

GALILEO 2nd CALL

PARTNERING EVENT

Mario Caporale

25 Maggio 2004

AGENDA

- 09.30 – 10.00 Registrazione
- 10.00 – 10.30 Benvenuto ed introduzione
- 10.30 – 11.15 **Iniziative GNSS in ambito europeo e nazionale:**
- o **Progetti della Galileo Joint Undertaking**
 - o **Progetti della Commissione Europea**
 - o **Progetti della Agenzia Spaziale Europea**
 - o **Progetti della Agenzia Spaziale Italiana**
- 11.15 – 13:30 Seconda Call Galileo
- Area 1: User Segment Development*
- Introduzione
- Presentazioni di ipotesi di progetto da parte della filiera nazionale
- Area 2: Mission Definition and Implementation*
- Introduzione
- Presentazioni di ipotesi di progetto da parte della filiera nazionale¹
- Area 3: Innovation and International Initiatives*
- Introduzione
- Presentazioni di ipotesi di progetto da parte della filiera nazionale¹
- 14:30 – in poi Sessione Aperta: tempo a disposizione dei presenti per contatti finalizzati alla
 formazione di partnership

Progetti GNSS in ambito Europeo

La **Galileo Joint Undertaking** ha effettuato un'indagine collezionando informazioni sui progetti avviati in ambito europeo.

L'informazione disponibile non è completa e aggiornata per tutti i progetti.

Il budget totale per i 55 progetti di cui si conosce il valore economico è di: 83.178 K€

La relativa parte finanziata ammonta a: 57.967 K€

Della quale:

EC 38.972 K€ (20.426 K€ finanziati)

ESA 20.857 K€ (20.402 K€ finanziati)

GJU 23.349 K€ (19.130 K€ finanziati)

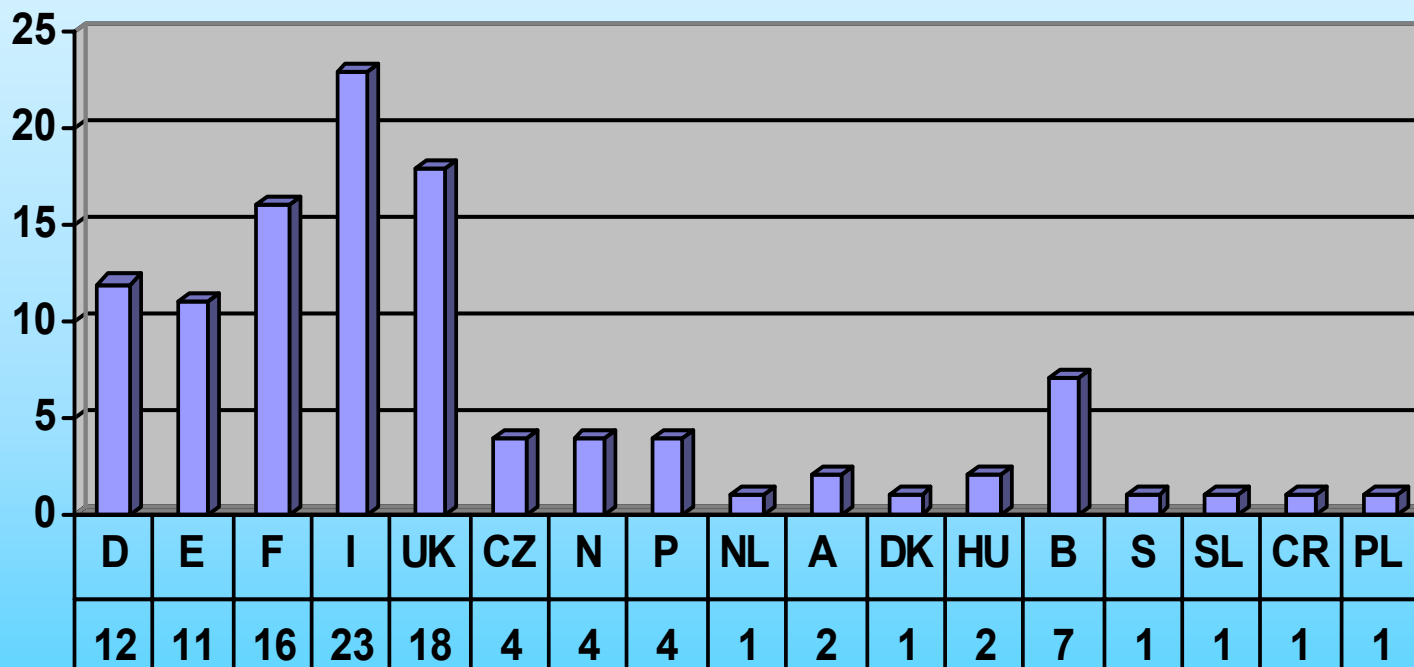
Progetti della Commissione - DTREN - COMPLETATI

GADEROS	13	GADEROS	Rail Transp. <input checked="" type="checkbox"/>	Rail - Train Control	EC DG-TREN level: EU completed: <input type="checkbox"/>	1,500 KEURO funded: 50% 730	28-Dec-01 28-Jun-04 (30 months)	INECO www.gaderos.com, A.Urech (INECO), alvaro.urech@ineco.es, +43 91 4526770	E
GALLANT	5	GALLANT	Road Transp. <input checked="" type="checkbox"/>	Road - Car Navigation - ADAS	EC DG-TREN level: EU completed: <input checked="" type="checkbox"/>	1,300 KEURO funded: 50% 650	03-Jan-02 30-Dec-03 (24 months)	CFR www.crfproject-eu.org, F.LIII (CRF) +39 04 61950549	I
INSTANT	7	INSTANT - Infomobility Services for safeTy-critical Applications on Land	Personal Mari Transp. <input type="checkbox"/>	Emergency services, pedestrian, maritime	EC DG-TREN level: EU completed: <input type="checkbox"/>	2,800 KEURO funded: 50% 1,400	01-Jul-02 04-Jul-04 (24 months)	NEXT G.Cornit, L.Mazzuchelli (NEXT), web: http://www.next.it/INSTANT/	I
NAUPLIOS	11	NAUPLIOS	Maritime Transp. <input checked="" type="checkbox"/>	Maritime surveillance and long range AIS	EC DG-TREN level: EU completed: <input type="checkbox"/>	2,200 KEURO funded: 45% 1,000	03-Jan-02 30-Apr-04 (28 months)	ONES	F
POLARIS	70	POLARIS	Cross domain Transp. <input type="checkbox"/>	Simulation Tool for the analysis of the GNSS applications from the user point of view	EC DG-TREN level: EU completed: <input type="checkbox"/>	2,700 KEURO funded: 50% 1,350	30-Jan-01 30-Apr-04 (27 months)	GMV	E
SIT	147	safe and secure intermodal transport	Road Transp. <input checked="" type="checkbox"/>	Road safety	EC DG-TREN level: EU completed: <input type="checkbox"/>	0 KEURO funded: 0% 0	01-Jan-03 (36 months)	Buck Consultants International ERTICO m.andrade@mail.ertico.com	

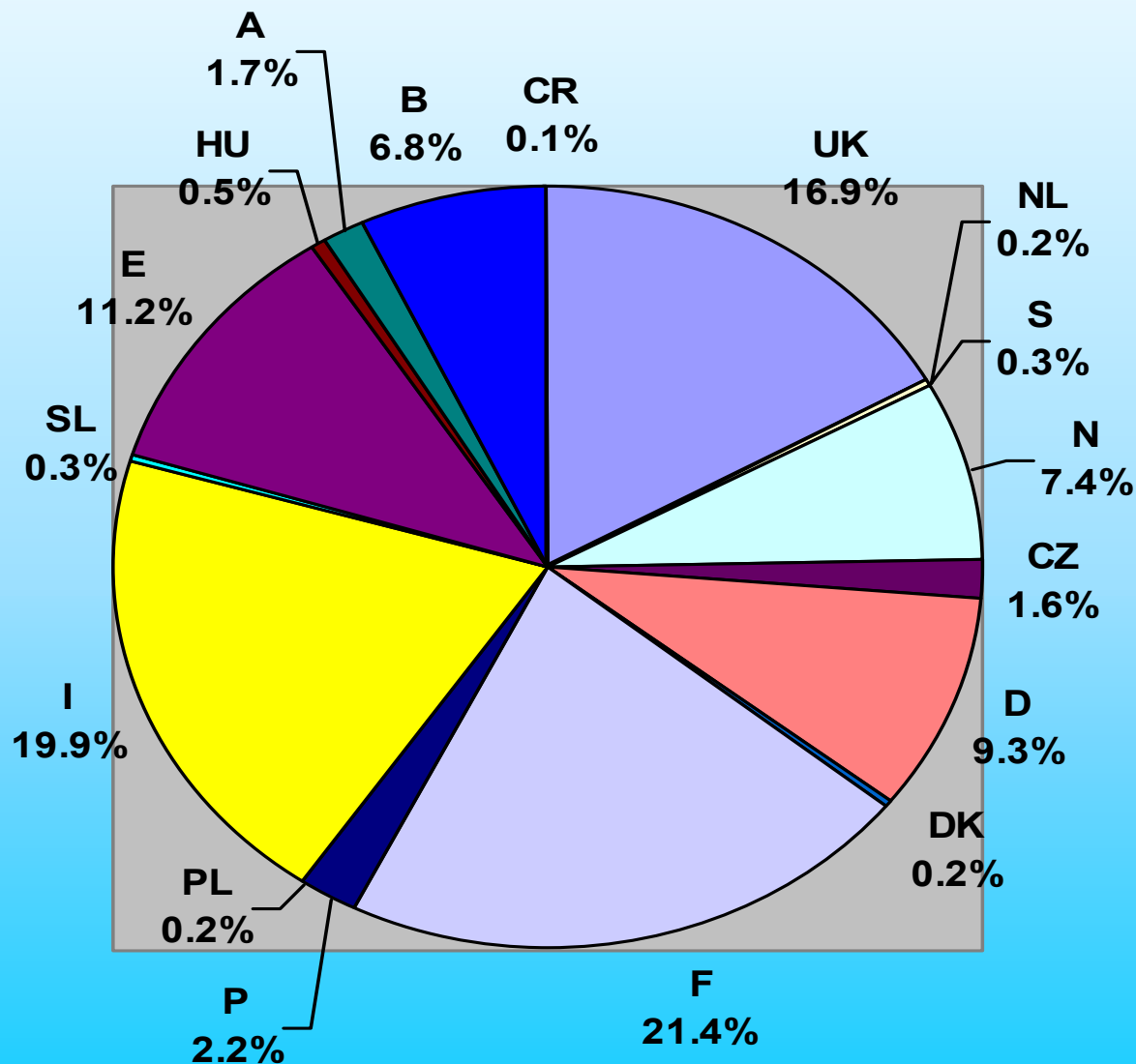
Progetti della GJU (lanciati con la 1a Call GALILEO)

