFORM	COMPOSITE TUBE PRODUCTS FOR SATCOM	Pierre-Luc Blavignac	MECANO
16:50-17:10	PLATFORM	HIGH MOMENTUM WHEELS	Michael Schmid	ASTRO-UND FEINWEKTECHNIK ADLERS-HOF GMBH
17:10-17:30	PLATFORM	ADVANCED MANUFACTURING OF ROTORS FOR REACTION WHEELS	Dimitri Albert	ROCKWELL COLLINS DEUTSCHLAND GMBH

PROGRAMME: DAY 3

ARTES FINAL PRESENTATIONS

TIME	EARTH 1	EARTH 2	EARTH 3	MOON	MARS	5G/6G HUB TOURS
09:00 – 11:00	GROUND	PAYLOAD	PLATFORM	MEET THE ARTES TEAM	MEET THE ARTES TEAM	09:30 – 10:15 10:30 – 11:15
11:00 – 11:30	**COFFEE BREAK**					
11:30 – 13:00	GROUND	PAYLOAD	PLATFORM	MEET THE ARTES TEAM	MEET THE ARTES TEAM	
13:00 – 14:00	**LUNCH**					
14:00 – 15:40	GROUND	SYSTEMS	PLATFORM	MEET THE ARTES TEAM	MEET THE ARTES TEAM	14:15 – 15:00
15:40 – 16:10	**COFFEE BREAK**					
16:10 – 17:50	GROUND	SYSTEMS		MEET THE ARTES TEAM	MEET THE ARTES TEAM	
17:50	**END OF DAY 3**					

PROGRAMME: DAY 3

GROUND (EARTH 1)

SLOT	ACTIVITY	PRESENTER	ORGANISATION
9:00-9:20	ESA KEYNOTE - VIRTUALIZATION AND DIGITALISATION OF GROUND SEGMENT	Sanna Sandberg	EUROPEAN SPACE AGENCY
9:20-9:40	VIRTUAL INTEGRATED BASEBAND (IBB) EQUIPMENT	Thibault Deleu	CELESTIA ANTWERP BV
9:40-10:00	MULTI-BEAM ELECTRONICALLY STEERED ANTENNAS	David Garrood	CELESTIA TECHNOLOGIES GROUP BV
10:00-10:20	GROUND COMPONENTS FOR DVB STANDARDIZED BEAM HOPPING	Christian Rohde	FRAUNHOFER
10:20-10:40	VIRTUAL INTEGRATED BASEBAND (VIBB) 2.0	Thibault Deleu	CELESTIA ANTWERP BV
10:40-11:00	MRC100	Geert Adams	ST ENGINEERING IDIRECT
11:00-11:30	COFFEE BREAK		
11:30-11:50	WIDEBAND DVB-S2X SOFTWARE DEMODULATOR RUNNING ON CPU AND/OR GPU ON CONSUMER HARDWARE PLATFORMS	Johannes Ebert	JOANNEUM RESEARCH GMBH
11:50-12:10	CASTEC FOR CONSTELLATION MONITORING	Mattia Ricatto	S.A.T.E SRL
12:10:12:30	GLOBAL NEWSPACE NETWORK EVOLUTION (GNNETE)	Tharun Jose	SSC SPACE UK LTD
12:30-12:50	MINIATURISED VHF/UHF OMNIDIRECTIONAL ANTENNA FOR M2M/IOT APPLICATIONS (MONAMI)	Serge Bories	CEA-LETI & KINÉIS
13:00-14:00	LUNCH BREAK		
14:00-14:20	MINFARM OPTIMISED LORAWAN TO SATELLITE SOFTWARE STACK	Carl Tano	MINFARM TECH LTD.
14:20-14:40	PROJECT CASSIS, CONNECTED AUTOMOTIVE SATELLITE SERVICED INTEGRATED SYSTEM	Harvinder Naghi	SPACE APPLICATIONS CATAPULT
14:40-15:00	CASSIS AND TAWNY - HYBRID BEAMFORMING FOR USER TERMINALS	Paul Morris	ENSILICA
15:00-15:20	DIGITAL IF FOR THE SATELLITE GROUND SEGMENT	Paul Gouws	ETL SYSTEMS
15:20-15:40	COMPACT MOBILE ANTENNA FOR HIGH-SPEED TRANSPORT VEHICLES	Oskar Zetterstrom	KUNGLIGA TEKNISKA HOGSKOLAN
15:40-16:10	COFFEE BREAK		
16:10-16:30	TFLN-BASED HIGH-SPEED ELECTRO-OPTIC MODULATORS	Marc Reig-Escalé	VERSICS AG
16:30-16:50	KA/KU BAND TRANSCEIVER ASIC	Graham Leach	RIVERBECK LIMITED
16:50-17:10			
17:10-17:30			

PROGRAMME: DAY 3

PAYLOAD, SYSTEMS (EARTH 2)

