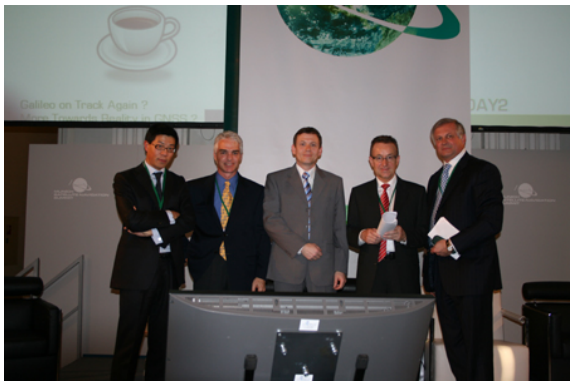
MUNICH SATELLITE NAVIGATION SUMMIT 2008

Session 4:

Chairman: Dr. Walter Doellinger

Herbert Blaser, from VP Marketing µ-blox, presented his "semiconductor views" on the boom in personal navigation and GNSS handheld devices questioning the possibility of a future without Galileo. µ-blox is a fabless GPS semiconductor company with 10 year track record. It is based in Thalwil, Switzerland and is the market leader in GPS modules occupying the second position in GPS chipsets. The company leads in solutions for stand-alone GPS receivers, being its new version, µ-blox 5, a new standard in performance. µ-blox 5 is the first highly integrated GNSS receiver that supports Galileo and is already able to acquire and track GIOVE-A signals. The company is indeed actively involved in European research projects on Galileo since higher positioning accuracy is expected. Moreover, according to Herbert Blaser Galileo should also bring higher reliability and new services. However, there is a risk that the portable market will happen without Galileo since this comes late and the legal and commercial situation is unclear. He emphasized that other GNSS's will offer similar services by the time Galileo is operational and the planning seems not to be very reliable yet. As a conclusion, unless the rules are not clarified, Galileo will lose part of its credibility.

Dr. Frank van Diggelen is from Global Locate, a small GPS startup that has lived the boom in personal navigation which was enabled from the growth in personal navigation devices (PND) and cell phones. As he pointed out, it took relatively long for the market to take off. However, in the last two years the number of applications and new products has really increased. The main reason for this boom, according to Dr. van Diggelen, has been the tremendous reduction in size, cost, power consumption and performance in the past years. Today, a complete solution in a mobile phone uses less PCB area than ever, including front end band pass filter, suitable oscillator (TCXO) and all required passive components. Moreover, the use of host based architectures has further improved the use of the existing resources. In fact, world's largest PND manufacturer (Tomtom) and the largest mobile phone manufacturer (Nokia) both use host based GPS now. From Dr. van Diggelen´s point of view, the turn-by-turn Navigation is the killer application today. Moreover, he believes that the market is not system-centric and it will further grow better with Galileo.



Tsjen, Diggelen, Blaser, Doellinger, Swiek (left to right)

F. Michael Swiek, Executive Director of the United States GPS Industry Council, presented his aspects on the evolution of the GNSS market in the future. The main idea he transmitted in his presentation was "Technology alone doesn't sell…it's not just the gizmo". He demonstrate this statement with numerous examples and discussions. Handheld GPS is everywhere today in GPS receivers, mobile phones, PDA's and personal navigators. However, from his point of view, people are not buying a GPS device or gizmo. They are actually buying maps, driving directions and information in general. Satnav is a dynamic market that attracts new players since GPS is a reliable service with stable policy framework. Moreover, its specs are open technology and there are no regulatory barriers or licensing fees/royalties. In addition, there are no preferential or discriminatory trade rules and the final success or failure is only based on business ability. According to Michael Swiek, the key factor for the success of GNSS will be the information integration and the simplification. As we literally say, "To succeed, make it easy…in the hand, and in the sky".

Li Lei Tsien, from SiRF, briefly showed the point of view of his company on the key trends of

location services and beyond. As he underlined, the increasing integration, the better location performance provided by GPS, the higher power from multimedia applications and more features supported by the enhanced connectivity should challenge the paradigm service versus device in the future. The costs of chip production are reducing enormously for which reason the margins are increasing. Different concepts ranging like SiRFStudio™ on LBS Enabling Middleware and other means to enable hybrid location should open the door to new navigation and information concepts in the near future. All of them are based on the best available location information in both indoors and outdoors. As an example of such ideas he presented the SiRFecosystem™.