PROJECT Acronym	ID	Full name	Domain	Application	Customer / level / status	Budget (tot-funded)	Schedule (duration)	Coordinator / Country / reference for more info
ADVANTIS	131	A Centralised, Guaranteed Integrity Localisation Service. A key for the EGNOS	Cross domain Transp. <input type="checkbox"/>	Service guarantee and liability provision based on EGNOS integrity	GJU level: EU completed: <input type="checkbox"/>	2,519 KEURO funded: 50% 1,285	01-Jan-04 31-Dec-05 (24 months)	GMV E S.Scarda (GJU) stefano.scarda@esa.int, R.Lucas (ESA)
Application Market Development	140	Application Market Development (Activity D 6FP 1st call)	Cross domain Transp. <input type="checkbox"/>	All applications (cross domain) addressed for market analysis and training	GJU level: EU completed: <input type="checkbox"/>	1,700 KEURO funded: 100% 1,700	10-Feb-04 10-Feb-06 (24 months)	ESYS UK A.Karamali (GJU) apostolia.karamali@esa.int, R.Lucas (ESA)
Galileo Local Component Development	142	Galileo Local Component Development (Activity B 6FP 1st call)	N/A Transp. <input type="checkbox"/>	not linked to specific applications	GJU level: EU completed: <input type="checkbox"/>	3,800 KEURO funded: 100% 3,800	01-Mar-04 01-Mar-05 (24 months)	Thales ATM UK J.Swann (GJU) john.swann@esa.int, A.Garcia (ESA)
GEM	143	Galileo Mission Implementation (Activity E 6FP 1st call)	N/A Transp. <input type="checkbox"/>	not linked to specific applications	GJU level: EU completed: <input type="checkbox"/>	4,900 KEURO funded: 100% 4,900	01-Jan-04 01-Jan-05 (24 months)	RDC F E.Chatre, R.Crescimbeni, L.Rutz (GJU) eric.chatre@esa.int, E.Breiterer (ESA), I.Stoljovic (ESA)
MARGAL	134	MARitime GALileo	Maritime Transp. <input checked="" type="checkbox"/>	Maritime and inlandwaterways navigation	GJU level: EU completed: <input type="checkbox"/>	2,859 KEURO funded: 50% 1,548	01-Jan-04 31-Dec-05 (24 months)	Kongsberg N S.Scarda (GJU) stefano.scarda@esa.int, J.C.de Mateo (ESA)
SCORE	132	Service of Coordinated Operational Search & Rescue using EGNOS	Personal, Ee Transp. <input type="checkbox"/>	EGNOS and Galileo for Emergency call E112	GJU level: EU completed: <input type="checkbox"/>	1,987 KEURO funded: 50% 1,161	01-Jan-04 31-Dec-05 (24 months)	Alcatel F S.Scarda (GJU) stefano.scarda@esa.int, J.L.Gerner (ESA)
User Receiver Preliminary Development	141	User Receiver Preliminary Development (Activity A 6FP 1st call)	Receivers Transp. <input type="checkbox"/>	not linked to specific applications	GJU level: EU completed: <input type="checkbox"/>	3,800 KEURO funded: 100% 3,800	05-Feb-04 05-Nov-05 (24 months)	Laben I V.Gabaglio (GJU) vincent.gabaglio@esa.int, M.Holreiser (ESA), www.laben.it
VERT	133	Vehicular Remote Tolling	Road Transp. <input checked="" type="checkbox"/>	Road tolling and remote payment	GJU level: EU completed: <input type="checkbox"/>	1,784 KEURO funded: 50% 936	01-Jan-04 31-Dec-05 (24 months)	SNELEC I S.Scarda (GJU) stefano.scarda@esa.int, R.Lucas (ESA)

Partecipazione per Stato membro nell'ambito delle proposte selezionate nella 1a Call Galileo



Finanziamenti ottenuti per Stato membro nell'ambito delle proposte selezionate della 1a Call Galileo



Progetti GNNS dell'ESA

PROJECT Acronym	ID	Full name	Domain	Application	Customer / level / status	Budget (tot-funded)	Schedule (duration)	Coordinator / Country / reference for more info
ARMAS	40	Active Road Management Assisted by Satellite	Road Transp. <input checked="" type="checkbox"/>	Road (urban and highways) tolling based on satellite positioning	ESA level: EU completed: <input type="checkbox"/>	1,300 KEURO fund ed: 100% 1,300	09-Mar-04 23-Feb-05 (12 months)	SKYSOFT P - Joao Canario, Project Coordinator, joao.canario@skysoft.pt, +351 213
COMNAV	55	COMNAV	Personal Transp. <input type="checkbox"/>		ESA level: EU completed: <input type="checkbox"/>	1,200 KEURO fund ed: 100% 1,200	(months)	Fraunhofer D
DAB	3	Demonstration of positioning performance improvement for land	Road Transp. <input checked="" type="checkbox"/>	Land vehicle navigation	ESA level: EU completed: <input checked="" type="checkbox"/>	140 KEURO fund ed: 100% 140	(months)	Bosch D
DELTA Hybridation	2	Specification and prototyping of an hybrid EGNOS navigator for A-	Aviation Transp. <input checked="" type="checkbox"/>	Advanced Surface Movement and Guidance Control Systems	ESA level: EU completed: <input checked="" type="checkbox"/>	32 KEURO fund ed: 100% 32	(months)	M3 Systems F
ECORAIL	49	EGNOS Controlled Railway Equipment	Rail Transp. <input checked="" type="checkbox"/>	Rail Traffic Management	ESA level: EU completed: <input type="checkbox"/>	969 KEURO fund ed: 100% 969	01-Dec-01 11-Dec-04 (36 months)	Technicatome F TECHNICATOME www.technicatome.com V.THEVENOT +33 4 42 60 27 30
ETRAN SISNET CCN	10	EGNOS TRAN CCN Contract for Professional EGNOS/ SISNET receiver	Personal Transp. <input type="checkbox"/>	Personal Digital assistance EGNOS receiver with SISNET powered	ESA level: EU completed: <input checked="" type="checkbox"/>	185 KEURO fund ed: 100% 185	22-May-02 22-May-03 (12 months)	Telespazio I ejgonzalez@gnv.es (Emilio González García-Consuegra)
ETRAN-1	16	EGNOS Terrestrial Regional Augmentation Network	Personal Mari Transp. <input checked="" type="checkbox"/>	Airport Surface Operations and Air Navigation, Dangerous Goods Fleet	ESA level: EU completed: <input checked="" type="checkbox"/>	1,932 KEURO fund ed: 100% 1,932	24-Sep-01 30-Jun-03 (24 months)	Telespazio I web: http://galileo.es.telespazio.it/egnostra rv

Progetti GNNS dell'ESA

PROJECT Acronym	ID	Full name	Domain	Application	Customer / level / status	Budget (tot-funded)	Schedule (duration)	Coordinator / Country / reference for more info
ETRAN-2	12	EGNOS Terrestrial Regional Augmentation Network	Maritime Transp. <input checked="" type="checkbox"/>	Maritime Navigation and Reporting	ESA level: EU completed: <input checked="" type="checkbox"/>	400 KEURO funded: 100% 400 (	06-Nov-01 14-Feb-04 (18 months)	Kongsberg N http://www.kongsberg-seatex.no/etran.html
Eurocopter	1	In-flight Validation of EGNOS in Medical Helicopters	Aviation Transp. <input checked="" type="checkbox"/>	helicopters guidance for emergency Emergency Medical Services	ESA level: EU completed: <input checked="" type="checkbox"/>	78 KEURO funded: 100% 78 (	03-Oct-02 03-Jun-03 (8 months)	Eurocopter F P. Rollet (Eurocopter), J.P. Lacroix (Thales Avionics), web site: www.esa.int/export/esaSA/SEMFR1
FGI SISNET	9	Development of a Handheld SISNET Receiver with the Finish Geodetic	Personal Transp. <input type="checkbox"/>	Personal Digital assistance EGNOS receiver with SISNET powered	ESA level: EU completed: <input type="checkbox"/>	46 KEURO funded: 100% 46 (	months)	Finish Geodetic Institute FI
GALEWAT	61	Galileo and EGNOS Automated Waterways	Maritime Transp. <input checked="" type="checkbox"/>	In land waterways navigation	ESA level: EU completed: <input type="checkbox"/>	1,600 KEURO funded: 100% 1,600 (	15-Jun-03 30-Apr-05 (24 months)	VaDonau A Jandritsits@va-donau.org (Marko Jandritsits)
GAMMA	18	GNSS for Airport Movement Monitoring and Alerting	Aviation and Transp. <input type="checkbox"/>	Monitoring and control of ground movement in the airport	ESA level: EU completed: <input type="checkbox"/>	1,004 KEURO funded: 100% 1,004 (	03-Apr-03 15-Apr-05 (24 months)	M3 Systems F http://telecom.esa.int/telecom/
IBPD	33	In-Building Positioning Demonstrator (using UltraWideBand)	Personal Transp. <input type="checkbox"/>	Indoor Positioning (LBS, personal mobility...)	ESA level: EU completed: <input type="checkbox"/>	900 KEURO funded: 50% 454 (	19-Dec-01 17-Jun-04 (30 months)	Thales Group UK http://telecom.estec.esa.nl/telecom/www/object/index.cfm?fobjectid=2813
IndoorNav XMI - 2002 -	32	IndoorNav XMI - 2002 -	Personal Transp. <input type="checkbox"/>	Handset	ESA level: EU completed: <input type="checkbox"/>	0 KEURO funded: 100% 0 (	months)	
INTEGRAL	15	GNSS-1 Rail User Navigation Equipment	Rail Transp. <input checked="" type="checkbox"/>	Railway traffic management and control	ESA level: EU completed: <input type="checkbox"/>	993 KEURO funded: 100% 993 (	01-Sep-01 30-Mar-04 (30 months)	Kyser-Threde D http://Integral.kayser-threde.com , Dr. Stefan Bedrich Stefan.Bedrich@kayser-threde.com