SLOT	DOMAIN	ACTIVITY	PRESENTER	ORGANISATION
9:00-9:20	PAYLOAD	EUFRATE (EUROPEAN FPGA RADIATION-HARDENED ARCHITECTURE FOR TELECOMMUNICATIONS)	Antonio Catanese	ARGOTEC S.R.L.
9:20-9:40	PAYLOAD	SINGLE POLE MULTI-THROW KA-BAND MICROWAVE MONOLITHIC INTEGRATED CIRCUIT SWITCH FOR SIGNAL DISTRIBUTION, REDUNDANCY AND BEAM-HOPPING	Francesco Scappaviva	MEC SRL - MICROWAVE ELECTRONICS FOR COMMUNICATIONS
9:40-10:00	PAYLOAD	HIGH TEMPERATURE, MODULAR AND FLEXIBLE POWER SUPPLY FOR KA/Q/V-BAND SOLID STATE POWER AMPLIFIER	Marc Bekemans	THALES ALENIA SPACE
10:00-10:20	PAYLOAD	INTER SATELLITE LINK V-BAND SOLID STATE POWER AMPLIFIER MODULE	Alessandro Fonte	SIAE MICROELETTRONICA
10:20-10:40	PAYLOAD	FERRITE SWITCHES	Benoit Lejay	THALES ALENIA SPACE
10:40-11:00	PAYLOAD	ON BOARD PROCESSORS FOR REGENERATIVE PAYLOADS	Manfred Sust	BEYOND GRAVITY AUSTRIA GMBH
11:00-11:30	COFFEE BREAK			
11:30-11:50	PAYLOAD	SMALL RECEIVE-ONLY KA-BAND 23 GHZ ANTENNA AND DEMODULATOR FOR USE ON SMALLER SATELLITES	Loris Marchignani	INFORMATION TECHNOLOGIES SERVICES
11:50-12:10	PAYLOAD	TRANSMIT/RECEIVE MULTI-FEED PER BEAM ANTENNA FOR A SINGLE REFLECTOR USING ADDITIVE MANUFACTURING	Antoine Calleau	SWISSTO12
12:10:12:30	PAYLOAD	GENERIC CCOB AND DTP OPERATED IN FLEXIBLE PAYLOADS	Helene Gachon	THALES ALENIA SPACE
12:30-12:50	PAYLOAD	ESA KEYNOTE - FUTURE TRENDS IN ACTIVE ANTENNA DESIGN	Giovanni Toso	EUROPEAN SPACE AGENCY
13:00-14:00	LUNCH BREAK			
14:00-14:20	SYSTEMS	ESA KEYNOTE - MARITIME VHF DATA EXCHANGE SYSTEM VIA SATELLITE	Nader Alagha	EUROPEAN SPACE AGENCY
14:20-14:40	SYSTEMS	CADSAT - CARRIER AGGREGATION IN SATELLITE COMMUNICATION NETWORKS	Eva Lagunas	UNIVERSITY OF LUXEMBOURG
14:40-15:00	SYSTEMS	AUTONOMOUS COLLISION AVOIDANCE SYSTEM FOR NGSO	George Dan Muntean	GMV
15:00-15:20	SYSTEMS	SHORT-TERM FORECAST OF SIGNAL PROPAGATION CONDITIONS BASED ON NUMERICAL WEATHER MODELS AND GROUND TERMINAL FEEDBACK	Jan Erik Håkegård	SINTEF
15:20-15:40	SYSTEMS	HYPERSPACE	Edvard Foss	KONGSBERG SATELLITE SERVICES
15:40-16:10	COFFEE BREAK			
16:10-16:30	SYSTEMS	NARROWBAND IOT STANDARD FOR SMALLSAT NETWORKS	Rene Brandborg Sørensen	GATEHOUSE TELECOM A/S
16:30-16:50	SYSTEMS	SINGLE COMMUNICATION LINK TO USER BASED ON CONTROL TOKEN PROTOCOL (SNAKE)	Giuseppe De Franco	SPACE BOY STATION

PROGRAMME: DAY 3

PLATFORM (EARTH 3)

SLOT	ACTIVITY	PRESENTER	ORGANISATION
9:00-9:20	DEMISABLE HIGH PRESSURE TANKS FOR LEO SATCOMS	Philipp Heher	PEAK TECHNOLOGY
9:20-9:40	NON-METALLIC GAS TANKS FOR SPACECRAFT PROPULSION SYSTEMS	Romilly Close / Paul Williams	HAYDALE COMPOSITE SOLUTIONS / INTERNATIONAL SPACE PROPULSION
9:40-10:00	NEXT-GEN EPPM ACTUATOR TECHNOLOGIES	Marcus Wrabel	BEYOND GRAVITY AUSTRIA GMBH
10:00-10:20	DEVELOPMENT OF A VERSATILE, HIGH-EFFICIENT 2 AXIS ELECTRIC PROPULSION POINTING MECHANISM	Matthias Forget	BEYOND GRAVITY AUSTRIA GMBH
10:20-10:40	TOWARDS IN-ORBIT DEMONSTRATION OF NPT30-I2 1U	Daniel Paricio Ezquerra	THRUSTME
10:40-11:00	BATTERY PASSIVATION FOR SMALL TELECOMMUNICATIONS SATELLITES	Davide Istria	ARGOTEC S.R.L.
11:00-11:30	COFFEE BREAK		
11:30-11:50	ESA KEYNOTE - CHARTING A COURSE: THE INTELLIGENT SYSTEM INITIATIVE	Monica Politano	EUROPEAN SPACE AGENCY
11:50-12:10	ARTIFICIAL INTELLIGENCE FOR AUGMENTED REALITY IN SATCOM ASSEMBLY, INTEGRATION AND TEST	Inês Cadilha	LUSOSPACE - PROJ DE ENGENHARIA
12:10:12:30	EMBEDDED SENSOR NETWORK IN SPACECRAFT STRUCTURES COMPATIBLE WITH DIGITAL FACTORIES	Henrik Galtung	JOTNE EPM TECHNOLOGY AS
12:30-12:50	GR7XV MICROPROCESSOR	Krishna Kalipurath Radhakrishnan	FRONTGRADE GAISLER
13:00-14:00	LUNCH BREAK		
14:00-14:20	EXPLOITING NOVEL TRANSPARENT MATERIALS AND MANUFACTURING TECHNIQUES TOWARDS KA-BAND PASSIVES DEPLOYED ON SATELLITE PHOTO VOLTAIC CELLS	Simos Nikolaou	FREDERICK UNIVERSITY
14:20-14:40	ELECTRIC ORBIT RAISING RADIATION ENVIRONMENT AND SOLAR ARRAY DEGRADATION	Athina Varotsou	TRAD - TESTS ET RADIATIONS
14:40-15:00	PROJECT ZEUS (SMALLSAT DEVELOPMENT)	Ashley Dove-Jay	ORBITAL ASTRONAUTICS LTD
15:00-15:20			
15:20-15:40			
15:40-16:10	COFFEE BREAK		

