



Dear Business Masters participant,

We have the pleasure to welcome you to our 2004 competition. This year we present you a truly challenging case to crack, challenging in several dimensions:

- state-of-the-art technology to be introduced in different traditional market segments
- one of the hot topics in Europe and even globally in what concerns social benefits
- commercialization of a service that currently is available for free
- at the crossroads of public and private interests.

The following information will give you directions on how to participate and how to win a trip to Germany for the finals:

- (1) Current situation
- (2) The case
- (3) Expected deliverables, formats, closing date
- (4) Information sources
- (5) Rating criteria and qualification requirements for the final round

(1) Current situation

Satellite navigation is set to become the primary means of navigation for civil applications worldwide. Satellite navigation, positioning and timing have already found widespread application in a large variety of fields and will be an integral part of global transport networks in the future. Many safety-critical services in areas of transport and numerous commercial applications will depend on this infrastructure.

One major concern for satellite navigation users is the reliability and vulnerability of current navigation signals delivered by GPS (US-System) and GLONASS (Russian system). Several cases of service

disruption have been reported over the past years, which have had many different origins, including unintentional interference, satellite failure, signal denial or degradation.

In this context, GALILEO – a European state-of-the-art technology mission will contribute significantly to reduce these shortcomings by providing additional navigation signals broadcast with a highly accurate, guaranteed global positioning service under civilian control. While providing autonomous navigation and positioning services, GALILEO will at the same time be interoperable with GPS and GLONASS, the two other global satellite navigation systems. A user will be able to take a position with the same receiver from any of the satellites in any combination. By offering dual frequencies as standard, however, GALILEO will deliver real-time positioning accuracy down to the meter range, which is unprecedented for a publicly available system. It will guarantee availability of the service under all but the most extreme circumstances and will inform users within seconds of a failure of any satellite. This will make it suitable for applications where safety is crucial, such as running trains, guiding cars and landing aircraft. The combined use of GALILEO and other Global Navigation Satellite Systems (GNSS) will offer a strongly improved performance for all kinds of user communities all over the world.

The range of applications that can make use of such navigation signals is diverse: From mobile telecommunication services to air traffic management, from Location Based Service applications to surveillance of oil & gas fields. These applications will be enabled by different navigation signals, some of them free of charge, emphasizing consumer applications and general-interest services, some with restricted access levels for commercial and professional applications that require superior performance to generate value-added services.

(2) The case

For this Case Challenge we assume that GALILEO will be fully functional in 2007 - this means that technical ground infrastructure is in place, all satellites are positioned in orbit and navigation signals are broadcasted.

It is your team's task to develop an organization that is capable of selling the GALILEO navigation signals to customers on a global basis and to generate business revenues. In this context it is important to

address market segments/application areas, distribution channels, geographical markets as well as potential charging mechanisms.

The assessment of major business risks as well as strengths and weaknesses in relation to current GNSS services are instrumental and should therefore be included in your considerations.

(3) Expected deliverables

There is a lot of information concerning GALILEO on the web (technical specifications, implementation studies, market surveys and even GALILEO user groups and technology cluster platforms). The publicly available information mirrors easily the breadth of this strategic project.

We do not expect you to become a GNSS expert within days – however, one challenge of this case is to filter out the critical questions that arise, if GALILEO shall become a commercial success and consequently which requirements can be derived for a marketing & sales organization.

In order to limit the scope of your case solution, we have already identified a number of critical questions that you may want to answer in your hand-in concept.

We recommend to focus your efforts on those two to three of them, which are crucial for your approach.

- **What application areas & customer segments is your organization focusing on?**
- **Which charging mechanisms for these application areas are you choosing?**
- **Which distribution channels are you using?**
- **What is the structure and size of your organization that deals with the management, marketing and sales of GNSS? Which functions are required?**

You are requested to hand in a concept that consists of **not more than** 5 full text pages (about 2000 words) and in addition 2 pages for graphs, tables and pictures. All documents have to be in English language– key to success is prioritization!

Your concept and the required application form for the 2004 Business Masters Case Challenge should be handed in electronically on our website www.businessmasters.de by **October 22nd, 2004.**

For further questions please write to contact@businessmasters.de

(4) Information sources

Try out the following internet pages for a start, there are hundreds more sources to discover:

www.esa.int

www.europa.eu.int/comm/dgs/energy_transport/galileo

Important note:

Please DO NOT contact any of the relevant international and national GALILEO organizations by telephone, e-mail or writing/fax – disobeying this rule will exclude your team from further participation.

(5) Rating criteria and qualification requirements for the final round

An independent jury will evaluate your concept in a two-stage process. The jury will consist of experts and decision-makers in following areas:

Entrepreneurship, corporate finance, satellite & space technology, transport industry, aviation, telecommunication, public-private-partnership

The following criteria are material to the evaluation process:

- Overall execution of the case
- Creativity
- Feasibility
- Strategic orientation

- Rationale related to application areas and market segments

- Proposed charging schemes and their implementation
- Proposed organization and functions

- Timing and barriers

Your concept will be rated by two independent jurors with marks from 1 (=outstanding) to 10(=not satisfactory) based on the criteria above.

The 30 best teams will be discussed in a jury panel that qualifies 16 teams for the final event in Karlsruhe (12 invitations, 4 stand-by).

Challenge the BEST, now!

Your

Business Masters Team 2004