Progetti GNNS dell'ESA

PROJECT Acronym	ID	Full name	Domain	Application	Customer / level / status	Budget (tot-funded)	Schedule (duration)	Coordinator / Country / reference for more info
Integrated Nav. Sensor for Train & Cargo Control	50	Integrated Nav. Sensor for Train & Cargo Control	Rail Transp. <input type="checkbox"/>	Rail	ESA level: EU completed: <input type="checkbox"/>	400 KEURO funded: 100% 400 (months)		Kayser-Threde D
Internet Satellite Tracking	19	Internet Satellite Tracking	Road Transp. <input checked="" type="checkbox"/>	Road Applications (Fleet Management)	ESA level: EU completed: <input checked="" type="checkbox"/>	250 KEURO funded: 100% 250 (12 months)	30-Jun-02 26-Sep-03	EDCNV www.sectrackglobal.com B
LOBAS	31	LOBAS	Personal Transp. <input type="checkbox"/>	Handset	ESA level: EU completed: <input type="checkbox"/>	0 KEURO funded: 100% 0 (months)		
LOCOLOC	14	Low Cost Train Location System	Rail Transp. <input checked="" type="checkbox"/>	Stand-alone navigation solution for controlling trains on low-density and	ESA level: EU completed: <input type="checkbox"/>	1,000 KEURO funded: 100% 1,000 (30 months)	02-Mar-02 31-Jul-04	Alstom http://telecom.estec.esa.nl/http://www.locoloc.org/ B
Low Cost Navigator	17	Low Cost Navigator	Rail Maritime Transp. <input checked="" type="checkbox"/>	Multi-modal	ESA level: EU completed: <input type="checkbox"/>	900 KEURO funded: 100% 900 (months)		
Management and Supervision System for	65	Management and Supervision System for Special Aircraft Operations	Aviation Transp. <input type="checkbox"/>	Air	ESA level: EU completed: <input type="checkbox"/>	0 KEURO funded: 100% 0 (months)		Euro Telematik AG D
MARLET	62	MARLET LOPOS	Maritime Transp. <input checked="" type="checkbox"/>	Harbour navigation	ESA level: EU completed: <input checked="" type="checkbox"/>	200 KEURO funded: 100% 200 (months)		Lopos D
Nav-Com	8	NavCom Terminal. Integrated GNSS and Mobile Communication	Road Transp. <input checked="" type="checkbox"/>	tracking and tracing of mobile vehicles Security and emergency location	ESA level: EU completed: <input type="checkbox"/>	1,356 KEURO funded: 100% 1,356 (months)		FhG-IS

Progetti GNNS dell'ESA

PROJECT Acronym	ID	Full name	Domain	Application	Customer / level / status	Budget (tot-funded)	Schedule (duration)	Coordinator / Country / reference for more info
Navindoor (stage 1)	29	Navindoor (stage 1)	Personal Transp. <input type="checkbox"/>	Handset	ESA level: EU completed: <input type="checkbox"/>	200 KEURO funded: 100% 200	(months)	
NavIndoor (stage 2)	30	NavIndoor (Stage 2)	Personal Transp. <input type="checkbox"/>	Handset	ESA level: EU completed: <input type="checkbox"/>	0 KEURO funded: 100% 0	(months)	Space Systems Finland FI
NAVOCAP SISNET	6	Development of Navigation Equipment with SISNET capability for urban buses.	Road Transp. <input checked="" type="checkbox"/>	Public Buses fleet management and navigation	ESA level: EU completed: <input type="checkbox"/>	47 KEURO funded: 100% 47	(months)	NAVOCAP F
NOVACOM	27	Integrated GNSS and Mobile Communication Terminal	Personal Transp. <input type="checkbox"/>	Tracking and tracing of mobile targets; security and emergency location	ESA level: EU completed: <input type="checkbox"/>	1,356 KEURO funded: 100% 1,356	01-Feb-02 15-Jun-05 (41 months)	Novacom F http://telecom.estec.esa.nl/telecom/www/object/index.cfm?objectId=11477
NOVEL Railway Control System	51	NOVEL Railway Control System	Rail Transp. <input type="checkbox"/>	Rail	ESA level: EU completed: <input type="checkbox"/>	500 KEURO funded: 100% 500	(months)	
RDS	4	EGNOS RDS	Road Transp. <input checked="" type="checkbox"/>	Car navigation / Broadcasting of the EGNOS signal	ESA level: EU completed: <input checked="" type="checkbox"/>	60 KEURO funded: 100% 60	(months)	TDF F
Receiver Processing Tech.. for Adv. Nav.	28	Receiver Processing Tech.. for Adv. Nav. App.----- TBC that contract is placed	Personal Transp. <input type="checkbox"/>	Handset	ESA level: EU completed: <input type="checkbox"/>	1,000 KEURO funded: 100% 1,000	(months)	
RFWT&R	54	Railway Freight Wagons Tracking and Reporting	Rail Transp. <input checked="" type="checkbox"/>	Railway CARGO Fleet Management	ESA level: EU completed: <input checked="" type="checkbox"/>	150 KEURO funded: 100% 150	10-Sep-02 27-Dec-03 (15 months)	C-Sigma srl I C-Sigma srl/Luca.Ghizzanzoni@csigma.it

Progetti GNNS dell'ESA

PROJECT Acronym	ID	Full name	Domain	Application	Customer / level / status	Budget (tot-funded)	Schedule (duration)	Coordinator / Country / reference for more info
RUNE	48	RUNE	Rail Transp. <input checked="" type="checkbox"/>	Rail	ESA level: EU completed: <input type="checkbox"/>	1,000 KEURO funded: 100% 1,000	(months)	Laber I
SHADE	152	Special Handled based Applications in Difficult environment	Personal Transp. <input type="checkbox"/>	Rescue operations	ESA level: EU completed: <input type="checkbox"/>	1,250 KEURO funded: 100% 1,250	(18 months) 01-Sep-03 01-Mar-05	TeleConsult Austria A http://telecom.esa.int/telecom
Ship Heading Nav. Sensor	60	Ship Heading Nav. Sensor	Maritime Transp. <input checked="" type="checkbox"/>	Maritime	ESA level: EU completed: <input type="checkbox"/>	400 KEURO funded: 100% 400	(months)	Kongsberg N
TCAR	73	TCAR	Cross domain Transp. <input type="checkbox"/>	Tools	ESA level: EU completed: <input type="checkbox"/>	0 KEURO funded: 100% 0	(months)	

Evaluate the feasibility and technological framing of an Intelligent Car Navigation System providing improved

- Traffic flow
- Safety for the driver
- Tolling concepts

By taking advantage of EGNOS/GALILEO capabilities

Consortium

- Skysoft, INOV, Autostrada do Atlantico, Lusoponte

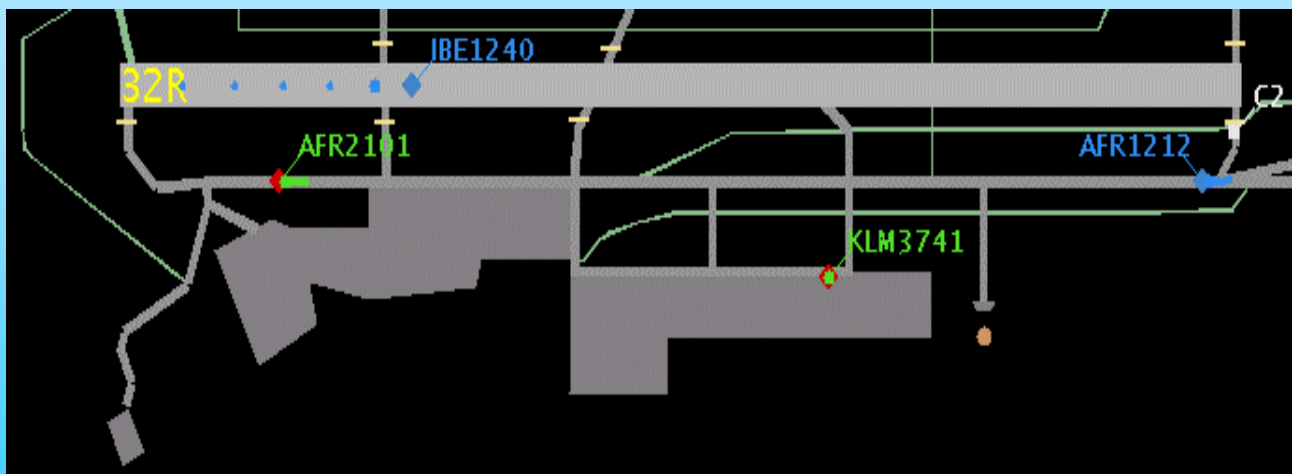
- **Precise autonomous train positioning** for safety-related and operational applications including **automatic level crossing application.**
- The **advantages** of this particular application are:
 - to cut back costs
 - increase traffic flow for roads
 - the reduction of emissions
- Consortium: Technicatome, Stern & Haffl, Alcatel Austria, St. MicroElectronics, Teleconsult Austria

