



Project no. 510391

Project acronym: GALILEOAPP

Project title: Support for the development and utilisation of Galileo applications in Poland and other accession countries

Instrument: Specific Support Action

Thematic priority: Aeronautics & Space

Final Publishable Activity Report

Period covered: from 1. 04. 2004 to 30. 06. 2006

Date of preparation: 20. 07. 2006

Start date of project: 1.04.2004

Duration: 27 months

Project coordinator name: Janusz B. Zieliński

Signature:

Project coordinator organisation name:

Space Research Centre Polish Academy of Sciences

SRC PAS director name: Marek Banaszekiewicz

Signature:

Dyrektor CBK PAN
doc. dr hab. Marek Banaszekiewicz

Content

- 1. Final Publishable Executive Summary** **p. 3**
- 2. Section 1** **p. 6**
Project objectives and major achievements during the reporting period
- 3. Section 2** **p. 7**
Workpackage progress of the period
- 4. Section 3** **p. 24**
Consortium Management
- 5. List of deliverables** **p. 28**

Final Publishable Executive Summary



GALILEO INFORMATION POINT POLAND

The specific support action project “GalileoApp” aimed at the promotion of the development and utilisation of Galileo applications in Poland and subsequently in other accession countries.

The project activities were focussed on:

- ◆ Supporting research and commercial sectors in **the development of Galileo-based applications**
- ◆ Providing background and support for **the development of a national policy** related to utilisation of Galileo services

In order to concentrate information, advisory and support activities related to Galileo in a single centre and thereby increase their efficiency and synergy, **Galileo Information Point** was established within the Polish Space Office. It is a part of Space Research Centre of Polish Academy of Sciences in Warsaw.

During two years of its existence, Galileo Information Point has:

- facilitated exchange of information and establishment of contacts among representatives of different GNSS-related sectors from Poland and abroad,
- identified the existing Polish potential in the field of satellite navigation and endeavoured to present it to the European GNSS community,
- analysed European Radionavigation Plan and possible effects of its introduction in Poland,
- broadened awareness among public authorities of Galileo programme and its potential benefits,
- provided public authorities with an independent information on the current state of the GNSS-related sectors in Poland,
- acted as an advisory and expert body to the government in issues concerning the development of Galileo system,
- increased the knowledge of general public about the benefits of satellite navigation and Galileo system in particular.

In order to achieve the objectives of the project Galileo Point organized or co-organized several large international conferences (more than 100 participants each). The first one, “National Information Day on European Satellite Navigation System Galileo” on 29th June 2004 in Warsaw, was addressed to the Polish sectors that are most interested in the development of satellite navigation – scientific centers, companies and public authorities. The next event, an international EGNOS Workshop held in Cracow on 24th September 2004, was the first seminar in Poland completely devoted to satellite-based augmentation system EGNOS. The aim of the third conference, “European Satellite Navigation Cooperation Day” on November 30th in Warsaw, was to foster cooperation between Polish and Western

European Industries (mostly SMEs) in the field of satellite navigation applications and to develop networking opportunities. „European Galileo Information Days in Riga” (12 – 13 May 2005, Riga, Latvia) aimed at bringing together the European GNSS community and foster international cooperation in the development of Galileo applications. “Workshop on EGNOS Performance and Applications”, held in Gdynia on 27 - 28 October 2005, was an occasion to review the present situation and status of the system after its entry into the Initial Operations Phase 3 months before. The last event (organized together with Eurisy), “Galileo Services: Chances for Business” on 24 – 25 April 2006 in Prague, was devoted to the regulatory framework and economical foundations necessary to allow private down-stream projects leading to the development of a market based on Galileo applications.

All events were successful, not only providing the participants with new information about Galileo and EGNOS system development and possible applications, but giving them an excellent opportunity to exchange information and establish valuable contacts as well. Moreover, they served to raise interest of public media in satellite navigation, thus increasing the general awareness of GNSS issues.

Since one of the main tasks of the project is the dissemination of information, Galileo Point established its own website <http://galileo.kosmos.gov.pl> with the information on Galileo system development and news about satellite navigation. A database of Polish and foreign institutions interested in the establishment of contacts and participation in GNSS projects was created. Furthermore, Galileo Point in close cooperation with “Geodeta” magazine began publishing a monthly bulletin “Nawi” devoted to satellite navigation. GP provided texts about EGNOS and Galileo systems and news from GNSS community. The bulletin was distributed by post and available in pdf version at the project website. This initiative is also expected to continue after the termination of GalileoApp project.

In order to provide the widest possible audience with comprehensive and complete information about Galileo system development and its possible applications, Galileo Point arranged for a book on Galileo to be translated and published. “A positioning system Galileo: strategic, scientific and technical stakes” presenting a broad scope of issues related to GNSS applications as well as technical, economic, political and military aspects of Galileo system development was published in the spring 2006. The book can be now purchased in bookshops and through internet. It is the first and so far the only book devoted completely to Galileo system available on Polish market.

Not only did Galileo Point disseminate information about satellite navigation in Poland, but it ensured Polish presence on European GNSS fora as well. Polish potential and interest in GNSS was presented during Second Galileo Conference for an Enlarged Europe in Budapest in May 2004, Galileo FP6 Research and Development: 2nd and 3rd call Information Days in Brussels, ESA Workshops in Noordwijk, Satellite Navigation Summits in Munich, EC seminars and meetings and on other occasions.

Taking into account the potential influence of European Radionavigation Plan on the future of navigation on the EU Galileo Point commissioned an in-depth analysis of this document, covering its technical, economic, organizational and legal aspects and possible effects of its introduction in Poland. The results were presented to the interested institutions and public administration bodies in order to help them to formulate a coherent national policy regarding the issue in question.

Another aspect of Galileo Point's mission was the assistance for public authorities in matters concerning satellite navigation. To this end the Working Group was established. It consists of GNSS experts and representatives of institutions already dealing with or interested in Galileo issues. Several meetings of the WG were organized. It has become an expert group aiding in work of the Interministerial Consultation and Coordination Board for Space Affairs, an advisory body to the Prime Minister. The Working Group as a whole, GalileoApp project coordinator, Professor J. B. Zieliński and Galileo Point are an important source of information for public administration (in particular Polish Ministry of Infrastructure) on GNSS-related issues. They are consulted on various topics regarding Poland's position towards Galileo. The fact that the Working Group, albeit slightly modified, will continue its activities even after the termination of GalileoApp project is the best confirmation of the success of this initiative. Moreover, basing on the experience from GalileoApp a three-year GNSS innovative applications development plan was prepared and submitted to the Ministry of Education and Science as a proposal for Polish National Framework Program.