ATTENDING INDUSTRY

AEROSPACELAB

Founded in 2018, Aerospacelab is an emerging figure in the aerospace sector, showcasing a remarkable achievement of 8 satellites successfully deployed in orbit. We pride ourselves on our dedication to vertical integration and TRL-9 implementation, solidifying our commitment to driving innovation in the space industry. With our operations strategically placed in various locations, including the U.S. Aerospacelab remains steadfast in its mission to deliver pioneering solutions for our diverse customer community. Additionally, Aerospacelab recently broke ground on its Megafactory in Belgium - the world's third largest satellite manufacturing facility, scheduled to begin operations in 2026.

ALPHA UNMANNED SYSTEMS

Alpha Unmanned Systems manufactures tactical helicopter unmanned aerial vehicles (UAVs) for clients, including the US Department of defense in 10 countries.
With over 10 years of experience working closely with the world's most important defense customers, Alpha's UAV helicopters are used frequently for maritime domain awareness and intelligence, surveillance and reconnaissance (ISR) missions.
The company was founded in 2014 and is based in Madrid with a team of 23 professionals completely specialized in drone technology. The A800 and A900 systems are fully autonomous and use either gasoline or heavy fuel. Alpha is an independent privately held company and is an ISO9001 manufacturer.

ALVATROSS

Alvatross is an Operational Support System (OSS) vendor, steadfastly aiding service providers in enhancing their competitive edge within the market. The company's hallmark is a state-of-the-art, modular, adaptable digital platform, aligned with TM Forum standards and the Open Digital Architecture (ODA). Alvatross' cloud-native digital platform comprehensively manages end-to-end order processes by seamlessly integrating various customisable modules within a unified solution; the Alvatross Digital Platform. Backed by the extensive expertise of the SATEC Group, accumulated over a 35-year journey in the telecom industry, Alvatross embodies a unique fusion of expertise and innovation. A young, modern, and flexible OSS vendor ready to navigate the challenges of today and embrace tomorrow's opportunities.

ASTRO-UND FEINWERKTECHNIK ADLERSHOF GMBH

Astro-und Feinwerktechnik Adlershof GmbH (ASTROFEIN), founded in October 1993, is a leading SME in space technology, specialising in high-quality space components. Renowned for our expertise in reaction wheels, we introduced the innovative "smart Reaction Wheel" with our RW90, first deployed on the BIRD satellite in 2001. Our smart reaction wheels feature digital interfaces, internal monitoring, and model-based controllers to ensure robust and reliable satellite operations by automating crucial attitude control tasks. ASTROFEIN's commitment to excellence has established us as a market leader, trusted for our advanced, dependable space technology solutions.

ATTENDING INDUSTRY

ASTROSCALE

Astroscale is the global leader in in-orbit servicing and close proximity missions to support the safe, sustainable and secure use of space. The company's innovative commercial services include debris removal, life extension and refuelling, end-of-life management and space-based space situational awareness. These solutions empower satellite operators to reduce risks, increase returns, and achieve mission success while fostering a sustainable space environment. Since its first successful launch in March 2021, Astroscale has proven rendezvous, proximity and inspection operations technologies in orbit during the ELSA-d and ADRAS-J missions. These technologies are crucial to helping unlock a circular space economy.

BEYOND GRAVITY

Beyond Gravity, headquartered in Zurich, Switzerland, is the first space company to combine a startup mindset, agility, speed and innovation with decades of experience and proven quality. Approximately 1800 employees at 14 locations in seven countries (Switzerland, Sweden, Austria, Germany, USA, Finland and Portugal) develop and manufacture products for satellites and launch vehicles with the goal of advancing humankind and enabling the exploration of the world and beyond. Beyond Gravity is the preferred supplier of structures for all types of launch vehicles and a leader in selected satellite products and for constellations in the New Space sector. In 2023, the company generated a revenue of around CHF 383 million. More information at: www.beyondgravity.com

SATENLIGHT

SatEnlight is a project conceived in the laboratories of University of Milano dealing with the development of a proprietary technology for satellite free-space optical communication. This technology, integrable with traditional optical solutions, implements digital multiplexing of data transmitted through an optical channel, exploiting the Optical Angular Momentum (OAM) property of the electromagnetic radiation (typically imprinting a vortex shape to a laser beam wavefront). This allows to decode information simultaneously received from several lasers. Since the decoding is carried out through an interferometric measurement that analyzes a small portion of the laser wavefront, the main goal is to design and produce a receiver with small dimensions compared to other solutions on the market.

ANTWERP SPACE

Antwerp Space is a leading Belgian Space company active in the field of Space based RF applications. It is part of OHB SE, a European Space and Technology group that currently employs over 3000 people. Antwerp Space's core business is in the delivery of satellite communication-, navigation- and radar solutions as well as instruments for scientific and exploration missions. The company activity started in 1962 with today's facilities in Antwerp and Leuven. Our growing team is formed by highly skilled engineers and PhDs from all over the world.