- Title: EGNOS Terrestrial Regional Augmentation Network
- Objective: Complement EGNOS coverage in mountainous regions, urban areas and high latitudes
- Application: Civil Aviation and Surface Operations
- Demonstrator: EGNOS integrated with GRAS/VDL-4
- Contractors: Telespazio(I), Swedavia(S), Thales ATM(F), Hitec(A)
- Activity Status: Closed
- Demonstration: Held at Kiruna (Sweden) Airport (68 degrees latitude) on the 10th April 2003
- Activity Duration: 24 months

- Title: EGNOS Terrestrial Regional Augmentation Network
- Objective: Complement EGNOS coverage in mountainous regions, urban areas and high latitudes
- Application: Maritime Navigation in Fjords
- Demonstrator: EGNOS integrated with AIS
- Contractors: Seatex-Kornsberg(N)
- Activity Status: Closed
- Demonstration: Held at Trondheim (Norway) Harbour (63 degrees latitude) on the 12 June 2003
- Activity Duration: 18 months

- **Title:** GALILEO and EGNOS in Waterways Transport
- **Objective:** Introducing EGNOS and GALILEO into the European River Information System
- **Application:** Maritime Navigation in Rivers and Harbours
- **Demonstrator:** EGNOS integrated with AIS
- **Contractors:** Via Donou(A), Teleconsult Austria(A), Seatex-Kornsberg(N), INOV(P)
- **Activity Status:** ongoing (started in April'03)
- **Demonstration:** To be organised during October'04-March'05 in Vienna (Danube River), Lisbon (Harbour) and Constanta (River/Harbour)
- **Activity Duration:** 24 months

- A-SMGCS = Advanced Surface Movement Guidance Control System for Airports
- 3 A-SMGCS Services provided to ATCO, Pilots, Drivers:
 - Guidance : Display the mobile position on the airport map
 - Surveillance : Display Ground Traffic Situation
 - Control : Alert when conflicts / infringements detected



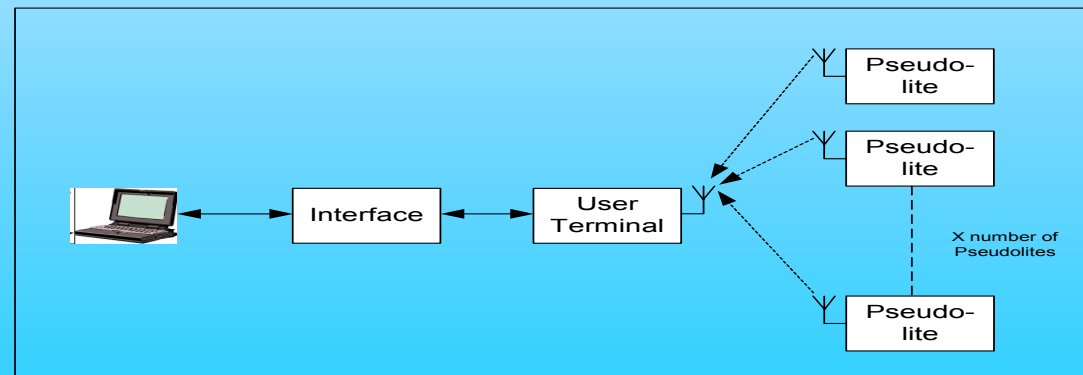
In-building Positioning based on UWB signals

Summary:

- Design and implementation of a demonstrator based on UWB signals
- Hospital application for localisation of staffs
- Accuracy target is 1 m (95%) (high multipath environments within buildings)
- Development of special interference mitigation techniques to be used within a Hospital environment
- Demonstration of the integration and interoperability with GNSS. Definition of the ICD SIS.

Main Features:

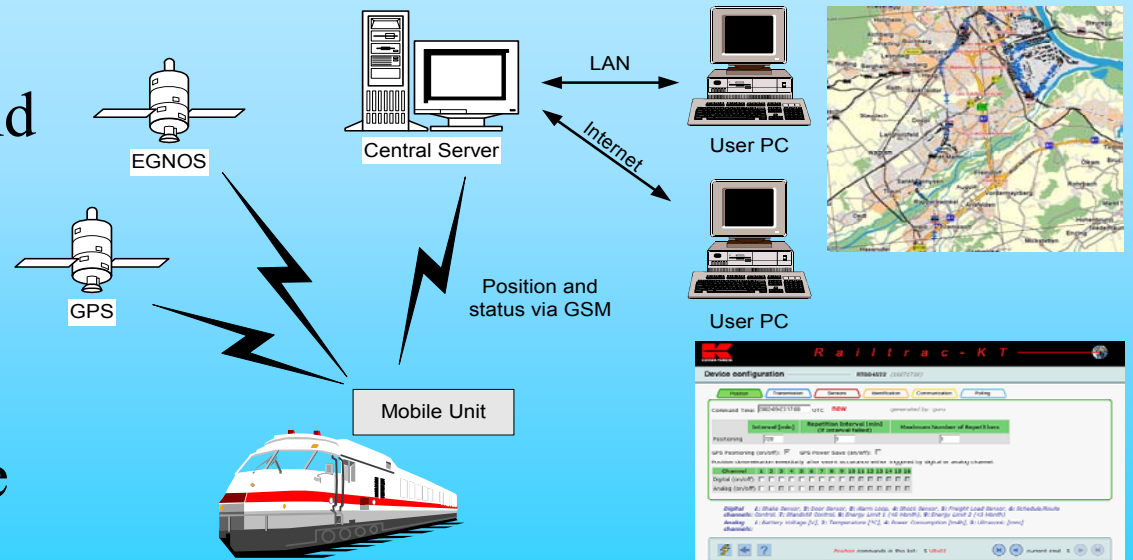
- No HW development (TD chip)
- Scalable. Any number of users
- Compatible with UWB regulations



Thales Research (UK) and Thales Navigation (UK)

INTEGRAIL

- Objective: Demonstrate the use of EGNOS for advanced railway traffic management and control.
- Integrail allows for the more profitable exploitation of low-density rail lines, and can evolve into an ERTMS virtual balise.
- Integrail is usable in safety critical applications, e.g. for supporting the locomotive Automatic Train Control and Protection system (ATP).
- Control the performance and the configuration of the mobile unit by GSM commands.
- Streamlined hybridisation algorithm facilitating future certification.

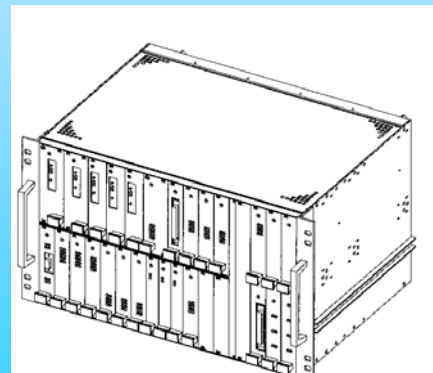


Summary

- Develop and validate satellite based **safe speed** and **acceleration** algorithms
- Integrate and validate EGNOS operation in rail environment (Accuracy, Integrity, Availability)
- Prototype a new web based service centre concept.
- Coordinated with LOCOPROL (EC): positioning, signalling and control centre based on GNSS

Main Features:

- Compliance with ERTMS for low density traffic lines market
- Preliminary Safety Case (10⁻¹² integrity)
- Professional on board equipment



Industry:

Alstom. F. Choquette:

francois.choquette@transport.alstom.com

Summary

Development and demonstration of an Integrated EGNOS/Comm Terminal based on the TETRAPOL system

Navigation module based on two chips solution

Tetrapol system oriented to the professional market for Public Safety Forces (Fully Digital Solution, End-to-end encryptions, High data rate (data, video, voice), Direct communication mode)

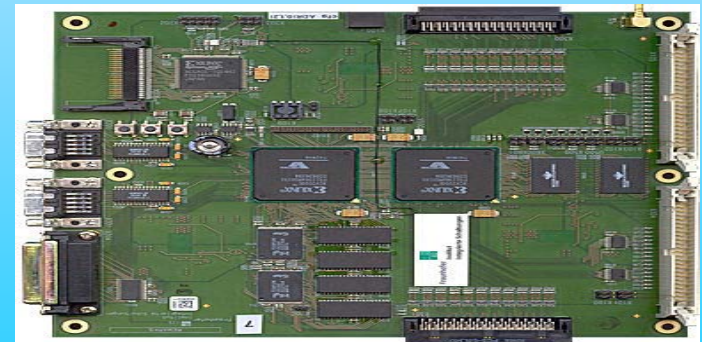
- Demonstration performed using the TETRAPOL Network operated by ESDN in France with the Police (Paris)

Main Features:

EGNOS-trans server used for data transmission

Navigation module: low price, low power consumption, small dimensions

Communication module reused



FhG-IIS, IMST (Germany), TCA (Austria), ESDN (France)

- Navigating with pseudolites for improved performance indoors and under decreased visibility
- Perform a real life demonstration
- Perform a commercial analysis
- Possible upgrade to EGNOS and Galileo
- Consortium: Space Systems Finland, Sportech Norway

- **Precise autonomous train positioning** for safety-related and operational applications including **in-cabin signalling of signals and speed regulations**.
- **Alternative train-borne positioning subsystem** by fulfilling the functionality as specified by ERTMS.
- Consortium: Laben, Ansaldo ASF, INTECS and VIA Rail Canada

- address novel applications in the non-transport sector that improve availability of continuous positioning solutions in dense urban and indoor environment
- SHADE provides safety and security enhancements for personal mobility applications.
- the ultimate objective is to have the proposed applications ready for operational exploitation in parallel with the introduction of the advanced European navigation satellite infrastructures (EGNOS and Galileo) in the time frame 2004 to 2008.