During two years of its activities Galileo Point significantly facilitated information exchange between Polish GNSS-related entities and opened several communication channels with European institutions. It has become a focal point of contact for the GNSS community, widely recognized both in Poland and abroad.

Further information about the project can be found at : <http://galileo.kosmos.gov.pl> .

Section 1

Project objectives and major achievements during the reporting period

The main goal of the support action was the promotion of the development and utilisation of Galileo applications in Poland and subsequently in other accession countries. For this purpose and in order to exploit synergies of information, advisory and support activities, a single entity – Galileo Information Point Poland (GP) – had been established.

Its activities were devoted to:

- Supporting research and commercial sectors in the development of Galileo-based applications
- Providing background and support for the development of a national policy related to utilisation of Galileo services.

The activities undertaken by Galileo Point Poland during the first year of its existence allowed to confirm the initial assumptions on base of which the project objectives had been chosen and a very favourable reaction of the main groups addressed - Polish and later regional GNSS communities, general public, Polish authorities and Western European GNSS sector - encouraged us to continue our actions with only minor modifications (in comparison with the initial project description). At the beginning of the project it was observed that links between research community and business were rare, working relations between GNSS-related communities in new EU member states and Western Europe were not sufficiently developed and general awareness of possible benefits offered by satellite navigation and its applications quite low, even in public administration. In order to rectify this situation Galileo Point pursued simultaneously three main lines of activities

- o Organization of conferences and seminars devoted to Galileo and EGNOS systems,
- o Information and promotion activities,
- o Advisory services to public administration.

During two years of its existence, Galileo Information Point has:

- facilitated exchange of information and establishment of contacts among representatives of different GNSS-related sectors from Poland and abroad,
- identified the existing Polish potential in the field of satellite navigation and endeavoured to present it to the European GNSS community,
- analysed European Radionavigation Plan and possible effects of its introduction in Poland,
- broadened awareness among public authorities of Galileo programme and its potential benefits,
- provided public authorities with an independent information on the current state of the GNSS-related sectors in Poland,
- acted as an advisory and expert body to the government in issues concerning the development of Galileo system,
- increased the knowledge of general public about the benefits of satellite navigation and Galileo system in particular.

Since its creation Galileo Point significantly facilitated information exchange between Polish GNSS-related entities and opened several communication channels. It has become a focal point of contact for the GNSS community, widely recognized both in Poland and abroad.

The details of our actions in the second reporting period are described below.

Section 2

Workpackage progress of the period

WP1

The workpackage 1 aimed at supporting the research and commercial sectors in development of Galileo-based applications. Specifically, it was intended to:

- Facilitate establishment of contacts and exchange of information among representatives of different sectors (including R&D and business) involved in development of satellite navigation applications
- Stimulate innovative concepts of EGNOS/Galileo applications and support their development into feasible projects
- Provide interested entities with all appropriate information necessary for application development
- Present the existing Polish and regional potential in the field of GNSS to satellite navigation community and support participation of Polish/regional entities in international projects

Organization of conferences

The main task planned in this workpackage was the organisation of events gathering the GNSS-related community. This line of activity was pursued without any modifications, apart from increasing the number of events in which Galileo Point was involved.

Two kinds of meetings were organised: **Galileo Information Days** and **EGNOS Workshops**. **Galileo Info Days** were addressed to the business community, companies and enterprises of any size interested in and/or dealing with GNSS, technical groups and market oriented public institutions interested in applications but not yet involved in realisation. The main aim was the popularisation of satellite navigation issues and fostering the establishment of contacts.

EGNOS workshops were held for people and groups actively involved in works related to GNSS development and applications. The programme consisted of technical papers and technical discussions. The main purpose was the exchange of information and experiences connected with the use of EGNOS.

In the course of the project, Galileo Point organized or co-organized 4 large Galileo Information Days and 2 EGNOS Workshops. It also sponsored special sessions devoted to Galileo during two more events.

The first event, **National Information Day** on a European Satellite Navigation System Galileo was held in Warsaw on 29th June 2004. The conference was addressed to the sectors that are most interested in the development of satellite navigation – scientific centers, companies and public authorities. More than 130 participants took part in the event. The

programme consisted of 2 main parts – presentation of the system (by a representative of Galileo Joint Undertaking) and its practical applications and presentation of possibilities of obtaining financial support for concrete projects.

National Information Day on Galileo was organized under the auspices of the Ministry of Infrastructure, whose representative, Under-Secretary Wojciech Halka, gave a short welcome address. He stressed the importance of Galileo program as one of the strategic initiatives of European Union, which would be used in many different areas, for instance such as transport, finance and banking, search and rescue operations, energy, agriculture and others. Professor Janusz B. Zieliński from Space Research Centre (Co-ordinator of GalileoApp project) presented the current situation of satellite navigation sector in Poland as well as potential possibilities of participation in Galileo program. The next speaker, Dr Jerzy Albin, General Surveyor of Poland, informed the audience about multi-functional positioning system ASG – PL/EUPOS, underlining the crucial role of GNSS reference stations system in ensuring proper functioning of public authorities and services and increasing the competitiveness of the economy.

Mr. Hans – Peter Marchlewski, a high-ranking representative of Galileo Joint Undertaking was the guest of honour at the conference. He presented Galileo system overview (current status and organization) and its market opportunities. He also explained the conditions of tender and rules of applying for contracts in the second Galileo 6th Framework Programme call.

The second session was devoted to examples of satellite positioning applications in Poland such as vehicle control systems, air navigation, National Active Geodetic Network, precise time signal transmission and others.

During the third session the participants had an opportunity to learn about possibilities of obtaining financial support for the projects connected with satellite navigation: financial instruments applied in 6th Framework Programme and rules of bidding for projects and contracts in FP6 calls, subsidies and grants of PAED, the rules of applying for structural funds and others.

More detailed report from this conference, a list of participants, detailed agenda, presentations and other information is available on the project website <http://galileo.kosmos.gov.pl> and on the attached CD.

The second event organized in the frame of Workpackage 1 was **EGNOS Workshop**, held on 24th September 2004 in Cracow, at the Faculty of Mining Surveying and Environmental Engineering of AGH University of Science and Technology. The seminar was a part of the conference "Satellite Positioning in Modern Geodesy and Navigation".