ATTENDING INDUSTRY

CELESTIA | Antwerp

CELESTIA ANTWERP BV

Celestia Antwerp BV origins date back to 1962, making it one of Belgium's oldest and most experienced space companies. In 1962 the company was set up as a division of Bell Telephone Manufacturing company. It became an autonomous subsidiary in the '90s. In 2005, 'Alcatel Bell Space' became 'Alcatel Alenia Space Antwerp', before being given the name 'Thales Alenia Space Antwerp' in 2007. These name changes show the evolution of our shareholding and the many consolidations that took place in the European space sector. Celestia Technologies Group acquired the company from the OHB SE group back in November 2019.

Through the decades, the Celestia Antwerp engineering team has built up a professional and recognised expertise in different domains of the space business. This expertise is not only limited to technical and technological skills on equipment level, but there is also a proven track record in advanced system studies, system design, system AIT (Assembly, Integration and Test), on-site delivery, installation and training, and providing turn-key solutions.

Celestia Antwerp is based in Berchem, Belgium, and currently employs around 25 persons, the majority of which hold an engineering degree, with strong expertise in the areas of: digital signal processing, RF, analogue (PCB) & digital (FPGA) hardware designs, software design and in the management and technical lead of complex projects.

CYSEC

CYSEC

In today's society, we heavily rely on space-based infrastructure. Given the continuously evolving cyber threats in the current geopolitical environment, securing space assets is a major challenge.

Since 2018, CYSEC has provided world-leading, high-performance cybersecurity tools to ensure robustness, performance, confidentiality, and integrity for the burgeoning trillion-dollar space asset market.

CYSEC has a portfolio including three main product lines and is the proud organiser of CYSAT, the biggest European event dedicated to space cybersecurity.

DARWIN SATCOM

DARWIN SATCOM

Darwin SATCOM specialises in the Seamless Integration of Non-Terrestrial Networks, leveraging on a thorough understanding of space and telecom technologies, market trends and service demands, powered by a series of internal tools. We enable our customers to make smarter R&D and operational investments, forge strategic partnerships, and unlock new revenue streams.

ATTENDING INDUSTRY

e-geos
AN ASI / TELESPAZIO COMPANY

E-GEOS

e-GEOS, an ASI (20%) / Telespazio (80%) company, is a global leader in delivering applications and services through highly technological and innovative geoinformation platforms based on artificial intelligence and cloud technology. e-GEOS offers a unique portfolio of application services, from data acquisition to analytical report generation, also thanks to its optical and radar capabilities and fast access to the superior monitoring capabilities of the first- and second-generation COSMO-SkyMed constellation, of which e-GEOS is the exclusive distributor worldwide. e-GEOS manages the Matera Space Center for the acquisition, storage and processing of multi-mission satellite data. The Center is one of the stations of the Core Ground Segment of Copernicus and receives radar data acquired by the Sentinel-1 mission.

deimos

ELECNOR DEIMOS

Elecnor Deimos, founded in 2001, is a leading European technology group with approximately 500 professionals. Headquartered in Spain and operating through subsidiaries in five countries, Deimos serves a wide range of industries, including space, transport, aeronautics, and maritime. Deimos offers end-to-end services, from small satellite design and integration to micro-launcher subsystem development and Earth observation satellite operations. Deimos also provides satellite data and end-user applications, ensuring a full range of solutions for clients.

EnSilica
your trusted IC partner

ENSILICA

EnSilica is a leading fabless supplier of complex mixed signal ASICs to OEMs and system integrators. We specialise in custom RF, mmWave, mixed signal, and digital ICs, serving global customers across automotive, industrial, healthcare, and communications sectors.
Our world-class expertise includes Ka-band chips for satellite communications, enabling hybrid beamforming, and digital beamforming ASICs for LEO payloads and user terminals.
With a strong track record in delivering high-performance, innovative solutions, we empower our clients to stay at the forefront of technology in some of the most demanding applications.

etl

ETL SYSTEMS

ETL Systems has been at the forefront of RF design and manufacturing for over 35 years. It designs and builds essential elements of critical satellite communications infrastructure. Its culture of innovation and its solutioneering approach have established it as a market leader. ETL's rapid growth and success have been recognised at the UK's highest level; it has won three Queen's Awards for Enterprise in International Trade. As a testament to that success, the top 20 satellite operators and teleports in the world utilise ETL's products. Today, the company offers a full suite of solutions between the antenna and the modem.

ATTENDING INDUSTRY

EUTELSAT GROUP

With a fleet of 35 geostationary satellites and a Low Earth Orbit (LEO) constellation of more than 600 satellites providing capacity for broadcasters, media service providers, telecom operators, ISPs and governmental agencies, Eutelsat Group is the world's first satellite operator with an integrated GEO-LEO infrastructure.

FRAUNHOFER ISS

The Fraunhofer-Gesellschaft, based in Germany, is one of the world's leading applied research organizations. Its research activities are conducted by 76 institutes and research units at locations throughout Germany. The Fraunhofer-Gesellschaft employs a staff of nearly 32,000 who work with an annual research budget of roughly €3.4 billion. The Fraunhofer Institute for Integrated Circuits IIS, headquartered in Erlangen, Germany, conducts world-class research on microelectronic and IT system solutions and services. Today, it is the largest institute of the Fraunhofer-Gesellschaft. More than 1200 employees conduct contract research for industry, the service sector and public authorities.