TeleConsult Austria GmbH, Graz, Austria

DigiUtopikA Ltd (UT), Areia Branca Beach, Portugal

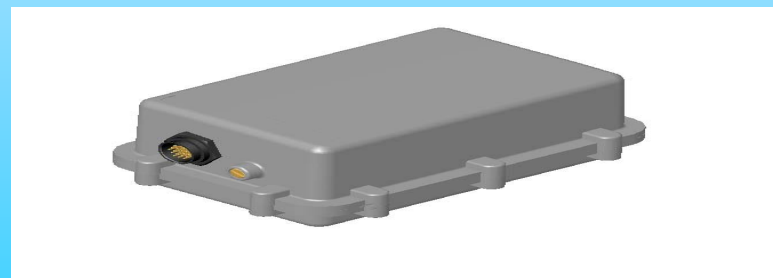
Telespazio S.p.A., Rome, Italy

Summary

- Develop and test an integrated navigation and mobile communications transceiver (Inmarsat L band) which utilizes the EGNOS or WAAS signal
- To perform a demonstration of this terminal in a maritime application environment (Ottawa River)
- Demonstration using the existing Vistar GlobalWave system (Omnistar) for communications
- Computed XPL are reported to a control center. Major interest in the integrity (Geofencing) instead on the accuracy.

Main Features:

- Nav module in a FPGA solution
- Existing comm receiver (MT2000)
- Nav/Comm integrated antenna



Industry:

Vistar (CND). Mr. T. Houtman:
thoutman@vistar.ca

Progetti GNNS della Commissione - INFOSO

JGT	148	open (OSGI-based) in-vehicle telematics platforms for the mass market	Road Transp. <input checked="" type="checkbox"/>	Open platform for telematics applications for vehicles	EC DG-INF SO level: EU completed: <input checked="" type="checkbox"/>	0 KEURO funded: 0% 0	01-Jun-02 30-Nov-03 (18 months)	ERTICO ERTICO Peter Van der Peire	B
ACTMAP	78	Active maps	Road Transp. <input checked="" type="checkbox"/>	Transport and tourism	EC DG-INF SO level: EU completed: <input type="checkbox"/>	0 KEURO funded: 0% 0	01-Apr-02 30-Nov-04 (30 months)	ERTICO web: www.ertico.com/attiviti/projects/actrapi/home.htm	B
AGORA	47	Implementation of Global Location Referencing Approach (AGORA)	Road Transp. <input type="checkbox"/>	Multi-modal	EC DG-INF SO level: EU completed: <input checked="" type="checkbox"/>	1,000 KEURO funded: 50% 500	01-Jan-01 30-Mar-02 (15 months)	ERTICO web: www.ertico.com/attiviti/projects/agorathome.htm	B
AIDE	144	Adaptive Driver-Vehicle Interface	Road Transp. <input checked="" type="checkbox"/>	Safety for road vehicles	EC DG-INF SO level: EU completed: <input type="checkbox"/>	0 KEURO funded: 0% 0	(0 months)		
AMBIESENSE	79		Road Transp. <input checked="" type="checkbox"/>	Transport and tourism	EC DG-INF SO level: EU completed: <input type="checkbox"/>	0 KEURO funded: 0% 0	(0 months)		
COMBINE 2	84	enhanced control centres for fixed and moving block signalling systems 2	Rail Transp. <input checked="" type="checkbox"/>	Transport rail signalling	EC DG-INF SO level: EU completed: <input checked="" type="checkbox"/>	0 KEURO funded: 0% 0	01-Mar-02 30-Oct-03 (20 months)	Bombardier Transportation web: www.combine2.org	F
PARAMOUNT	36	Paramount	Personal Transp. <input type="checkbox"/>	Handset	EC DG-INF SO level: EU completed: <input type="checkbox"/>	0 KEURO funded: 50% 0	(months)		
PREVENT	145	PREVENT	Road Transp. <input checked="" type="checkbox"/>	Safety for road vehicles, accidents avoidance	EC DG-INF SO level: EU completed: <input type="checkbox"/>	0 KEURO funded: 0% 0	(0 months)		
Tahiti	34	Tahiti	Personal Transp. <input type="checkbox"/>	Handset	EC DG-INF SO level: EU completed: <input type="checkbox"/>	0 KEURO funded: 50% 0	(months)		
Webpark	37	Webpark	Personal Transp. <input type="checkbox"/>	Handset	EC DG-INF SO level: EU completed: <input type="checkbox"/>	0 KEURO funded: 50% 0	(months)		

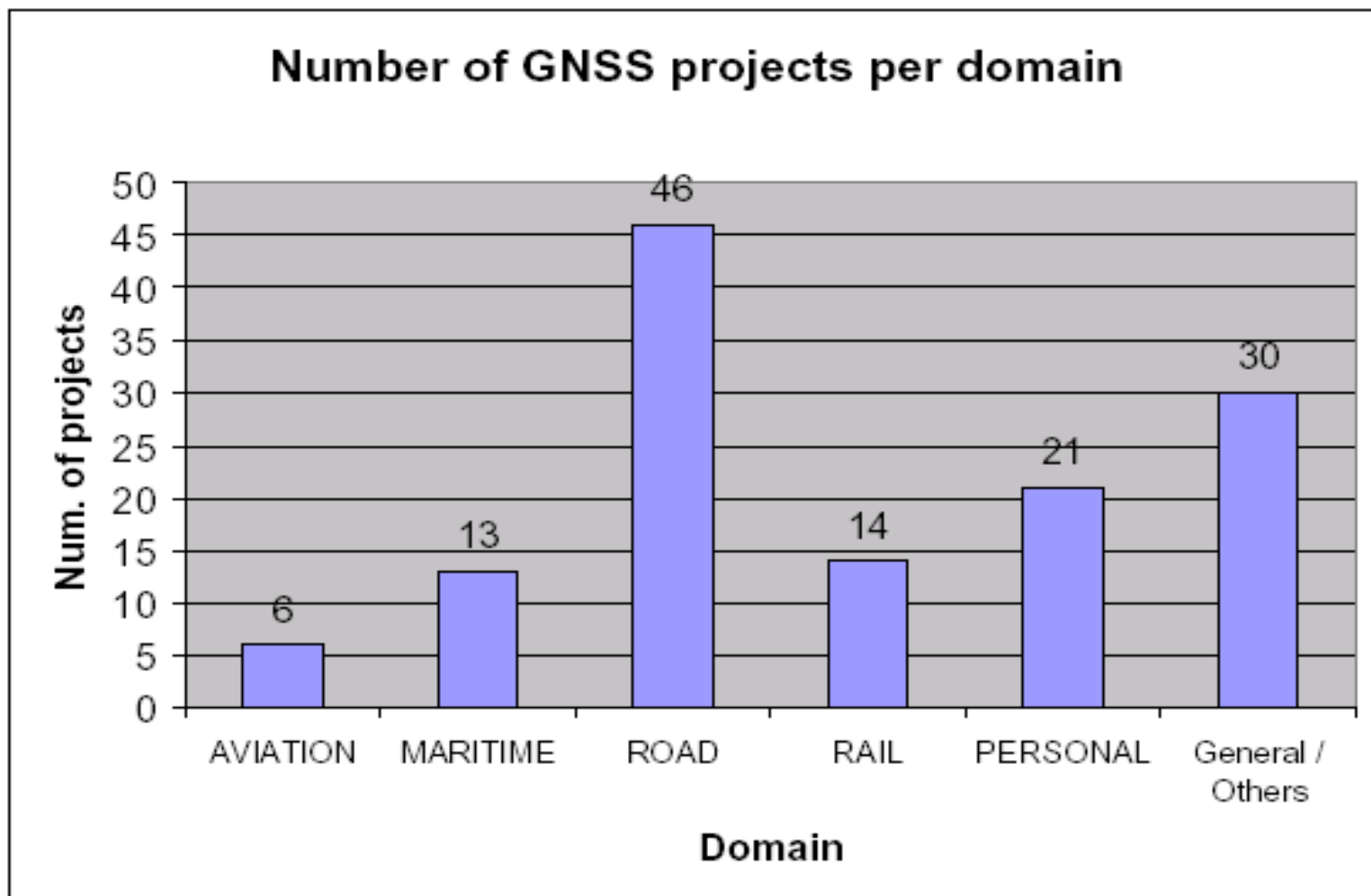
Progetti GNNS della Commissione - INFOSO

