

ORganisation of European GNSS INdustry

Second Galileo Conference for an enlarged Europe

Budapest

27-28 May 2004

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- **What Industry expects from Galileo**
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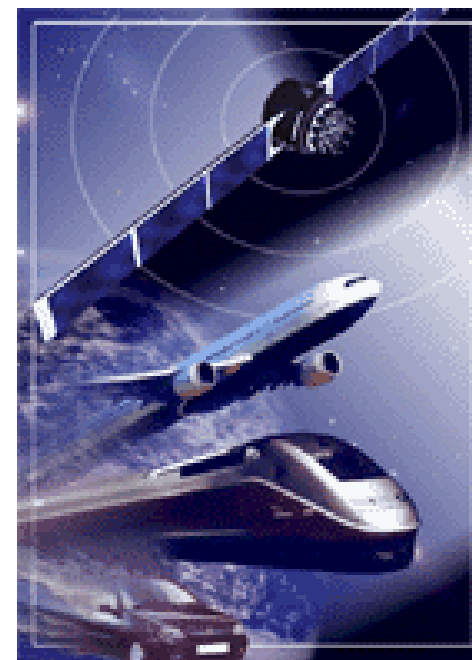
WHAT IS OREGIN ?

WHAT IS OREGIN ?



The **OR**ganization of **E**uropean **G**nss **I**ndustry of equipment and services, has been created in Feb 1999 for:

- information exchange
- cross-fertilisation of expertise
- point of contact/industry voice for the European Institutions
- publicity and lobbying
- fostering co-operation with non-European industries creating opportunities in overseas and global market



MEMBERS



- **More than 130 members**
including international industry organisations and national groups
(close to 250 industrialists represented)
- **Industries from 14 European countries**
- **From SMEs to biggest groups**
- **Associating Universities**
Research labs since 2003



MEMBERS PROFILE (1/2)



- **Chip producers, Equipment manufacturers, Software developers, Service providers, Integrators, Telecom and Car manufacturers, ...**



Source: OREGIN Members websites

MEMBERS PROFILE (2/2)



- Experienced in all kinds of applications:
 - Safety of Life, Governmental, Professional, Mass markets
 - Air, Maritime, Rail, Road, Intermodal, Pedestrian, Leisure, Geodesy, Scientific, Agriculture, Space, ...



Source: OREGIN Members websites

OREGIN MEMBERS LIST (1/4)



- **ACSA** (FRANCE)
- **ADVANCED AVIATION TECHNOLOGY** (UK)
- **ADVETO AB** (SWEDEN)
- **AERODATA F.** (GERMANY)
- **AGROCOM** (GERMANY)
- **ALCATEL/SEL** (GERMANY)
- **ALENIA** (ITALY)
- **ALGONET** (GREECE)
- **ALGOSYSTEMS** (GREECE)
- **ALL COMM** (FRANCE)
- **ASTRIUM** (UK)
- **BMW-AG** (GERMANY)
- **BOMBARDIER TRANSPORTATION** (GERMANY)
- **CAA** (GERMANY)
- **CAP GEMINY ERNST & YOUNG** (FRANCE)
- **CARLO GAVAZZI SPACE** (ITALY)
- **CLARITI Technologies** (FRANCE)
- **COM DEV Europe** (UNITED KINGDOM)
- **CRYPTOLOG INTERNATIONAL** (FRANCE)
- **CS Communication & Systèmes** (FRANCE)
- **DAIMLER CRYSLER GROUP** (GERMANY)
- **DIGINEXT** (FRANCE)
- **DIGIUTOPIKA** (PORTUGAL)
- **DORNIER CONSULTING** (GERMANY)
- **EADS** (FRANCE)
- **EADS** (GERMANY)
- **EDISOFT** (PORTUGAL)
- **EGERY** (FRANCE)
- **ELNA** (GERMANY)
- **ERICSSON TELECOMUNICAZIONI** (ITALY)
- **ERTICO** (INTERNATIONAL)
- **EURO-TELEMATIK** (GERMANY)
- **EUTELSAT** (INTERNATIONAL)
- **FASTRAX** (FINLAND)
- **FAUCON ROBOTIQUE** (FRANCE)
- **FDC** (FRANCE)
- **FIAT** (ITALY)
- **FINMEK SPACE** (ITALY)
- **FUTURASPACE SARL** (FRANCE)
- **GPV TECHNOLOGICAL INOVATIONS** (GREECE)
- **Grupo GMV SA** (SPAIN)
- **HELIOS TECHNOLOGY** (UK)
- **HELLENIC AEROSPACE INDUSTRY** (GREECE)
- **HIGH TECHNOLOGY ASSOCIATES** (UK)
- **HÖGEL & PARTNER** (GERMANY)
- **IFEN** (GERMANY)
- **IMEC** (BELGIUM)