EGNOS Workshop was the first seminar in Poland completely devoted to satellite-based augmentation system EGNOS. More than 90 participants attended the conference. Speakers from England, Spain, Hungary, Italy, Ukraine, Latvia and Poland as well as representatives of European Space Agency explained the present situation and status of the system and exchanged information and experiences connected with the use of EGNOS. 15 papers were delivered, including 9 presented by guests from abroad:

- Overview of GALILEO and status – Alexandre Steciw (ESA)
- EGNOS overview and status – Giorgio Solari (GJU)
- The EGNOS Project Status and the future plans – Javier Ventura–Traveset (ESA)
- GNSS in the on-field check agriculture parcel measurement for IACS – Simon Kay (JRC)
- The Exploitation of ESTB to Demonstrate SatNav Capabilities in the Several Transport Domains – Rafael Lucas Rodriguez (ESA)
- EGNOS/ESTB Data Collection and Evaluation in Budapest – Jozsef Ádám, Bastiaan Ober, Szabolcs Rózsa (Hungary)

- ESTB in Maritime, Air and Land application – Jarosław Cydejko, Marek Grzegorzewski, Stanisław Oszczak, Adam Ciećko (Poland)
- EGNOS, the answer to 10 years of suffered DGPS in Italy – Giorgio Manzoni (Italy)
- GPS/EGNOS Pre-Processing experimental software „OCTAVA_PPA”: concept, possibilities, initial test results – Oleksiy Zhalilo (Ukraine)
- GNSS application in Riga city – Madara Caunite, Elina Silabriede (Latvia)
- Reliability Characteristics of Differential GPS Transmission – Cezary Specht (Poland)
- Test of Seres receiver using EGNOS signal – Joanna Czapska (Poland)
- GNSS receiver testing techniques in a laboratory environment – Piotr Mielnik (Poland)
- Space Research Center contribution to EGNOS – Zdzisław Krysiński (Poland)
- GalileoApp Project – Janusz B. Zieliński (Poland)

More detailed report from this conference, a list of participants, detailed agenda and other information is available on the project website <http://galileo.kosmos.gov.pl> and on the attached CD.

The third event, **European Satellite Navigation Cooperation Day**, was held in Warsaw on 30th November 2004. It was not foreseen in the frame of Workpackage 1, but it resulted from the contacts established by GalileoApp project coordinator with the representatives of France Development Conseil during meetings on European GNSS forums. The European Commission GALILEAN project team (led by FDC) and Galileo Information Point Poland organized this conference together, but the costs were covered by GALILEAN project; the personnel of Galileo Point contributed mostly his work and contacts.

The aim of the event was to foster cooperation between Polish and Western European Industries in the field of satellite navigation applications and to develop networking opportunities. The seminar was attended by around 100 participants from European GNSS downstream industry such as suppliers of equipment and services, and research institutes from both Western Europe and Poland.

The first session was devoted to Galileo Programme Update and existing GNSS cooperation networks, such as OREGIN, Galileo Services and NAVOBS. During the second session two consortia - iNavSat and Eurely - bidding to become the Galileo Operating Company were presented. The third session of the conference was devoted to the presentation of Galileo R&D activities plan and examples of project realized by Western companies. After an overview of the first and second Galileo Joint Undertaking (GJU) call under the 6th RTD Framework Programme, cooperation opportunities for the third Galileo call as well as for the FP7 related activities to be launched from 2006 to 2010 the representatives of the following companies presented: their achievements in Galileo receivers' development (Septentrio), maritime and inland waterways services utilizing Galileo (Kongsberg Seatex), GNSS-based telematics applications in railway operations (Bombardier Transportation), GNSS applications to aviation and rail (INECO-TIFSA), satellite location technology (Alcatel Space), GNSS signal generators (Spirent Communications) and business models for Location Based Services (Logica CMG). All speakers underlined their interest in finding potential partners from Poland and indicated some possible areas for cooperation.

During the last session 5 Polish projects were presented. They addressed the following topics: GNSS applications for time transfer (Space Research Centre), vessel traffic management systems using EGNOS/GALILEO (Maritime University Szczecin and Dornier Consulting GmbH), location based applications for transport safety and antiterrorist activity support (Industrial Research Institute for Automation and Measurements), teletransmission of DGPS/RTK data via GSM/GPRS (University of Warmia and Mazury) and telematic services

(Autoguard & Insurance). A general overview of Polish GNSS Activities was given by Janusz B. Zieliński, Galileo Point Coordinator.

In the discussion that followed the last session Polish scientists and businessmen analysed the specific barriers faced by Polish industry on the European GNSS market and sought possible solutions to overcome them. According to the Western companies, the main obstacle in the establishment of contacts is the lack of sufficient information about Polish scientific and technological potential. It was noted that in order to change this situation, Polish achievements should be better promoted on European GNSS forums and Polish entities should participate in information and contact networks.

More detailed report from this conference, a list of participants, detailed agenda and other information is available on the project website <http://galileo.kosmos.gov.pl> and on the attached CD.

The first conference organized in 2005, „European Galileo Information Days in Riga”, took place on 12 – 13 May in the capital of Latvia. The aim of this event was to bring together the European GNSS community and foster international cooperation in the development of Galileo applications. The participants (coming from many European countries and even Turkey) had a possibility to learn more about Galileo and EGNOS project status and overview, presentations of consortia bidding for Galileo concession, 6 Framework Programme Galileo calls, examples of projects and applications and. European solutions (companies, associations and programs) aiming at fostering international cooperation in GNSS. The conference was held under the auspices of the European Space Agency and Galileo Joint Undertaking; high-ranking representatives of both institutions presented the overview of Galileo and EGNOS. The seminar was divided into 5 sessions devoted to:

- general information on Galileo (including Galileo project overview, system architecture and technical issues, the Galileo frequency and signal structure, 6 FP Galileo activities, Glonass status, performance and perspectives etc.)
- economic aspects of Galileo (presentations of iNavSat and Eurely, solutions to develop GNSS markets, extracting downstream value from Galileo etc.)
- supporting cooperation (OREGIN, Galileo Services, ESA navigation support facilities, the concept of Galileo Cooperation Platform for Central Europe, EUPOS project)
- applications and projects (two sessions including development of GNSS-1 capabilities in Central and East European countries, examples of GNSS and Galileo R&D projects in Poland, Czech Republic, Romania, Hungary, Latvia, GNSS activities in Portugal and the evolution to Galileo, Galileo for implementing the “intelligent road “ concept, real on-demand Location Based Services, the German Galileo Test and Development Environment – GATE, Validation of current DGNSS positioning accuracy based on EGNOS and network - DGNSS data, etc.)