One core business field of Fraunhofer IIS is satellite communication technology. Besides overall system and architecture definition, special focus is on related transmission technologies and individual components such as antennas, transmitters and receivers – either standard-compliant (e.g. 5G/ 6G or DVB-S2X) or tailored to customer needs. Fraunhofer IIS also develops ground station technologies and test equipment and offers dedicated measuring and test facilities for validating prototypes. All these developments and activities serve a wide range of applications starting from narrow-band solutions for satellite-based internet-of-things (Sat-IoT) to flexible high throughput systems & satellites (HTS) including satellite onboard processing (OBP).

For more details, please take a look at our website: https://www.iis.fraunhofer.de/en/ff/kom/satkom.html

ATTENDING INDUSTRY

FRONTGRADE GAISLER

Frontgrade Gaisler is a leading provider of radiation-hardened microprocessors and IP cores for critical applications, particularly in the space industry. The company's processors are known for their reliability, fault tolerance, and radiation tolerance, making them ideal for any space mission or other application.

GATEHOUSE SATCOM

For more than two decades Gatehouse Satcom has delivered market-leading communications software products to the satellite communications industry, and we are looking forward to continuing this role in the new era of standardised and direct-to-device satellite connectivity.
We are experts in embedded satellite communications software and in the development of satellite communications protocol stacks, waveforms and test tools for terminals, satellites, and network infrastructure. Together with other visionary companies we unlock the full potential of satellite communications for a seamlessly connected world.

HAYDALE COMPOSITE SOLUTIONS/ISP INTERNATIONAL SPACE PROPULSION (ISP)

HAYDALE Composite Solutions (HCS) is a distinct unit within the UK HAYDALE group, a leading global technology solutions company that specialises in the design, development, and commercialisation of advanced materials using graphene and other nanomaterials. The company's advanced materials are used in a variety of industries, including aerospace, automotive, construction, energy, and electronics.
ISP International Space Propulsion (ISP) is a space engineering consultancy of long-standing, that has supported many aspects of component and system operational development, and supply chain support within the UK space sector, primarily to enhance the UK satellite propulsion industry. The company has supported ESA projects, notably Galileo IOV and FOC production, test and launch; ATV system design; and Sentinel-5p ATEX Ground Equipment. The Company offers a diverse range of technical project solutions, as well as reputable Product Assurance and management services.
The two companies have been jointly developing demisable Type IV tank solutions, since 2016, without the use of metallic liners or carbon-fibre shells, aimed at rapid provision of low-cost satellite applications, primarily in gas- and liquid-propellant tanks.

ATTENDING INDUSTRY

HPS High Performance Space Structure Systems GmbH The Team to Trust

HPS GMBH

HPS GmbH, founded in 2000 with HPS Romania and HPtex, has evolved into an independent group with more than 80 employees. HPS Group develops high-end space technology and delivers flight hardware on equipment up to subsystem level. Major product lines and services are:

- HPS is currently on board with more solid reflector antennas (up to 2.5 m)
- Large deployable reflector subsystems (up to 20 m)
- Deorbit deployable sail subsystems
- Nanosatellite-equipment (RF, mechanical, thermal)
- Thermal hardware (radiators, MLI, thermal straps)
- Composite & metal structures, radiation protection
- Mechanical Ground Support Equipment (MGSE)
- Engineering & integration services

...on more than 25 space-missions.

IDE INTRACOM DEFENSE

IDE

INTRACOM DEFENSE (IDE) is a highly acclaimed defense systems company, registered in Greece and focused on the design, development, manufacturing and supply of systems for military and security applications. IDE's main capabilities include: tactical communications, missile electronics, unmanned air & Sea Systems and hybrid energy systems. Since recently, IDE has been actively involved in the space sector, and participates in several projects, like ODIN'S EYE of EDF, ESA's ACROSS-AIR and DANTE, extending its know-how in related areas such as satcom and 5G-Non-Terrestrial Networks. IDE operates sophisticated R&D laboratories, facilities for environmental and EMI/EMC testing, and plans its infrastructure adaptation for space manufacturing, assembly, integration and testing.

ATTENDING INDUSTRY

JOTNE CONNECT

Since 1990, Jotne Connect has developed open standard-based information management solutions specialising in different engineering domains such as CAD, CAE, PLM, simulation, testing and manufacturing. Jotne Connect software products have successfully reduced development and product lifecycle costs via the use of intelligent data management in the areas of aeronautics, space, defence and built environment.

Jotne Connect is a leader in the development of standards-based software products specialising in:

- Product Data Exchange
- Product Lifecycle Management
- Long-term data & product OAIS archiving
- Data validation & verification, code checking
- Rules based data modelling
- Cross-platform data sharing

Our suite of products is based upon the EXPRESS Data Manager™ (EDM) utilizing ISO standards, particularly STEP ISO 10303 the Standard for the Exchange of Product Model data. Jotne Connect can deliver every level of data management solution; from a full product lifecycle modelling server, to an OAIS archiving server, to specialised developer tools. Jotne Connect has a solution to fit your product data exchange requirements.

KEPLER COMMUNICATIONS, INC.

Kepler Communications, Inc. is a satellite telecommunications provider on a mission to build the Internet for space. Incorporated in 2015, Kepler provides real-time, continuous connectivity for space communications, abolishing barriers to make space-generated data universally available. The company is vertically integrated, with an in-house production facility allowing satellites to be designed and built on-site. The Kepler Network will initially service low Earth orbit (LEO) and plans to provide connectivity services to space missions in LEO, MEO, GEO, and beyond. Headquartered in Toronto, Canada, Kepler is building a global company to enable communications for the future space economy.