OREGIN MEMBERS LIST (2/4)



- **INDRA ESPACIO** (SPAIN)
- **INECO** (SPAIN)
- **INFORMATION TECHNOLOGY SERVICE** (ITALY)
- **INSYST** (FRANCE)
- **INTECS SISTEMI** (ITALY)
- **I-SPACE** (FRANCE)
- **KONGSBERG** (NORWAY)
- **LABEN** (ITALY)
- **LEICA GEOSYSTEMS** (SWITZERLAND)
- **LNR GLOBALCOM** (THE NETHERLANDS)
- **LOGICA** (UNITED KINGDOM)
- **LOPOS TECHNOLOGIES** (GERMANY)
- **M3 SYSTEMS** (FRANCE)
- **MAN TECHNOLOGIE** (GERMANY)
- **MANNESMANN VDO** (GERMANY)
- **MARCOSOFT** (ITALY)
- **MLR Electronique** (FRANCE)
- **MORS** (FRANCE)
- **MUNICH ORIENTATION CONVENTION** (GERMANY)
- **N2C** (FRANCE)
- **NATIONAL PHYSICAL LABORATORY** (UK)
- **NATS** (UK)
- **NAVIGATION TECHNOLOGIES** (BELGIUM)
- **NAVIONICS** (ITALY)
- **NAVOCAP** (FRANCE)
- **NEMERIX** (SWITZERLAND)
- **NEXANS** (BELGIUM)
- **NEXT** (ITALY)
- **NOKIA** (FINLAND)
- **NORDNAV TECHNOLOGIES** (SWEDEN)
- **OMNISTAR BV** (THE NETHERLANDS)
- **ORMSTON** (UK)
- **PIONEER TECHNOLOGY** (BELGIUM)
- **POLE STAR** (FRANCE)
- **PRAXIS CRITICAL SYSTEM** (UK)
- **Q-SYSTEMS S.A.**
- **RAYTHEON** (UK)
- **ROBERT BOSCH** (GERMANY)
- **ROKE MANOR RESEARCH** (UK)
- **SAGEM** (FRANCE)
- **SATCON** (GERMANY)
- **SATPLAN** (FRANCE)

OREGIN MEMBERS LIST (3/4)



- **SCHLUMBERGER SEMA** (SPAIN)
- **SENA GPS** (SPAIN)
- **SENER** (SPAIN)
- **SEPTENTRIO** (BELGIUM)
- **SKEYE** (GERMANY)
- **SKYSOFT** (PORTUGAL)
- **SOCRATEC** (GERMANY)
- **SOCRATEC NAVSAT** (SPAIN)
- **SPACECHAKER** (BELGIUM)
- **SPACE SYSTEM FINLAND** (FINLAND)
- **SPIRENT COMMUNICATIONS** (UK)
- **ST MICROELECTRONICS** (UK)
- **STA** (ITALY)
- **SURREY SATELLITE TECHNOLOGY** (UK)
- **TECHNIUM** (FRANCE)
- **TECHNOMAR** (GERMANY)
- **TEKELEC Systèmes** (FRANCE)
- **TELE ATLAS** (BELGIUM)
- **TELECONSULT** (AUSTRIA)
- **TELEMATICA** (GERMANY)
- **TELECONSULT** (GERMANY)
- **TELESPAPIO** (ITALY)
- **TELIT** (ITALY)
- **TERRAFIX** (UK)
- **THALES** (FRANCE)
- **THALES AIBORNE SYSTEMS** (FRANCE)
- **THALES AIR DEFENCE** (FRANCE)
- **THALES ATM** (GERMANY)
- **THALES ATM** (UNITED KINGDOM)
- **THALES AVIONICS** (FRANCE)
- **THALES AVIONICS** (UNITED KINGDOM)
- **THALES COMMUNICATIONS** (FRANCE)
- **THALES NAVIGATION** (FRANCE)
- **THALES RESEARCH** (UNITED KINGDOM)
- **THALES TRACKS** (UNITED KINGDOM)
- **TWENTE INSTITUTE FOR WIRELESS AND MOBILE COMMUNICATIONS** (NETHERLANDS)
- **VITROCISSET** (ITALY)
- **ZENITEL** (BELGIUM)

