



MUNICH SATELLITE NAVIGATION SUMMIT 2008

Session 5:

Chairman: Dr. Daniel Ludwig

Chairman Dr. Daniel Ludwig, Senior Programme Advisor of GSA, introduced the auditorium to the challenge that Galileo means to the education community. 150,000 job opportunities are expected and it is not trivial to educate an appropriate number of engineers. The session was dedicated to education, research and navigation. Whereas the first speaker presented a study on this topic, the other three speakers gave their comments from the viewpoint of an entity deeply connected to education, research and innovation, respectively.

Andrew Davies, Managing Director of ESYS plc (UK), presented the ERIG project whose objective has been to measure the status of education, research, innovation and technology transfer in GNSS in Europe. Whereas the first phase was mainly dedicated to data gathering, the second phase aims to evaluate the collected data regarding corresponding activities in North America and Asia Pacific region. The data analysis resulted in the conclusion that there is currently not a sufficient number of master courses in GNSS in Europe. Moreover, the number of courses for professionals is small. Satisfying networking activities between industry and universities is limited to France. A joint European master course is one of the project's recommendations. With respect to research a better project layout for SME is recommended. In terms of innovation, the ERIG project partners recommend a modified patent regime in order to keep up with the number of patents in North America.

Prof. Dr. Giorgio Franceschetti, Professor at the University Federico II of Naples and Adjunct Professor University of California Los Angeles commented the major outcomes of the ERIG project study. He considers the study as excellent providing exhaustive information. He put his personal attention to the educational aspects and proposes a university scenario that offers fundamental courses to all students. From his point of view satellite navigation should be one of the fundamental courses as soon as its

content is clearly defined. He pointed out that this course has to be held already in the very beginning of a career. In order to provide a sufficient academic background, Prof. Franceschetti prefers classic universities instead of specific schools.



Davies, Ruiz, Ludwig, Shortman, Franceschetti
(left to right)

Joaquín Cosmen-Schortmann, CEO Advisor of gmv (Madrid, Spain), started with a brief introduction of his company providing one of the largest GNSS engineering teams in Europe and playing a key role in the development of EGNOS. The 24 years long experience of gmv in research and development activities made Cosmen-Schortmann pointing out that the number of patents is an important indicator that has to be increased. He continued giving some recommendations. With respect to the private sector performing internal R&D an uncoupling of internal R&D staff (generating potentially long term profits) from the pressure of externally financed projects (generating short term profits) has positive effects. Other keywords are cross-fertilization and specific training programs, especially selecting the best and most motivated personnel to promote interdisciplinary teams. With respect to the public sector he particularly votes for a high level of customer involvement and for small projects instead of large ones due to their higher grade of innovation.

Luis Ruiz represented Aerospace Valley Cluster (Toulouse, France) that was founded in 2005 and has accredited 19 GNSS applicative projects and two transverse projects in support of GNSS



applications. Satellite navigation is one of nine branches of the Aerospace Valley Cluster. The cluster has been established in order to support the French industrial policy that attempts to bring together industrial, scientific and academic players to form competitiveness clusters. Today, Aerospace Valley Cluster is one of 71 nationwide competitiveness clusters and consists of an industrial, a research and a training component. The task of the cluster is to support the project in terms of finding appropriate industrial and scientific partners, and further on, investors. According to Ruiz, innovation is nothing else but bringing research into business. He closed his presentation mentioning some selective projects.