ATTENDING INDUSTRY

KSAT

KSAT is a leading provider of ground station services for satellite communication and Earth observation. Founded in 2002, KSAT is headquartered in Tromsø, Norway, and operates a global network of ground stations from pole-to-pole that support spacecraft in low Earth orbit, medium Earth orbit, and geostationary orbit.

KSAT offers a broad range of services, including real-time satellite data downlink, telemetry, tracking and control (TT&C), data processing and satellite operations. Its network includes over 250 antennas at more than 25 locations worldwide, making it one of the largest ground station networks in the industry. KSAT's services are vital for satellite operations, space exploration missions, and environmental monitoring, including maritime domain awareness, oil spill detection, and weather forecasting.

KSAT is known for its involvement in commercial satellite operations, supporting both large-scale satellite constellations and smaller, specialised missions. With a focus on innovation and sustainability, KSAT collaborates with both governmental space agencies and private sector companies to provide reliable satellite communication and Earth observation services.

LACUNA SPACE

Lacuna Space is a pioneer in leveraging satellite technology to deliver global, cost-effective Internet of Things (IoT) connectivity. We provide low-cost, reliable solutions for sensors and mobile equipment, even in the most remote regions, eliminating the need for traditional infrastructure. As leaders in satellite IoT, we at Lacuna Space set industry benchmarks in both global coverage and ground terminal battery efficiency, driving innovation and redefining the possibilities of global connectivity.

LONDON ECONOMICS

London Economics is an independent economic consultancy with a dedicated space practice. Across 150 projects, covering the full value chain from manufacturing and launch to downstream applications, our specialised team of economists and engineers advise governments, space agencies, investors, and private companies on market sizing and forecasting, due diligence and business case development, utility benefits estimation, and return on investment analysis. We have specialist knowledge of PNT, EO, and satcom and have supported a nation state's procurement of a sovereign communications satellite, provided strategic advice to leading satcom companies, and is currently investigating the impact of ESA's ARTES programme.

ATTENDING INDUSTRY

LUSOSPACE

Lusospace is a Portuguese company that specialises in space systems, namely in attitude and orbit control, optical ground support equipment and augmented reality for satellite design, assembly and testing. The company has been working directly for ESA and the main industry primes for the past 20 years.

MAGISTER SOLUTIONS

We at Magister Solutions have a unique collection of world class expertise and products in the area of mobile and satellite technologies.

Our strong scientific background is complemented by our proficient software development teams. We have 19 years of experience in network simulations for the mobile industry, as well as 12 years of experience in space business. What we do: satellite, UAV and terrestrial simulators on cloud or stand-alone; visualisation software; space situational awareness solutions; satellite and UAV constellation and communication design and simulation assisted R&D services

MEC

Microwave Electronics for Communications (*www.mec-mmic.com*) is an Italian SME founded in 2004 as a start-up company gathering the experience of distinguished academic people in the field of microwave and millimetre-wave belonging to the Universities of Bologna and Ferrara. Since then, we have devoted to develop a science-based entrepreneurship to achieve state-of-the-art innovative industrial solutions for our customers in the microwave and millimetre-wave electronic fields. MEC's core business is the design and the implementation of monolithic and hybrid circuits for Space applications mainly, with more than 200 MMICs designed over the years.

MINFARM TECH LTD

MinFarm Satellite is a trusted partner for industrial communications in hazardous areas with deep domain expertise in LoRaWAN® and satellite communications. Over the past five years MinFarm has developed and deployed hardened wireless products for connecting field devices in remote locations where no cellular data or grid power is available. Our autonomous satellite-enabled LoRaWAN®, CCTV and SCADA products connect to customer private networks via simple API and dashboard tools.

ATTENDING INDUSTRY

NOKIA

At Nokia, we create technology that helps the world act together. When the world's people, machines and devices are in sync with each other, we can realise the full potential of digital:

- Sustainable business growth
- Productivity in industry
- Inclusive digital access

We are a B2B technology innovation leader, delivering networks that sense, think and act. Networks that sense, think and act™ bring the combined capability of Nokia's best-of-breed portfolio across mobile, fixed and cloud networks, fuelled by the innovations of Nokia Bell Labs, winner of multiple Nobel Prizes and a pioneer in disruptive, long-term industrial research in networking, software and silicon.

Nokia is uniquely positioned for customers given its:

- Trusted performance across all network domains
- Networks as platforms for monetisation
- Truly open network architectures
- Technology leadership and trusted partnerships

NOVASPACE

Merger of Euroconsult Group and SpaceTec Partners

Novaspace is the global leading consulting firm in the space sector combining the strength of Euroconsult and SpaceTec Partners, a united force committed to promoting forward thinking and supporting decision-making for all space stakeholders. Drawing from Euroconsult's four-decade legacy of empowering industry leaders with strategic insights and SpaceTec Partners' innovative approach to management consulting in the space sector, Novaspace is positioned to deliver professional services that support programs with both commercial viability and societal impact.

NTT DATA SPAIN

NTT Data Spain is part of the international NTT Data Inc. group. The Product Engineering division specialises in Systems Engineering and Embedded Software development. We provide support in process assessment and improvement, safety and cyber analysis, achievement of certifications/qualifications/homologations, quality assurance, digital validation, and software development and we are also specialised in Independent Software Verification and Validation (ISVV) for space systems. We understand the challenges and complexities of developing products across various industries, addressing their needs throughout the entire lifecycle.