OREGIN MEMBERS LIST (4/4)



NATIONAL GNSS INDUSTRY ORGANIZATIONS

- **ASA - Austrian Space Agency** (Austrian Industry)
- **Navigate Consortium** (Italian Industry)
- **SGIC - Scandinavian GNSS Industry Council** (Scandinavian Industry)
- **GSS - Galileo Sistemas y Servicios** (Spanish Industry)

EUROPEAN UNIVERSITY RESEARCH CENTER

- **Centre for Communication Systems Research**, University of Surrey (UK)
- **GIS Research Centre**, University of Glamorgan (UK)
- **Institute of Engineering Surveying and Space Geodesy**, University of Nottingham (UK)
- **Lulea University of Technology** (Sweden)

MISSIONS AND OBJECTIVES



- To support the development of GALILEO users segment equipment and services,
- To provide public authorities with technical and marketing expertise and support in analysing the impact of GALILEO architecture on user equipment and services,
- To support the necessary efforts on standardisation and certification for the development of user segment equipment and services,
- To foster the identification of business opportunities and define the necessary actions to ensure their success,
- To foster partnership between industrialists and in particular between large corporations and SMEs,
- To rapidly and efficiently circulate relevant information,
- To promote EUROPEAN industry, technology, products and services,
- To encourage participation of universities and research centres in R&D activities related to GALILEO developments.

STATUS OF THE INITIATIVE



- **Foundation meeting on 16 Feb. 99**
- **6 Plenary meetings**
- **2 Workshops**
(with the EC Vice-president and ESA Director of applications)
- **Active participation in PPP and Joint Undertaking initiatives**
- **Presentations to Transport Council Working Group, European Parliament, Sky and Space Intergroup...**
- **Briefing to the Belgian Senate 2nd Seminar on Current Space Issues**
- **Presentation made in US, Japan, China, South Korea, apologies for Israel**
- **Interest expressed by Non European industry to cooperate (Canada, Chinese, Israel, Japanese, US, ...)**

What do we expect from Galileo?