More information about this conference, a list of participants, detailed agenda, presentations etc. are available on the project website <http://galileo.kosmos.gov.pl> and on the attached CD.

The second event in 2005, “Workshop on EGNOS Performance and Applications” was organized by Polish Galileo Information Point in close cooperation with the European Space Agency and Institute of Navigation and Hydrography of the Naval University of Gdynia.

The aim of the seminar held on 27 - 28 October in Gdynia was to bring together the European EGNOS community, review the present situation and status of the system, and foster international cooperation in the development of the EGNOS applications.

The two-day seminar was divided into 6 sessions: two devoted to general information about EGNOS (historical background, general concept, legal aspects, system status and performance, system operation and planned evolutions), two devoted to applications and tools (overview of ESA and other projects, SISNeT, GATE, some examples of applications) and the last ones devoted to applications in navigation (road, rail and maritime transport, aviation, agriculture and others). The Programme Committee awarded the authors of the best papers of each session; Mr. Michael Optiz received "The Best Paper of the Conference Award" for his presentation about development of a SISNeT – simulation software.

Over 120 participants from 18 countries had a unique opportunity to exchange information and experience connected to the use of EGNOS signal after the successful Operational Readiness Review of the system by ESA in June this year and its entry into the Initial Operations Phase in July.

The organization of EGNOS Workshop (the second conference in Poland completely devoted to this system, the first having been prepared by Galileo Point last year) and great interest it raised among Polish R&D institutions, public administration and business sector confirmed Poland's active interest in the development of satellite navigation – as Mr. Wojciech Hałka, Undersecretary of State for Telecommunications in the Ministry of Infrastructure, stated during the opening ceremony. Participation of numerous representatives of GNSS community from other European countries proved their willingness to exchange information and pool the European potential to develop EGNOS and in the future Galileo applications in order to better meet the needs of European citizens.

List of presentations delivered during **Workshop on EGNOS Performance and Applications**, October 27 – 28, 2005, Gdynia, Poland:

1. General concept of EGNOS, legal aspects – Giorgio Solari (GJU)
2. Operating EGNOS – Ashley Lyon (ESSP)
3. Historical background of EGNOS – Alexandre Steciw (ESA)
4. EGNOS opening the way to »sole means of navigation« but... - Calin Roseti (ESA)
5. EGNOS usefulness in no classical navigation tasks – Andrzej Felski (Poland)
6. EGNOS System Status, performance, start of operations and Planned Evolutions – Laurent Gauthier , F. Toran, J. Ventura-Traveset (ESA)
7. The EGNOS Data Access System (EDAS) Real-Time Access to the EGNOS Products for Multi-Modal Service Provision – A. Cruz, F. Toram, J.Ventura – Traveset, Nestor Zarraoa (ESA)
8. Traditional and new navigational activities and their substance – Z. Kopacz, W. Morgaś, Józef Urbański (Poland)
9. EGNOS Application in civil aviation – Richard Farnworth (Eurocontrol)
10. Time scale for EGNOS – D. Lemanski, Jerzy Nawrocki, P. Nogas (Poland)
11. The EGNOS 2 - Galileo "E2G" programme – Marco Manca, G. del Duca (Italy)
12. ESA Projects Overview in Support to EGNOS Applications Developments – A. Garcia, M. Tossaint, J. Samson, G. Seco, J.C. de Mateo, J.L. Gerner, F. Toran, Rafael Lucas-Rodrigues, J. Ventura, B. Arbesser-Rastburg (ESA)
13. Development of a SISNeT- Simulation Software – Michael Optiz (Austria)
14. A Facility for GPS/EGNOS Signal Monitoring – Jose Santa Lozano (Spain)
15. AVANT: A Wide Range Utility for GPS/EGNOS Navigation System Users – Rafaelo Toledo Moreo (Spain)

16. ASQF: Measuring EGNOS Performance for Applications – Esperanta Herraiz – Monseco (Spain)
17. SOFT-REC: A GPS Real Time Software Receiver with EGNOS augmentation – Giacomo Bacci, F. Principe, M. Luise, C. Terzi, M. Casucci (Italy)
18. Validation of current EGNOS based DGNSS positioning data – Jurgen Alberding (Germany)
19. EGNOS applications in tourist GIS and driver safety – Giorgio Manzoni, R.G.Rizzo (Italy)
20. German Galileo Test and Development Environment – GATE – Stefan Baumann, W. Lechner (Germany)
21. EGNOS Terrestrial Regional Augmentation Networks for River Information Services – Marko Jandrisits (Austria)
22. Surveying, mapping and others – Simon Kay (JRC)
23. Validation of GPS Methods and Equipment for IACS Parcel Area Checks in Poland – A. Ciećko, Stanisław Oszczak (Poland)
24. On the use of satellite navigation systems for geodynamical studies in Russia and adjacent areas – Tatevian Suriya (Russia)
25. Applications of EGNOS Vehicle Terminals – Hugo Zunker (Germany)
26. EGNOS based solution for info mobility services – Marco Manca (Italy)
27. EGNOS Initial Operations Phase Performance in the Area of Polish Coast – Jarosław Cydejko (Poland)
28. Evaluation of EGNOS Flight Trials Data from Aeronautical Perspective – Henk P.J. Veerman, P. Rosenthal, O. Perrin (the Netherlands)
29. Experience of the Warsaw RIMS operation and activity in PERFECT project – Leszek Jaworski, Z. Krysiński, T. Michałowski, J. B. Zieliński (Poland)
30. RUNE (Railway User Navigation Equipment): GPS-EGNOS trials on Italian ERTMS equipped route – A. Antonella, U. Guida, Livio Marradi (Italy)
31. EGNOS/DGPS System for airport fire brigade vehicle localization – J. Jagnyziak, Jerzy Sobstel (Poland)
32. EGNOS Signal Availability Measurements for a Land Mobile User – P. Kovář, Pavel Puričer, L. Seidl, J. Špaček, F. Vejražka (Czech Republic)
33. Real Time Car Navigation using WADGPS (Wide Area Differential GPS) – M. Calderon, Rafaela Cefalo (Italy)

More information about this conference, a list of participants, detailed agenda, presentations etc. are available on the project website <http://galileo.kosmos.gov.pl> and on the attached CD.