ATTENDING INDUSTRY

OXFORD SPACE SYSTEMS

Oxford Space Systems aims to become the global leader in deployable antennas for space. Our innovative products make use of a unique blend of skills and knowledge in structures, materials, mechanisms and RF engineering combined with expertise from outside the space sector in textiles, formula 1 composites, kite making and origami. Our helical and Yagi antennas for cubesats have flown multiple times on orbit and our large deployable Wrapped Rib and Offset Reflector antennas for microsats are in the final stages of qualification and in orbit demonstration for customers in the UK and around the world.

RAL SPACE

RAL Space carries out world-class science research and technology development with significant involvement in more than 210 instruments on missions. As an integral part of the Science and Technology Facilities Council (STFC), RAL Space is the space hub for UK Research and Innovation, supporting its mission to create the best possible environment for research and innovation to flourish. RAL Space has over 60 years of experience and expertise in space programmes. Our experts work throughout the lifecycle of space missions: leading concept studies for future missions; developing bespoke innovative technologies and instrumentation; providing space test and ground-based facilities; operating ground-stations and processing and analysing data.

REDSPACE LTD

RedSpace Ltd provides engineering capability and consultancy in the spaceflight domain. Our team has worked on equipment for missions to the Moon, Mars and near-Earth asteroids, and has experience in implementing CCSDS standards including Proximity-1 onto flight systems.

RIVERBECK LTD

Riverbeck Limited is an analogue, RF and millimetre wave (mm wave) integrated-circuit company. The company specialises in high performance analogue and mixed signal integrated circuits incorporating radio knowledge with a UK workforce. Riverbeck has developed a range of radios operating from mmWave to sub MHz.

Several of our projects have included up-integration of discrete PCB designs to reduce cost and protect IP. The bespoke projects require RF system models to derive block specifications. The company takes pride in consistently achieving a high percentage of projects that reach first silicon production.

The company was founded by Managing Director Graham Leach and Chief Technology Officer Ian Watson. Both are industry veterans with more than 30 years' experience. Riverbeck are always looking for new opportunities. If you have an analogue ASIC requirement, please get in touch.

ATTENDING INDUSTRY

REFLEX AEROSPACE

Reflex Aerospace offers rapid, dual-use, secure-by-design small satellite solutions. The company is leveraging the latest techniques to modernise payload-centric satellite development and production, achieving significantly faster delivery times and enhanced reliability. By applying algorithmic engineering and streamlined system design processes, Reflex accelerates the delivery of satellites enabling lightning-fast innovation for their customers.

ROHDE & SCHWARZ

Rohde & Schwarz is a global technology group striving for a safer and connected world. With its test & measurement, technology systems and networks & cybersecurity divisions, the company creates tomorrow's innovations today. The company's leading-edge products and solutions empower industrial, regulatory and military customers to attain technological and digital sovereignty.
Innovation has been part of Rohde & Schwarz since the very beginning. The company founders Lothar Rohde and Hermann Schwarz were technological pioneers. With their hands-on entrepreneurial spirit, the two college friends entered the unexplored field of RF engineering. Ninety years later, the company is still pushing technological boundaries – as a successful shaper of cutting-edge technologies such as artificial intelligence, 6G, cloud and quantum technologies.

S.A.T.E. – SYSTEMS AND ADVANCED TECHNOLOGIES ENGINEERING S.R.L

SATE is an R&D and engineering company founded in 1998 providing advanced and forefront customised software products and services for simulation, diagnostics and data analysis in the automotive, space and energy fields.
SATE key competences include the systems and software engineering, the AI & ML for knowledge extraction from data, systems modelling and anomaly detection, the model-based and data-driven diagnostics, the control systems, the systems simulation and physical mathematical modelling.

SAFRAN TIMING TECHNOLOGIES

Safran Timing Technologies, a Safran Electronics & Defense subsidiary, is a world leader in rubidium atomic clocks and oscillators, Hydrogen MASER, integrated in Global Positioning Navigation System both on board satellites, and ground stations.
Safran Timing Technologies manufactures a large portfolio of atomic clocks, starting from miniaturised Rb oscillators (low SWAP) to active hydrogen MASERs with the best frequency stability. STT addresses several markets with numerous uses-cases, with an organisation based on three product lines: industry & defense; space and science & metrology.
Whether you need short or long-term stability, our decades of experience designing and manufacturing products (plus their maintenance) is trusted by companies ranging from global enterprises to space initiatives.

ATTENDING INDUSTRY

SIAE MICROELETTRONICA

SIAE MICROELETTRONICA is a leader in wireless communication technology. It offers advanced solutions for microwave and millimetre-wave transport domain with world-class portfolio of products and professional services. SIAE MICROELETTRONICA design and produce end-to-end RF components exploiting in-house labs, clean rooms and industrial grade product assembly. Its product portfolio include 2.5GBps dual-carrier full outdoor system, 10GBps E-band radios and microwave radios tailored for mobile x-hauling. SIAE MICROELETTRONICA delivers a complete range of professional services to successfully design, build, maintain and optimise wireless networks.

SNT

The Interdisciplinary Centre for Security, Reliability and Trust (SnT) at the University of Luxembourg, conducts research aimed at designing, emulating and testing new high-performance systems for the future of mobile terrestrial and non-terrestrial communications, and is rapidly expanding its research areas to various enabling technologies for beyond 5G/6G wireless networks. For details, you may refer to the following: https://wwwen.uni.lu/snt/research/sigcom.