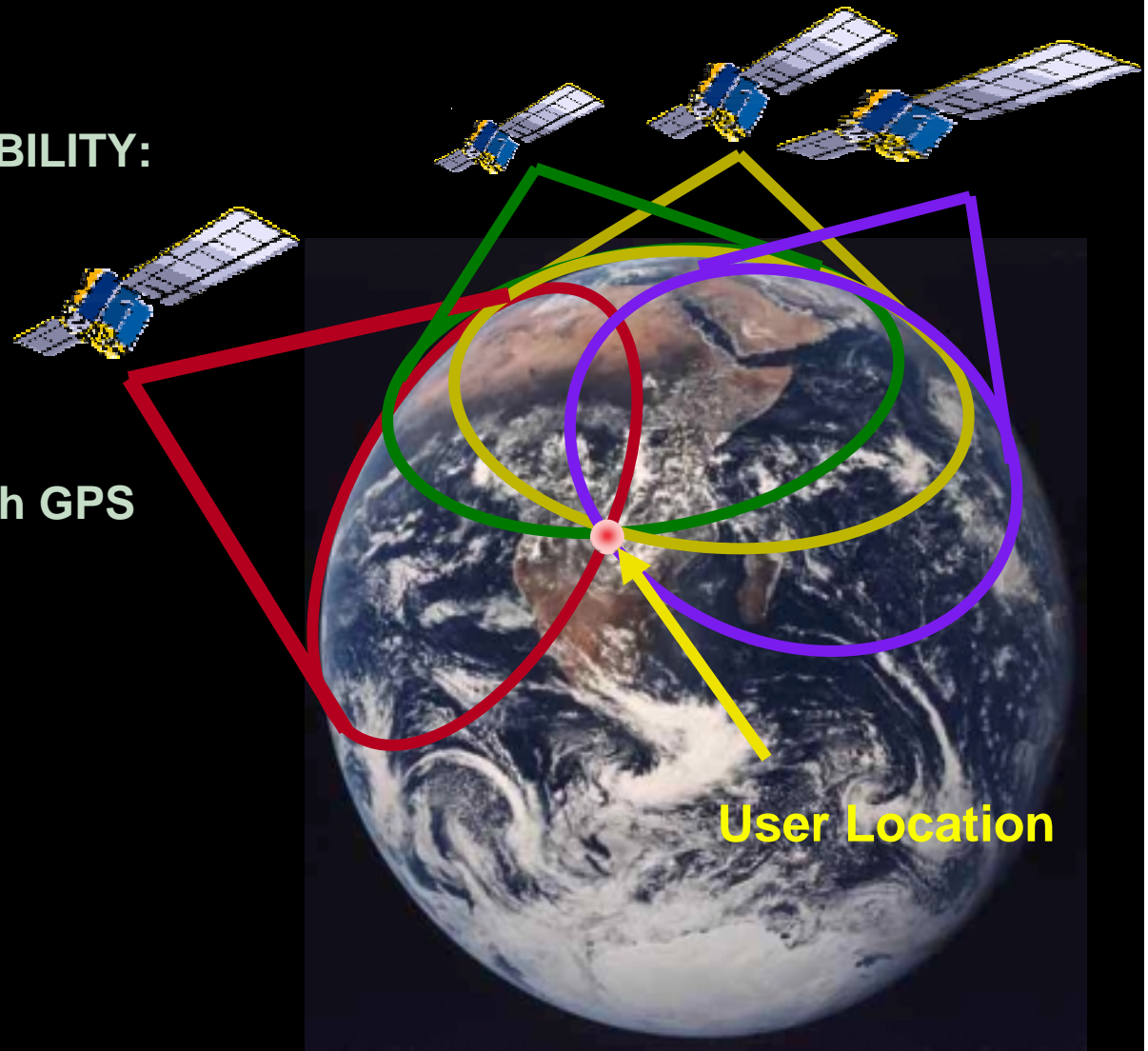
GALILEO TECHNICAL ASSETS



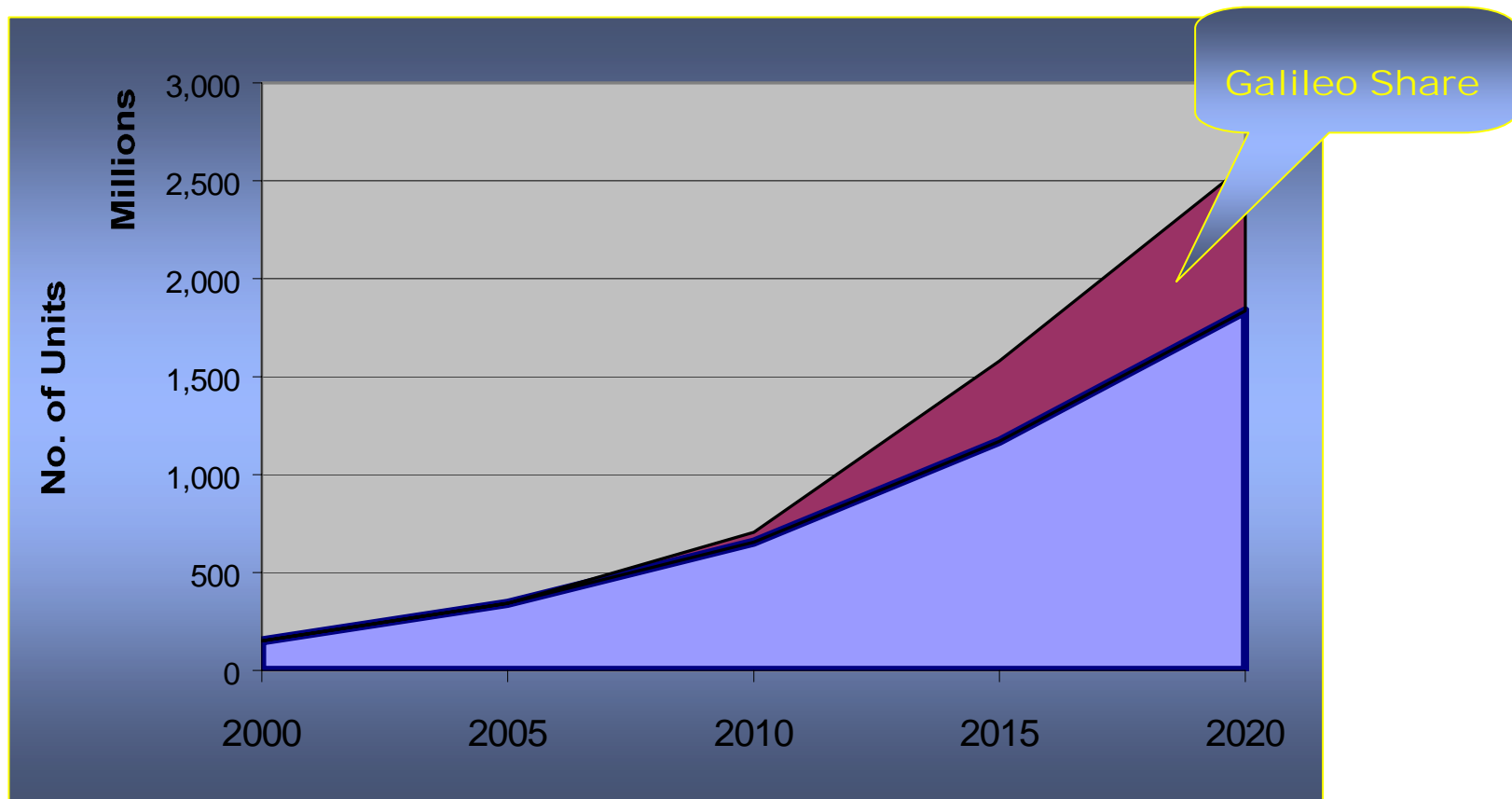
Galileo will offer optimum

PERFORMANCES and RELIABILITY:

- a high level redundancy with GPS (technical & political)
- integrity
- availability
- continuity of service
- accuracy
- security



GLOBAL GNSS MARKET SIZE



Source: EC Galileo Definition studies, 2000

INDUSTRY MOTIVATION



- One of the crucial task of the Galileo programme, as a Public-Private Partnership, is to foster the development of new Markets
- European Industry is expecting to play a leading role in the Brand-New Markets generated by GALILEO
- Galileo, as a European System, already motivated the European Industry to make up for lost time in Satellite Navigation market

EUROPEAN INDUSTRY OFFER

- EU Industry is leading the world in many areas of technology



- EU Industry, through its active participation, is well aware of latest Galileo's infrastructure (signal and services) development
- It is capable of the complete range, from chipset design to manufacture, integration and certification of major systems and provision of innovative services

EUROPEAN INDUSTRIAL CONTEXT



Mobile com.	Chipsets		LBS
Car navigation	Chipsets		Telematics
Fleet management	Chipsets		
Survey. and mapping	DGPS receivers		Augmentation
Aviation	Chipsets/receiver	FMS, GBAS	ATM services
Maritime	receivers		
Leisure	chipsets		
Agriculture	DGPS receivers		
Timing	DGPS receivers		
Road pricing	chipsets/receivers		
Rail	chipsets		
Market size	component	System integration	service



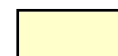
weak



mean



leader



Small or emergent market

Source: EC Musik project

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EUROPEAN GNSS INDUSTRY ENLARGEMENT

GALILEO AMBITION IS NOT TO STAY AS A WESTERN EU SYSTEM



- Galileo will provide Global services, generating a Global Market
- Market optimisation requires inter-Region cooperation on both Institutional and Industry sides