Galileo Point was also actively involved in preparation of the last conference planned in the modified GalileoApp workprogramme – “Galileo Services: Chances for Business” on 24 – 25 April 2006 in Prague; the other co-organizers were Eurisy and Czech Space Office. Galileo Point contributed to the organization of this conference by taking part in the works of Programme Committee and elaboration of the agenda, inviting speakers, providing the chairman for one of the sessions and offering financial support for some participants. The aim of the event was to address the regulatory framework and economical foundations necessary to allow private down-stream projects leading to the development of a market based on Galileo applications. The conference was a great success. More than 200 experts, business managers and public officials gathered in Prague to assess the market opportunities derived from the Galileo programme, the role of the various actors (the European Commission, the

GJU and GSA, Member States and their different institutions, private investors, etc...), and the importance of the legal and administrative framework. Numerous discussions were triggered by important presentations, on the growing GNSS based application global market and the part Galileo could take in it, on the importance of EGNOS in the preparation of Galileo, on the open issues of liability and certification, etc... between the speakers and the audience. Two round tables – about market opportunities and market enablers and obstacles – served to identify critical questions on these issues. Underlining the importance of these subjects, three different television channels and numerous press attended the conference. This event also stressed the key role that the new EU member states have to play in Galileo as co-owners of the system. It helped to prepare the ground and keep them informed of all the developments in the European GNSS programmes (Galileo and EGNOS), as well as the market opportunities that the systems will offer to their industries. The conference was divided into 4 sessions on:

- general keynotes (including Galileo Programme status and market development strategy, overview of the Galileo Services, approach & business strategy of the future concessionaire, ESA vision etc.)
- market analysis and opportunities for GNSS-based applications (the current drivers, market and players of GNSS based applications, the GNSS market from the financial perspective, a sceptical point of view on business opportunities and Galileo public-private partnership concept, the challenges for SMEs in the GNSS environment, examples of GNSS based applications success stories etc.)
- the role of public organizations and institutions in supporting the development of Galileo business at local, national, European and international level (Galileo potential for member states, regulated applications, results of the 6th FP, perspectives on the 7th FP, the support of ESA to navigation applications, national activities related to GNSS in Czech Republic, Poland and Latvia etc.)
- the administrative and legal framework (including intellectual property rights, certification and regulation from an institutional point of view, contracting and insurance issues with final user etc.).

More information about this conference, a list of participants, detailed agenda, presentations etc. are available on the project website <http://galileo.kosmos.gov.pl> and on the attached CD.

Galileo Point also supported the seminar “Polish Technologies in the European Space Programme”, which took place on 9 February 2006 in the Space Research Centre in Warsaw. In order to acquaint representatives of research and industrial sectors with a large, albeit challenging market of space technology, Polspace Ltd - assisted by the European Space Agency, the European Commission - invited a group of experts to share their knowledge and reflections on the subject. One session was devoted to Galileo problems. A much expected exchange of opinions formed a valuable contribution to the ongoing discussion about Polish space priorities.

Presentations at the Seminar covered:

- recent developments in the European space policy, industry and technology,
- results of the study on Polish space capabilities, financed by ESA and performed in 2004,
- opportunities and strategies for the Polish space sector,
- current and intended Polish contributions to the GALILEO satellite navigation system,
- scientific and industrial opportunities onboard the International Space Station within the SURE project.

More information about this conference, a list of participants, detailed agenda, presentations etc. are available on the project website <http://galileo.kosmos.gov.pl> and on the attached CD.

The last event co-organized by Galileo Point in Poland was “Satellite Positioning in Modern Geodesy and Navigation” on 11 – 12 May 2006 at WAT Military University of Technology in Warsaw, with one session devoted to Galileo. This event was synchronized with the final meeting of the Advisory Board of GalileoApp project. Three AB members and the project coordinator delivered presentations during the Galileo session. More than 60 Polish scientists and experts dealing with GNSS issues took part in the event, as well as representatives from France, Germany, Hungary, Ukraine and Italy. The conference was divided into 4 normal and 1 poster session on:

- Methods of post-processing of GNSS observations (two parts)
- Influence of atmosphere on GNSS measurements
- Applications of satellite techniques in geophysics
- Project GALILEO - with the presentations of:
 - ✓ H. P. Marchlewski: Recent status of the Galileo Programme
 - ✓ G. Hein: The New Joint Galileo L1 O / GPS L1C Signal
 - ✓ G. Manzoni: The MONITOR Project
 - ✓ J. Zieliński: Contribution of Poland to GALILEO

More information about this conference, a list of participants, detailed agenda, presentations etc. are available on the project website <http://galileo.kosmos.gov.pl> and on the attached CD.

Information dissemination

Comprehensive information for the public opinion about the development of the Galileo programme and about the activities of ESA and EU is very important for gaining the public support for this idea. Therefore Galileo Point Poland continued to act as the main source of information about EGNOS and Galileo programs.

The organization of the abovementioned conferences provided a good opportunity to launch and support information campaign in media aimed at raising general awareness of GNSS issues and Galileo programme in particular. In this aspect a particularly noteworthy event was National Information Day on Galileo in June 2004. It was organized under the auspices of the Ministry of Infrastructure and was mentioned in several TV and radio stations and press articles. Another spectacular event (although not directly organized by Galileo Point) was the opening of RIMS station in Space Research Centre in Warsaw on 27th September 2004. The ceremony was attended by high-ranking officials from public administration, numerous representatives of Polish scientific sector as well as media. In 2005 the most remarkable event was the launch into orbit of the first Galileo satellite GIOVE – A on December 28 – it was mentioned in all TV and radio stations and in many press articles.

Apart from ensuring media coverage of particular events Galileo Point established and maintained its own permanent website <http://galileo.kosmos.gov.pl> with the information on Galileo and EGNOS system development, news about satellite navigation and project activities. A database of Polish and foreign institutions interested in the establishment of contacts and participation in GNSS projects as well as a list of GNSS project currently under way in Europe was created.

Moreover, the representatives of Galileo Point promoted Galileo and EGNOS system during several national conferences, such as “Satellite Positioning in Modern Geodesy and Navigation” conference (23 – 24 June 2006, Poznań), “GEA Fair” in Poznań in September 2005, “DESIW - DGPS/EGNOS on Inland Waterways on Great Masurian Lakes” in October - to name but a few.

Ensuring Polish presence on European GNSS forum

One of the tasks of GP was to assure Polish presence on European fora dealing with GNSS issues. It was aimed at general presentation of Polish potential, brokering of contacts and lobbying towards inclusion of appropriate Polish institutions in particular projects. The representatives of Galileo Point took part in several events and the contacts established there proved to be very valuable to the realization of the project. They resulted in ensuring support of GJU and ESA for the conferences organized by GP (for details please refer to the reports from these events) and allowed to increase the number of participants from European GNSS community who took part in the events. Moreover, contacts with FDC and GALILEAN project team led to the organization of an additional conference, European Satellite Navigation Cooperation Day in Warsaw, without any direct financial contribution from GalileoApp project budget, and contacts with Eurisy and Czech Space Office resulted in joint organization of the conference “Galileo Services: Chances for Business” in Prague, which was a great success.