PROJECT Acronym	ID	Full name	Domain	Application	Customer / level / status	Budget (tot-funded)	Schedule (duration)	Coordinator / Country / reference for more info
EASIS	154	EASIS	Road Transp. <input type="checkbox"/>	Technology on board the car for telematics	Ec DG-INFOSO level: EU completed: <input type="checkbox"/>	0 KEURO funded: 0 % 0	(0 months)	
ELBA	39	ELBA	Personal Transp. <input type="checkbox"/>	Handset	EC DG-INFOSO level: EU completed: <input type="checkbox"/>	0 KEURO funded: 100 % 0	(months)	
E-MERGE	146	E-MERGE	Road Transp. <input checked="" type="checkbox"/>	Pan-European harmonised vehicle Emergency Call Service and E112	EC DG-INFOSO level: EU completed: <input type="checkbox"/>	4,200 KEURO funded: 50 % 2,100	01-Mar-02 01-May-04 (24 months)	ERTICO web site: www.e-merge.org , M.Nielsen (ERTICO)
EMILY	75	EMILY	Cross domain Transp. <input checked="" type="checkbox"/>	Transport and tourism	EC DG-INFOSO level: EU completed: <input type="checkbox"/>	0 KEURO funded: 100 % 0	03-May-01 31-Dec-04 (months)	Ertico (replacing Thales) web: www.emilypgm.com/projpres.htm
EYE IN THE SKY	46	EYE IN THE SKY	Road Transp. <input type="checkbox"/>	Road	EC DG-INFOSO level: EU completed: <input type="checkbox"/>	2,000 KEURO funded: 50 % 1,000	(months)	Klimakoligo GR
F-MAN	53	F-MAN	Rail Road Transp. <input type="checkbox"/>	Rail	EC DG-INFOSO level: EU completed: <input type="checkbox"/>	1,400 KEURO funded: 50 % 700	(months)	Genoa University I
GALILEAN	72	GAULEAN	Cross domain Transp. <input type="checkbox"/>	Tools	EC DG-INFOSO level: EU completed: <input type="checkbox"/>	1,600 KEURO funded: 100 % 1,600	(months)	FDC F
GAUSS	38	Galileo & UMTS Synergetic System (GAUSS)	Personal Transp. <input checked="" type="checkbox"/>	Assisted Navigation, Vessel Localisation and Tracking, Vessel Traffic Management,	EC DG-INFOSO level: EU completed: <input checked="" type="checkbox"/>	3,900 KEURO funded: 50 %	(24 months)	Telespazio A. DiFazio (Telespazio) antonella_difazio@telespazio.it - web site:

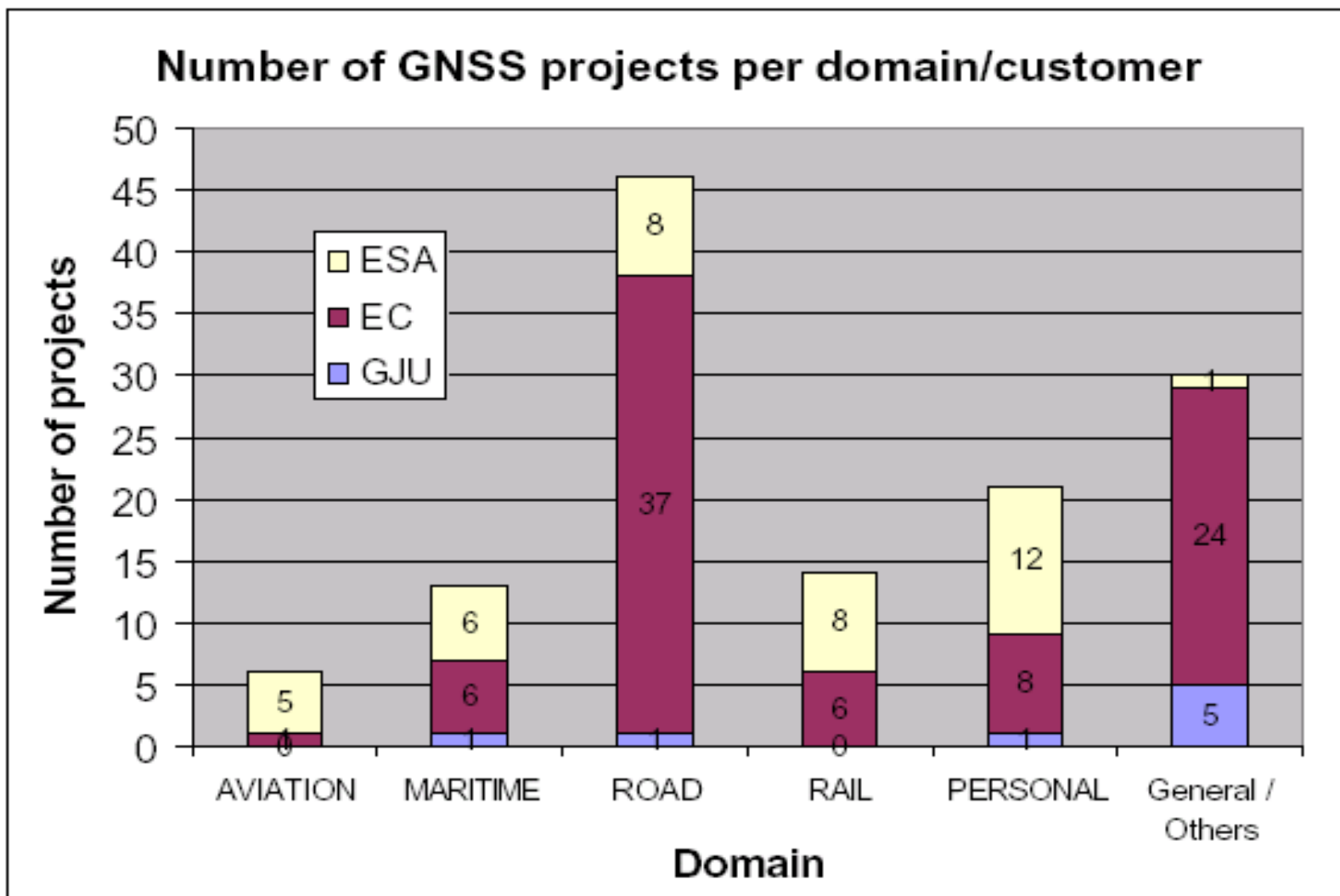
Progetti GNNS della Commissione - INFOSO

PROJECT Acronym	ID	Full name	Domain	Application	Customer / level / status	Budget (tot-funded)	Schedule (duration)	Coordinator / Country / reference for more info
GIFTS	26	GIFTS	Road Maritim Transp. <input type="checkbox"/>	Multi-modal	EC DG-INF SO level: EU completed: <input type="checkbox"/>	2,400 KEURO funded: 50% 1,200	(months)	
GLORIA	25	GNSS & LORAN-C in Road and Rail Applications (GLORIA)	Road Rail Transp. <input type="checkbox"/>	Multi-modal	EC DG-INF SO level: EU completed: <input checked="" type="checkbox"/>	1,000 KEURO funded: 50% 500	(months)	
GST	153	Global System for Telematics	Road Transp. <input checked="" type="checkbox"/>	Road emergency, post accident rescue services.	EC DG-INF SO level: EU completed: <input type="checkbox"/>	0 KEURO funded: 0% 0	(0 months)	
GUST	71	Galileo User Support Transport (GUST)	Cross domain Transp. <input type="checkbox"/>	Tools	EC DG-INF SO level: EU completed: <input type="checkbox"/>	500 KEURO funded: 100% 500	(months)	FDC F
HELINET	139	European Network of Stratospheric Platforms	Cross domain Transp. <input type="checkbox"/>	Telecommunication applications based on unmanned air vehicles	EC DG-INF SO level: EU completed: <input type="checkbox"/>	0 KEURO funded: 0% 0	(0 months)	Politecnico Torino I web: http://www.helinet.polito.it/default.htm
LOCOPROL	52	LOCOPROL	Rail Transp. <input checked="" type="checkbox"/>	Rail	EC DG-INF SO level: EU completed: <input type="checkbox"/>	4,000 KEURO funded: 50% 2,000	(months)	Aiscom B
Loveus	35	Loveus	Personal Transp. <input type="checkbox"/>	Handset	EC DG-INF SO level: EU completed: <input type="checkbox"/>	0 KEURO funded: 50% 0	(months)	