SOITEC

Soitec, a leader in semiconductor materials, uses unique innovative material to support the semiconductor market. Its products enhance the mobile and digital revolutions, powering devices like smartphones, computers, servers, cars, and medical equipment. With over 4,000 patents, Soitec focuses on disruptive innovation to offer high-performance, energy-efficient, and competitive products. Headquartered in Bernin, France, and founded 30 years ago in Grenoble, Soitec has facilities and offices in Europe, the U.S., and Asia. The company is listed on the CAC NEXT 20 in Paris. For more information, visit www.soitec.com.

STARION GROUP

Starion Group is a professional engineering and solutions company, offering system development, security and engineering services for space, government, defence and other critical infrastructure organisations across Europe. We have over 30 years heritage providing services and solutions that help drive organisational and cultural initiatives, leading to sustainable added value for our clients. Headquartered in Belgium, Starion Group employs over 600 people who work in offices and at client sites across Belgium, France, Germany, Italy, Luxembourg , the Netherlands, Spain, and the United Kingdom. Starion led the R3 Study as a pre-cursor to ESA's Civil Security for Space (CSS) programme and is just starting SAFEPLACE, one of several European initiative under the CSS programme and is leading other ARTES initiatives on Quantum Key Distribution and 5G signal monitoring.

ATTENDING INDUSTRY

ST ENGINEERING IDIRECT

ST Engineering iDirect, a subsidiary of ST Engineering, is a global leader in satellite communications, providing technology and solutions that enable its customers to expand their business, differentiate their services and optimise their satcom networks. With over 40 years of delivering innovation focused on solving satellite's most critical economic and technology challenges we are committed to shaping the future of how the world connects. The product portfolio, branded iDirect, represents the highest standards in performance, efficiency and reliability, making it possible for its customers to deliver the best satcom connectivity experience anywhere in the world. ST Engineering iDirect is a leader in key industries including mobility, broadcast and military/government. For more information visit www.idirect.net.

TESAT

TESAT is a leading manufacturer of satellite equipment. The product range spans the smallest space-specific components to modules, entire assemblies or payloads for telecommunication, navigation, Earth observation and science missions. In Backnang, Germany, more than 1,200 employees develop, assemble and test systems and equipment for satellite communications. TESAT is the technology leader for in-orbit-verified optical communication terminals for data transmission via laser and has a focus on commercial and institutional space programs. As the leading manufacturer in its field, the company helps to sustainably connect the world and make it a better place to live for everyone. Learn more about TESAT at www.tesat.de

THALES

Thales is a globally operating company that provides a diverse portfolio of high-tech solutions in the fields of aerospace and space, defense and security, and cybersecurity and digital identity to a wide range of commercial, institutional and governmental customers. Thales' 81000 employees are active in 68 countries.

Its business line microwave imaging and subsystems is a worldwide leading manufacturer of vacuum-electronic RF amplifiers and sources, including traveling-wave tubes (TWTs), klystrons, and gyrotrons, that are used in satellite, industrial and scientific applications. Thales has supplied the TWTs for a large number of communication satellites, Earth observation missions, navigation satellites, and deep-space scientific missions. The R&D efforts in this field are on-going, with the focus being on the miniaturisation of Ku- and Ka-band communication TWTs, the development of high-power TWTs in Ka-band and above, and on the development and industrialisation of ion thrusters.

ATTENDING INDUSTRY

THALES ALENIA SPACE

A joint venture between Thales (67%) and Leonardo (33%), Thales Alenia Space is a global space manufacturer delivering, for more than 40 years, high-tech solutions for telecommunications, navigation, Earth observation, environmental management, exploration, science and orbital infrastructures. Thanks to our diversity of skills, talent and cultures, our customers (governments, institutions, space agencies, telecommunications operators), therefore have space to connect, secure and defend, observe and protect, explore, travel and navigate. The company recorded consolidated revenues of 2.2 billion euros in 2023 and has 8,600 employees. We operate in nine countries, with 16 facilities in Europe and an industrial plant in the United States.

THETA SYSTEMS LTD

Next Generation Electric Propulsion for Industry & Exploration (Theta) Systems Ltd is a UK-based start-up specialising in medium power (1kW - 5kW) electric propulsion (EP) for the space industry. Our team, drawn from UK university researchers, brings together plasma physics expertise and successful orbital EP experience. Our goal is to eliminate industry dependence on extremely expensive and environmentally damaging propellants, particularly Xenon and Krypton. Instead, low-cost and sustainable alternatives are used which outperform current Hall-Effect Thrusters by using novel plasma acceleration techniques.

TRAD

For the past 30 years, TRAD Tests & Radiations conceives innovative solutions to define and minimise radiation effects on space systems. We offer a complete range of test and engineering services as well as dedicated products, allowing to meet all requirements of the radiation assurance process and applicable standards. Radiation, thermal cycling, UV, humidity and optical characterisation tests are performed by our material experts. Our radiation engineers assist throughout the whole space project lifecycle with space environment analysis and modelling, radiation effects calculations, dosimetry calculations and satellite shielding analysis. TRAD conceives, develops and distributes cutting-edge software such as OMERE for space environment and effects calculations and FASTRAD® for satellite 3D modelling and shielding assessment. TRAD proposes “ready for space” electronic components through the R2COTS® brand.

VERSICS AG

Versics AG is a spin-off from ETH Zurich (Switzerland) that commercializes electro-optic modulators, transmitters, and lightwave component analysers that operate up to 110 GHz. These large bandwidths are ideally suited for transmission systems reaching hundreds of Gbit/s. The products of Versics AG are assembled with standard optical and electrical connectors and tested under Telcordia and MIL-STD reliability standards. The compact form factors guarantee excellent integration in testbeds or subsystems.