- Thanks to Europe's enlargement, Galileo suddenly becomes a 25 European Member States Programme,
- Other countries are being associated within the programme (China, Israel, India...)

**➡ Industry from Central Europe must be more represented in the Galileo Programme,
they must take part of and benefit from the Galileo Success story**

INVOLVEMENT OF CENTRAL EUROPE'S INDUSTRY



- **Almost only western Europe Industry is currently involved in Galileo**
- **Central Europe Industry is now known for its dynamism**
- **Emerging markets in Central Europe are very promising for Galileo**
- **Local Industry is more aware of users needs and market trends**

**➡ Europe's enlargement must not be limited to Institutions,
Central Europe Industry must be more present in
Galileo programme & applications development.**

CONCLUSIONS

CONCLUSIONS (1/2)



- **Galileo will generate tremendous economic spin offs**
- **Participation of the European Downstream Industry in the development of Galileo ensures the absolute efficiency of its Services**
- **European Industry of Equipment and Services has recognized skills and competencies and is experiencing an important increase of its turnover**
- **OREGIN has been created to back up Public efforts, with the ultimate objective to jointly pave the way to the success of Galileo**

CONCLUSIONS (2/2)



- **Central Europe Industry could be more represented in the field of Galileo application sector, for the benefit of this Industry itself and of Galileo**

➡ OREGIN would be pleased to enlarge its membership to Central Europe:

- **It would allow Central Europe industry to be better known,**
- **to be more aware of Galileo's programme progress and opportunities,**
- **it will help it to find new partners to extend their business,**
- **it will provide a path to express their concerns to European Institutions,**

➡ At the same time, this will reinforce the Galileo Programme strength and consistency

EC Initiatives to support EU Industry



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