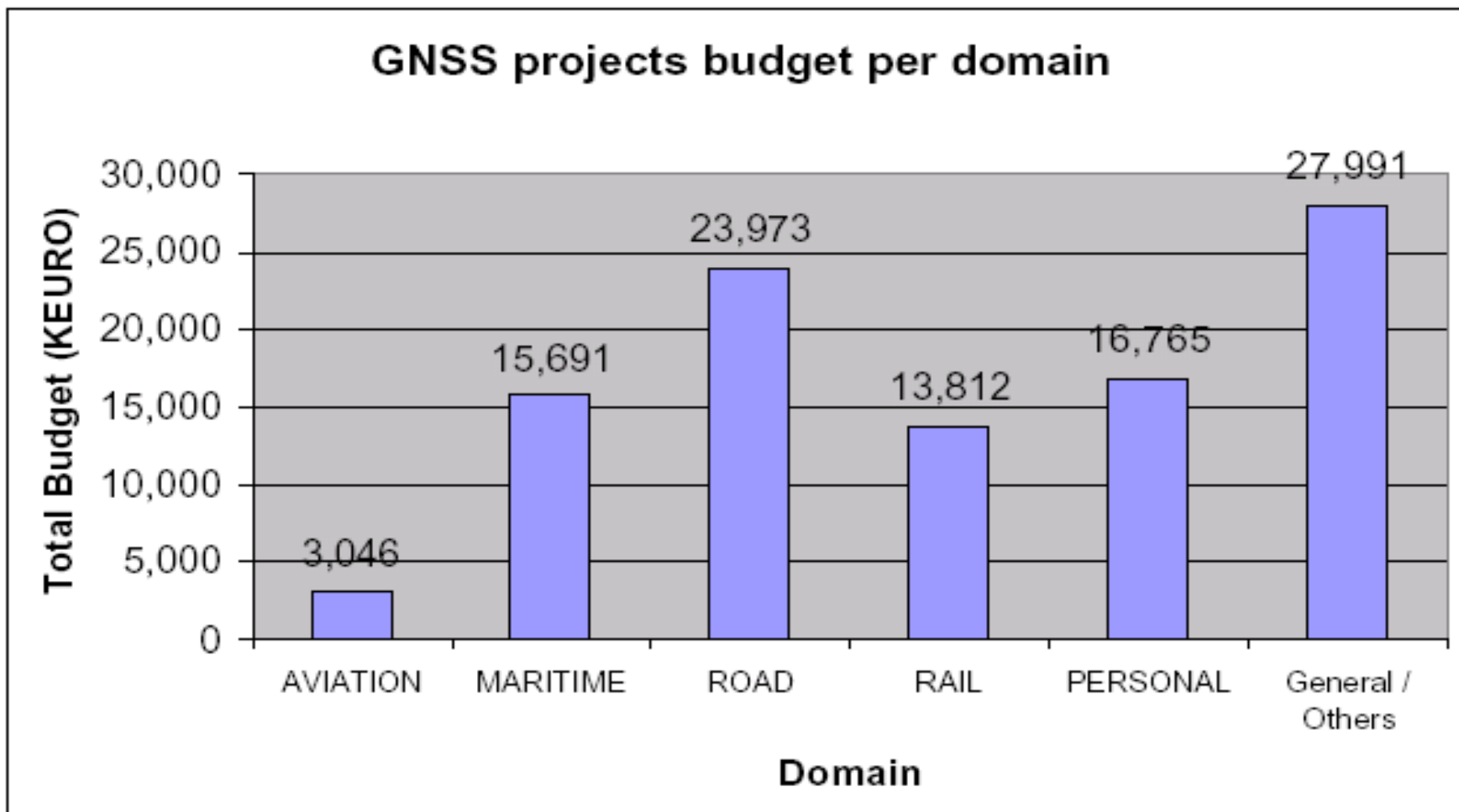
Numero di Progetti GNSS per dominio applicativo



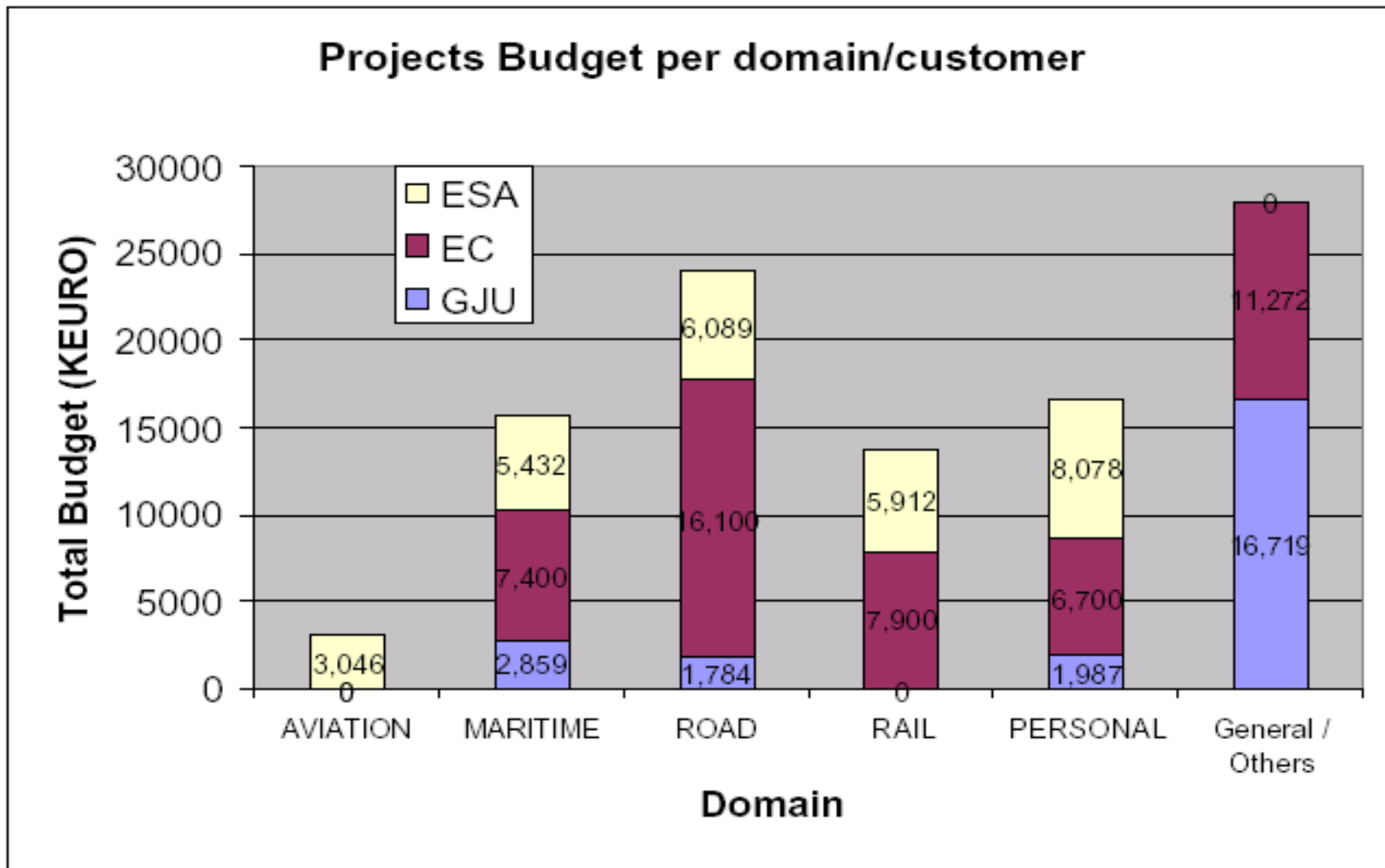
Numero di Progetti GNSS per dominio applicativo / Cliente



Budget di Progetti GNSS per dominio applicativo



Budget totale di Progetti GNSS per dominio applicativo / Cliente



- Coordinamento “A Priori”
 - Attraverso il Program Committee
 - Meeting Bilaterali
 - **Identificare aree per futura potenziale interazione**
- Coordinamento “A Posteriori”
 - Interazione tra i Programmi Nazionali (attuali or pianificati) e I progetti lanciati con la 1st Call FP6
 - Future Interazioni tra i Programmi Nazionali e le Attività della 2nd Call FP6

L'iniziativa **PERSEUS**

(**PER** il **S**upporto al programma **EU**ropeo di navigazione **S**atellitare)

- L'iniziativa PERSEUS dell'ASI é volta ad implementare la direttiva inclusa nella Legge 10/2001 "Disposizioni in materia di navigazione satellitare"
- L'iniziativa Perseus è stata presentata dall'ASI alla Presidenza del Consiglio, a valle di un processo di "Call for Ideas" diretto alla filiera nazionale delle Imprese e della Comunità Scientifica
- Il Decreto Presidenziale DPCM del 5.2.2002, relativo alla Legge 10/2001, nell'accogliere la richiesta ASI, precisa l'opportunità di indirizzare i progetti applicativi nel controllo della varie modalità di trasporto e di monitoraggio delle coste e delle frontiere ed in generale nella sicurezza dei trasporti

- Il Programma GALILEO si limita a sviluppare specifiche e prototipi di riferimento per gli **Elementi Locali** (Local Elements) ed i **terminali**, considerando questi, insieme ai **Centri Servizi**, oggetto di sviluppi nazionali
- La funzione di Navigazione dell'ASI intende **promuovere l'utilizzo** dei sistemi spaziali di navigazione nel contesto nazionale in un quadro di collaborazione sinergica tra gli Enti Istituzionali, ponendosi come il ricettore delle esigenze operative e favorendo lo sviluppo pre-operativo, all'interno di **Macro Progetti Applicativi**, di:
 - **Elementi Locali**, per la fornitura di servizi di navigazione e localizzazione di precisione, su aree locali e/o regionali
 - **Centri Servizi**, che costituiscono un elemento di forte interesse anche per la possibilità di certificare tali sviluppi a livello europeo e costituire degli elementi di forte competitività anche a livello mondiale
 - **Terminali**, idonei a favorire l'uso di GALILEO, in forme anche combinate con altre tecnologie (altri sistemi di navigazione, satellitari e non, sistemi di tlc, satellitari e non)

TEMI SELEZIONATI

I Temi applicativi selezionati scaturiscono da un processo di approvazione avvenuto attraverso l'interazione con il **Gruppo Interministeriale di Indirizzò e Coordinamento in Materia Aerospaziale** insediato dal Ministro dell'Istruzione dell'Università e della Ricerca.