The details of the most important meetings and conferences in which the representatives of Galileo Point took part are listed below.

1. Second Galileo Conference for an Enlarged Europe, Budapest, 27 – 28 May 2004.
On 27th May, during the afternoon session of the conference, Professor Zieliński presented GalileoApp project, its assumptions and execution plan. The presentation aroused much interest from the audience and resulted in establishment of a few valuable contacts. Professor Zieliński also invited guests to the EGNOS workshop in Cracow and arranged for Mr. Marchlewski from Galileo Joint Undertaking to come to Warsaw on 29 June.
During this conference the first meeting of the Advisory Board of GalileoApp project was organized (for details please refer to the WP 3 section).
2. Galileo FP6 Research and Development: 2nd Call Information Day, 2nd June 2004, Brussels.
Professor Zieliński with a colleague attended an event organized by Galileo Joint Undertaking. The information gathered there was later disseminated among Polish institutions interested in taking part in the present call; some contacts with foreign partners were also established.

3. Second ESA Workshop on Satellite Navigation User Equipment Technologies NAVITEC 2004, ESTEC, Noordwijk, the Netherlands, 8 – 10 December 2004.

Professor Zieliński and dr Nawrocki attended the workshop and presented a paper on “Availability, reliability and continuity model of DGPS transmission” (9 December).

4. Satellite Navigation Summit in Munich, 8 – 10 March 2005.

During this conference the second meeting of the Advisory Board of GalileoApp project was organized. The report on the activities undertaken in 2004 was presented and approved by AB members and an action plan for 2005 – 2006 was discussed. Advisory Board offered its active support to the activities foreseen in 2005 (for details please refer to the WP 3 section).

Other contacts and meetings during the conference, in particular with Professor Janis Balodis from the University of Latvia, were very useful for the organization of the next activity of Galileo Point – European Galileo Information Days in Riga in May 2005.

5. Seminar on Satellite Navigation Regulated Applications, 30 September 2005, Brussels.

The representatives of Poland delivered a presentation on "Implementation of GNSS services for some regulated applications in Poland", including the application of GPS/DGPS/GPRS for creating an inventory of road accidents, project of civil protections and safety system in Warmia and Mazury Region with GNSS applications and others.

6. Galileo FP6 Research and Development: 3rd Call Information Day, 15 December 2005, Brussels.

Professor Zieliński attended an event organized by Galileo Joint Undertaking. The information gathered there was later disseminated among Polish institutions interested in taking part in that call; some contacts with foreign partners were also established.

7. Satellite Navigation Summit” in Munich, 21 – 23 February 2006.

Apart from taking active part in the conference, Professor Zieliński had the opportunity to discuss the preparations for the Prague event with the representatives of GJU, GSA, ESA and Eurisy present in Munich, as well as the details of the final meeting of the Advisory Board meeting with its chairman, Professor Hein.

8. Workshop on Tools and Facilities for Galileo Receivers, 23 – 24 March 2006, ESTEC, Noordwijk.

Two representatives of Galileo Point took part in the workshop devoted to new solutions for tools and facilities for testing Galileo satellite signals, both in terms of hardware and software. They also attended a meeting with Dr Rafael Lucas – Rodriguez and Mr. Falcone from European Space Agency, during which they discussed possibilities of the active participation of Space Research Centre PAS in testing of Galileo system and establishment of Galileo reference station in Poland.

Cooperation with Polish Academy of Sciences’ Agency in Brussels POLSCA

This cooperation focused on preparation of Galileo thematic priority in the 7th EU Framework Programme. A number of Polish institutions were invited to elaborate their proposals, which were later submitted to POLSCA. Polish position regarding Galileo topic in 7 FP was then presented and discussed during a meeting with the representatives of Galileo Joint Undertaking and European Commission (DG Research - Transport/Aeronautics). Papers and presentations concerning Poland’s interest in different aspects of Galileo system were distributed to all participants of the meeting, including Polish Permanent Representative by

the EU. They will be taken into account in the process of elaboration of the 7th Framework Programme and related documents. _

WP2

The main aim of Workpackage 2 was to provide background and support for **development of national policy** related to utilisation of Galileo services. Specifically, it was intended to:

- Broaden awareness among public authorities of Galileo programme and its potential benefits
- Facilitate exchange of opinion between public authorities and GNSS-related community
- Inform the public opinion about the importance of the GNSS problems and broaden the political support
- Provide public authorities with independent evaluation of the current and foreseen state of the GNSS-related sectors

Raising the awareness among public authorities

It was the main task planned in this workpackage and in order to achieve this objective several steps were taken simultaneously.

Establishment of Working Group of the project and organization of 8 meetings

Working Group consists of 16 specialists from public administration and scientific centers, interested in satellite navigation and/or involved in GNSS activities. It controls the realization of the project, evaluates the activities of Galileo Point, formulates strategic guidelines and suggests modifications if necessary. However, its role was significantly expanded in comparison to the initial idea of the project. It has become a forum of information exchange and discussion for the representatives of Polish GNSS community and public authorities, mostly due to very active involvement of the Ministry of Transport (formerly Infrastructure), which represents Poland in Galileo-related matters in the EU. It was recognized as an official expert group to the Interministerial Consultation and Coordination Board for Space Affairs – an advisory body to the Prime Minister. The activities undertaken by the WG met with the approval of all parties involved. The fact that the Working Group, albeit slightly modified, will continue its activities even after the termination of GalileoApp project is the best confirmation of the success of this initiative.

8 meetings of Working Group were organized in the course of the project; six in the Space Research Centre and two in the Ministry of Transport. They took place on 14 May, 18 June, 15 September 2004, 10 February and 4 October 2005, 26 January, 9 May and 21 June 2006 (minutes available in Polish).

Updated list of members of the Working Group of GalileoApp project.