-Macro Progetto Aeronautico



-Macro Progetto Marittimo



-Macro Progetto Trasporto Merci pericolose





Obiettivi del Progetto:

- ✈ **Supporto alla gestione del traffico aereo in fase di rotta, terminale e di avvicinamento**

- ✈ **Supervisione e controllo dei mezzi in aerostazione**



Applicazioni:





- ✈ **NAV/COM Satellitare per Servizi Aeronautici (Sorveglianza, ATS, AOC)**
- ✈ **NAV Satellitare per la gestione ed il controllo del traffico aeroportuale al suolo**

Enti Coinvolti (Potenziali):

- ✈ **ENAV, ENAC, Gestori Aeroportuali, Compagnie Aeree, Vigili del Fuoco**








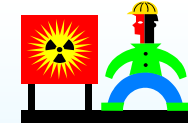
Obiettivi del Progetto:

-  Promuovere l'uso della navigazione satellitare per il miglioramento della sicurezza della navigazione e dell'efficienza delle operazioni di **Search and Rescue** e **Law Enforcement** in mare
-  Sviluppare e sperimentare l'uso di **EGNOS** per le applicazioni marittime, anche con lo scopo di preparare la strada all'avvento di Galileo
-  Sperimentare l'integrazione tra l'**Automatic Identification System (AIS)** e il **Vessel Traffic System (VTS)**
-  Sviluppare applicazioni a supporto del progetto delle **Autostrade del Mare** e del **trasporto fluviale e marittimo delle Merci Pericolose** con ausilio della navigazione e delle telecomunicazioni satellitari



Organizzazioni Coinvolte (Potenziali):

-  Ministero dei Trasporti
-  Capitanerie di Porto
-  Autorità Portuali
-  Agenzia per la Protezione Amb. (APAT)
-  Università e Centri di Ricerca



Obiettivi del Progetto:

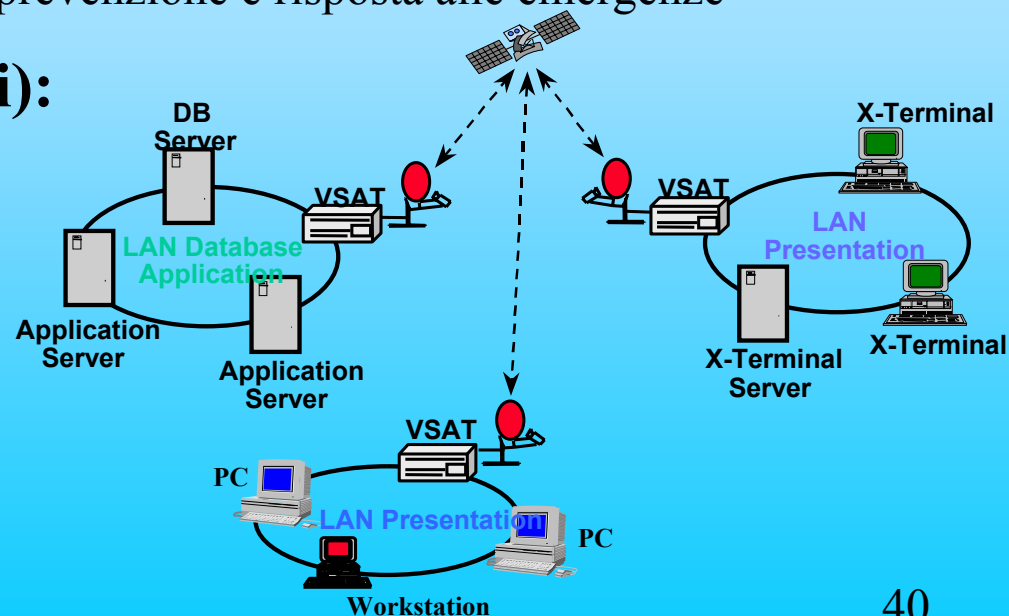
- Favorire lo sviluppo di un sistema pre-operativo per il monitoraggio, la gestione ed il controllo del trasporto di merci pericolose e la fornitura di servizi in ambito intermodale (terrestre, marittimo, ferroviario e su acque interne)

Principali Funzioni:

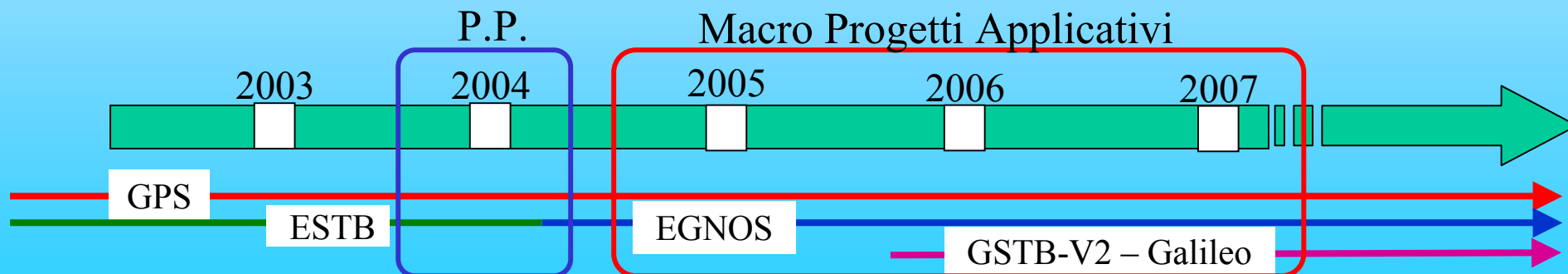
- **Monitoraggio:** Collezione, processamento e distribuzione di informazioni agli utenti e agli operatori coinvolti
- **Management:** Pianificazione dei percorsi, prevenzione e risposta alle emergenze

Organizzazioni Coinvolte (Potenziali):

- Ministero dei trasporti
- Amministrazioni regionali e locali
- Protezione Civile
- Vigili del Fuoco
- Croce Rossa
- Agenzia per la Protezione Ambientale (APAT)
- Università e Centri di Ricerca



-
- Progetti Preliminari (6 mesi)
 - Formazione delle Partnership
 - Macro Progetti Pre-Operativi
 - *Spin-off* di Macro Progetti operativi Nazionali



Affidati Contratti per:

Trasporto Marittimo

e

Trasporto Merci Pericolose

Rimissione Bando Settore Trasporto Aeronautico
(scadenza 7 Giugno 2004)

- 09.30 – 10.00 Registrazione
- 10.00 – 10.30 Benvenuto ed introduzione
- 10.30 – 11.15 Iniziative GNSS in ambito europeo e nazionale:
o Progetti della Galileo Joint Undertaking
o Progetti della Commissione Europea
o Progetti della Agenzia Spaziale Europea
o Progetti della Agenzia Spaziale Italiana
- 11.15 – 13:30 **Seconda Call Galileo**
Area 1: *User Segment Development*
Introduzione
Presentazioni di ipotesi di progetto da parte della filiera nazionale
Area 2: *Mission Definition and Implementation*
Introduzione
Presentazioni di ipotesi di progetto da parte della filiera nazionale1
Area 3: *Innovation and International Initiatives*
Introduzione
Presentazioni di ipotesi di progetto da parte della filiera nazionale1
- 14:30 – in poi Sessione Aperta: tempo a disposizione dei presenti per contatti finalizzati alla
formazione di partnership

3 principali Aree di orientamento

- **1: User Segment Development**

Lo sviluppo del Segmento Utente segue due line guida:

- Service enablers per le varie comunità (elementi locali, ambiente operativo, sinergie con comunicazioni, ...)
- Approccio tecnologico per lo sviluppo di vari tipi di ricevitori

- **2: Mission implementation and evolution**

L'obiettivo è ottimizzare le missioni EGNOS e GALILEO con attenzione ad altre sorgenti informative quali tempo, riferimenti geodetici, Search & Rescue.

- **3: Innovation and International Activities**

Le attività comprenderanno:

- supporto all'innovazione attraverso attività dedicate alle PMI;
- Networking di esperti in varie comunità di utenti;
- Supporto al coinvolgimento di partners internazionali.

Area 1: User segment

User Community

Identificate principalmente:

Road, rail, Maritime, aviation e personal mobility.

In aggiunta, “special” communities:

Land surveying, civil engineering, Agriculture sector, Multi-modal transport, Remote asset tracking, Emergency management, Law enforcement, Energy domain, Scientific research.

Technological R&D

Sviluppo ricevitori per 3 mercati: **Mass market, professional, Safety of Life.**

Mitigazione Interferenze: sviluppo di tecniche per rilevare, mitigare e / o isolare sorgenti di interferenza per Galileo.

- ***Ottimizzazione e consolidamento del Signal-in-Space***
 - Interfaccia con il “Galileo core system” (*SIS ICD*)
- ***Analisi dell’evoluzione della Missione***
 - Search and rescue
 - Advanced Mission Concept (Galileo-2)
 - EGNOS mission evolution
- ***Servizi Galileo Complementari***
 - Time Service provider
 - Geodesy Service provider
 - Service Centres
 - Regional Integrity
 - Search and Rescue

- Attività Innovative dedicate alle SME's
 - *Stimolare l'innovazione in vari aspetti: ricevitori, elementi locali, applicazioni*
 - *Facilitare l'introduzione di SME's nelle future attività*
- Supporto al Galileo R&D a livello Europeo e Internazionale
 - *Formazione di Reti di esperti*
 - *Lancio di piccoli studi, dimostrazioni, attività di training*
 - *Supporto alla presa di conoscenza dell'uso della navigazione satellitare*

BUDGET

AREA 1 - 42 M€ budget

(finanziamento al 50 %)

USER COMMUNITY

LBS	3,2 M€	1 contratto
Road	3,2 M€	1 contratto
Rail	3,2 M€	1 contratto
Maritime	3,2 M€	1 contratto
Aviation	2,2 M€	1 contratto
Special	5 M€	4 contratti

TECHNO

Mass Market rx	7,5 M€	3 contratti
Prof. Market rx	5,2 M€	2 contratti
SoL Market rx	3,5 M€	1 contratto
Interference mitigat.	1,8 M€	1 contratto

AREA 2 - 16,5 M€ budget

(finanziamento al 100 %)

Galileo Mission	3,8 M€	1 contratto
Advanced Concept	2,8 M€	1 contratto
Time	2,8 M€	1 contratto
Geodesy	1,8 M€	1 contratto
S&R	4,3 M€	1 contratto

AREA 3 - 8,4 M€ budget

(finanziamento al 100 %)

Innovation & International	4,9 M€	1 contratto
SME's	3,0 M€	10 contratti

Information Day sulla 2a Call

La Galileo Joint Undertaking terrà un Information Day sulla 2^a Call il 2 Giugno 2004 a Brussels.

Maggiori informazioni sul GJU web site:

<http://www.galileoju.com>