	Name	Institution
1.	Krzysztof Banaszek	LOT Polish Airlines
2.	Bogdan Różycki	Ministry of Transport
3.	Tomasz Borkowski	Agency of Internal Security
4.	Andrzej Felski	Naval Academy
5.	Marek Grzegorzewski	Airforce Academy
6.	Michał Marszalec	National Institute of Telecommunications
7.	Janusz Narkiewicz	Warsaw University of Technology
8.	Bronisław Nawrocki	Civil Aviation Office
9.	Jerzy Nawrocki	Astrogeodynamical Observatory of SRC PAS
10.	Stanisław Oszczak	University of Warmia and Mazury
11.	Monika Żuberek	Ministry of Scientific Research and Information Technology
12.	Michał Rzewuski	Polish Air Traffic Agency
13.	Wiesław Salmonowicz	Office of Telecommunications and Post Regulation
14.	Andrzej Stachnik	National Institute of Telecommunications
15.	Janusz Śledziński	Warsaw University of Technology
16.	Artur Wieczynski	Industrial Research Institute for Automation and Measurements
17.	Janusz B. Zieliński	Space Research Center

Advisory services for public administration.

GalileoApp project coordinator, Professor Zieliński, and Working Group as a whole have become an important source of information for public administration (in particular Polish Ministry of Transport – providing it with necessary technical expertise) on GNSS-related issues. They are consulted on various topics regarding Poland’s position towards Galileo and thus participate actively in the development of Polish policy regarding these matters. Moreover, apart from regular activities of Working Group, several meetings with Professor Zieliński and other specialists (for example Dr Lewandowski from Bureau International des Poids et Mesures) were held in the Ministry.

General information dissemination

Galileo Point continued to ensure the participation of the representatives of public administration of various levels (including regional and local) in the events it is organizing. The transport and geodetic sector seemed to be particularly interested (as proved by the lists of participants of the conferences). Galileo Point tried to identify the most active persons and further involve them in its activities. It also provided information about Galileo and EGNOS on demand.

Cooperation with the Ministry of Transport (formerly Infrastructure)

Since this Ministry is responsible for most of Galileo matters in Poland, Galileo Point has established close cooperation with this institution. GP is consulted on various topics regarding Poland's position towards Galileo and offers its technical expertise when needed. The Ministry of Transport, for its part, supports the project activities, for instance by placing the information about them and Galileo system on its website. It is expected that this close cooperation will continue after the termination of the project.

Preparation of GNSS innovative applications development plan

The situation of the GNSS sector in Poland was analyzed by the Working Group and discussed during quite frequent meetings with the representatives of the Ministry of Transport (formerly Infrastructure). These discussions and efforts of the Working Group resulted in the proposal submitted by the Minister of Infrastructure to the Ministry of Science „Development of methods and systems of satellite positioning and navigation as well as their application in the infrastructure, economy and security of the country”. This proposal is intended become a part of Polish National Framework Programme. It covers the following topics:

- Development of new GNSS applications in maritime navigation, aviation and land transport
- Development of augmentation systems for positioning, surveying, safety and security and other non-transport applications
- Development of technological solutions for Galileo system
- Economic, organisational and legal issues connected with Galileo

The proposed project budget is 8 million PLN (about 2 mln euro) for three years.

Polish text of the proposal is available on the website <http://galileo.kosmos.gov.pl>.

Information dissemination

Information activities, in particular providing the decision-makers and general public with printed materials about Galileo system, was also an important element of Workpackage 2.

To realize this objective, Galileo Point in close cooperation with “Geodeta” magazine began publishing an information bulletin “Nawi” devoted to satellite navigation. GP provided texts about EGNOS and Galileo systems and news from GNSS community. The bulletin is distributed by post and available in pdf version at the project website; of course it is also available to all readers of “Geodeta” magazine. All issues of “Nawi” published so far are attached to this report. It is important to underline that “Geodeta” is interested in further pursuit of this activity.

In order to provide the widest possible audience with comprehensive and complete information about Galileo system development and its possible applications, Galileo Point arranged for a book on Galileo to be translated and published (an activity not foreseen in the initial project). To this end, GP established contacts with the authors and publishing company “Wydawnictwa Komunikacji i Łączności”. Galileo Point employees and experts from Space Research Centre took active part in preparing Polish edition of the book. “A positioning system Galileo: strategic, scientific and technical stakes” presenting a broad scope of issues related to GNSS applications as well as technical, economic, political and military aspects of Galileo system development was published in the spring 2006. The book covers the following topics:

- Technical description of the system
- Civil applications (aerial navigation, marine navigation, surface transport, broadcast of standard time and frequency signals and synchronisation data, Galileo applications in mobile telecommunications, terrestrial and maritime cartography, and geographical information systems)
- Space technology applications
- Scientific applications (geodetic and temporal reference systems, contribution of Galileo to geophysics, limiting factors and scope for improvement with Galileo)
- Security and defence
- Defence applications of navigation satellite systems
- Atomic clocks (specific features of atomic clocks, second-generation clocks for Galileo, recommendations for mastering atomic clock technology)

The book can be now purchased in bookshops and through internet. It is the first and so far the only book devoted completely to Galileo system available on Polish market.

This initiative met with approval not only in Poland, but at the international forum as well. Galileo Point received an official thanks from Professor F. Barlier, President of Bureau des Longitudes. Moreover, a letter of congratulation on the publication of the book and all successful activities of Galileo Point was sent by ESA Director General, Mr. Jean Jacques Dordain .

Copies of both letters are below.



Grasse le 12 avril 2006

François BARLIER
Président du Bureau des longitudes
Observatoire de la Côte d'Azur
Avenue N.Copernic
06130 GRASSE

Monsieur Le Professeur Janusz B.Zielinski
Galileo Information Point
Polish Space office
Space Research Centre PAS
Ul. Bartycka 18A 00-716 WARSAW

Monsieur le professeur et cher Janusz,

Je voudrais vous remercier un peu plus formellement que par courrier électronique de votre très gentille lettre du 3 mars sur la traduction en polonais de notre petit livre sur Galileo, lettre que vous avez pris la peine d'écrire en Français et dans un Français excellent que vous n'avez pas oublié, lettre accompagnant aussi 3 exemplaires de votre traduction. Un grand merci pour tout cela.

Cette collaboration franco-polonaise en matière de géodésie spatiale nous ravit et nous paraît bien continuer une collaboration historique entre nos deux communautés géodésiques ; par ailleurs l'effort exceptionnel que vous faites dans le cadre du projet européen Galileo avec Galileo Information Point à Varsovie me paraît à tout point de vue remarquable. Il me paraît donc important et opportun d'en informer le Directeur Général de l'ESA, Monsieur Jean-jacques Dordain et je me permets aussi de lui adresser une copie de votre lettre et de la mienne.

Puisque nous sommes donc au début de la réalisation du programme Galileo avec le lancement avec succès de GIOVE A, nulle doute que nous sommes dans une nouvelle phase d'échange et de coopération européenne dans ce domaine et je m'en réjouis beaucoup.

Je vous prie d'agréer, Monsieur le Professeur et cher Janusz, l'expression de mes sentiments très cordiaux et très amicaux.

Avec toutes mes amitiés.

François

Le Président du Bureau des longitudes

François Barlier

-Monsieur Jean-Jacques Dordain Directeur Général de l'ESA
8-10 rue Mario Nikis
75015 Paris



LE DIRECTEUR GÉNÉRAL

DG/181

Paris, le 25 avril 2006

Monsieur le Professeur Janusz B. Zielinski
Galileo Information Point
Polish Space Office
Space Research Centre PAS
Ul. Bartycka 18A
00-716 Warsaw

Monsieur le Professeur,

Toutes mes félicitations pour la traduction en polonais de l'ouvrage sur Galileo qui va permettre d'étendre l'intérêt porté à ce programme phare de l'Europe. « Galileo, un système de positionnement » est vraiment une référence non seulement en français et en anglais mais aussi désormais en polonais.

Je tenais également à vous remercier d'avoir bien voulu associer l'Agence spatiale européenne à cette édition. Avec le lancement de GIOVE A, le premier satellite Galileo, en décembre dernier, qui a marqué la concrétisation de ce programme dans l'espace, il est évident que nos échanges ne peuvent que se poursuivre et s'amplifier pour soutenir le succès de Galileo, programme européen à vocation mondiale.

Veillez agréer, Monsieur le Professeur, l'expression de mes sentiments les meilleurs.

Jean-Jacques Dordain

Analysis of European Radionavigation Plan and the situation of GNSS in Poland.

The actual situation of the GNSS application in Poland and the future development was analyzed on the basis of the European Radionavigation Plan elaborated for the European Union on the order of the European Commission.

This action was undertaken in response to the suggestions of the Working Group of the project, in view of the importance of this plan to the further evolution of the navigation sector in Europe. It gave the optimal framework for the assessment of the national development.

Taking into account the potential influence of European Radionavigation Plan on the future of navigation on the EU Galileo Point commissioned an in-depth analysis of this document, covering its technical, economic, organizational and legal aspects and possible effects of its introduction in Poland. The analysis was conducted by a group of experts led by Professor Andrzej Felski from Naval Academy in Gdynia. It was presented during 11th International Scientific – Technical Conference on Marine Traffic Engineering (24 – 25 November 2005, Swinoujście). Moreover, the results were presented to the interested institutions and public administration bodies in order to help them to formulate a coherent national policy regarding the issue in question. The analysis is also available at Galileo Point's website.

Resolutions of the Advisory Board of „GalileoApp” project

The Advisory Board, after careful examination of the documents presented by the project coordinator and attached materials, fully endorses the report on the activities undertaken in the frame of “GalileoApp” project from April 2004 to May 2006. The aim of the project was the promotion of the development and utilisation of Galileo applications in Poland and subsequently in other Central and Eastern European countries. The information, promotion, organizational and advisory activities conducted by the project team resulted in achieving the GalileoApp objectives and allowed to confirm the initial assumptions on which the project was based.

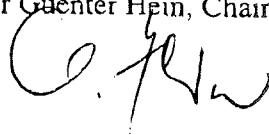
The Advisory Board in particular wishes to compliment the project team for a very efficient distribution of the financial resources of GalileoApp. With quite a limited budget they succeeded in organizing several international conferences and workshops, publishing a regular information bulletin and a book about Galileo and providing advisory services to the public administration. Good management of GalileoApp funds enabled the project team to undertake more activities than initially planned.

Galileo Information Point Poland, established in the frame of this project, has become an entity recognized by GNSS community both in Poland and at international forum. Its information and advisory activities (in particular the information bulletin “Nawi” and advisory services to public administration) are greatly appreciated by all interested parties. In view of their positive effect it is therefore recommended that these activities be continued. The Advisory Board strongly suggests to the institutions concerned to seek financial resources which would allow the pursuit of the abovementioned actions of Galileo Point.

The Advisory Board is of the opinion that the experience from the realization of GalileoApp project and Galileo Point activities could serve as an example for other organizations from Central and Eastern European countries willing to promote Galileo development in the region.

On behalf of the Advisory Board

Professor Guenter Hein, Chairman



29 Aug 2006

Section 3 Consortium Management

Objective of the project management required the following actions:

- Establishment of the Advisory Board of the project and organization of its meetings
- Review and evaluation of the project's objectives realisation
- Administrative work – task distribution among staff, reporting, etc.

- Financial issues – funds control

These actions have been conducted during the project without any obstacles.

The Advisory Board, comprising the representatives of international research and development community related to GNSS, was the main supervisory body of GalileoApp. It advised on course of the project, assessed the reports prepared by GP and formulated strategic guidelines.

The members of Advisory Board were:

- Prof. Guenter Hein – Munich University, Germany (chairman)
- Prof. Istvan Fejes – FOMI Satellite Geodetic Observatory, Hungary
- Dr. Daniel Ludwig – Galileo Joint Undertaking
- Prof. Giorgio Manzoni – Trieste University, Italy
- Prof. Stanisław Oszczak – University of Warmia and Mazury, Poland
- Dr. Alexandre Steciw – France

Due to financial reasons, it had been decided that the meetings of AB could not be held separately or too often; in order to minimize the costs they would be synchronized with other important conferences concerning Galileo.

In accordance with that principle the first meeting of the Advisory Board took place on 28th May 2004 in Budapest, during the Second Galileo Conference for an Enlarged Europe. This was an organizational meeting and an inauguration of the project activities.

The second meeting was held on 8th March 2005 during the Satellite Navigation Summit in Munich. The report on the activity in frame of GalileoApp project in 2004 was presented, discussed and endorsed. The Advisory Board also discussed and approved plans for the year 2005.

The final meeting of the Advisory Board took place on 12 May 2006 in Warsaw, during the yearly conference “Satellite Positioning in Modern Geodesy and Navigation”. The aim of this meeting was to review the whole realization of GalileoApp project. The project coordinator presented the report on the activities undertaken by Galileo Information Point Poland from April 2004 to May 2006 (the related documents had been sent to AB members before the meeting).. AB members congratulated Galileo Point on its success, especially in terms of raising public awareness of Galileo, consultations to public administration and the positive role played by the Working Group.

The Advisory Board as a whole endorsed the report of GalileoApp project, stressing the success of Galileo Point activities despite its limited financial resources. Galileo Point should continue as a focal point for all Galileo-related issues in Poland and as a contact point for foreign institutions.