



EUGIN - European Group of Institutes of Navigation

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As far as UAS related subjects is concerned over the past year interference of satellite signals should be of prime interest. EUGIN has in the past brought forward amongst others that the John A. Volpe Vulnerability Assessment of Transportation Infrastructure relying on the GPS (Aug 2001) in the United States indicated how vulnerable these GNSS systems are. There is an increased awareness of the potential for natural, accidental and deliberate interference (and jamming) of satellite navigation systems. Some devices used in jamming the system can be very small and extremely effective. A jamming device the size of a dice can disturb the signal over an area of several hundreds of metres.

Satellite navigation information is not solely used for the determination of geographical positions but also as an essential input for timing devices of land based and maritime infrastructure (such as AIS). It should be realised that there is still a continued availability of terrestrial electronic navigation systems (such as Loran) that can serve as an alternative source of input for the determination of position and time. It is also worthwhile to note that the HELIOS European Radio Navigation Plan (ERNP) report mentions that the existing and planned radio navigation spectrum environment is stable and robust. But also that satellite navigation services are vulnerable to interference.

With this in mind EUGIN has expressed its concern in the past, with regard to developments of existing European terrestrial radio navigation systems. It was mentioned that it would be unfortunate if, for whatever reason, important decisions regarding present and future infrastructure would be pre-empted by shutting down such infrastructure.

Future trans-national Commission initiatives should remain a possibility and aspects with regard to vulnerability and integrity issues to certain user requirements as described in the ERNP study (e.g. Safety and security services) should not negatively be affected. EUGIN fully supports and commends those who will take research in to this field a step further.

In Europe, Norway announced (with this in mind) that it will keep its Loran transmitters in the air until at least 2009. The United Kingdom has built a new transmitter near Rugby. E-Loran tests in the UK have shown that such a system can achieve sub 10- metres accuracy. Recently the US has acknowledged the potential of terrestrial systems as potential back up.

The aforementioned European Radio Navigation Plan (ERNP) remains a subject of prime interest if not indeed to all members of the European navigation community. As expected ERNP developments met over the last year with difficult times. At the start of 2007 members of the navigation community had a meeting with representatives of the European Commission. They spoke with representatives of the European Union who indicated that the update of the Helios ERNP report was to be implemented in the EU's 7th framework program for research

and technological development (FP7). It was then already ascertained that such action moved the start of the update most probably to the end of 2007. Relation with the EU's development of Galileo was expressed in a communication by the Transport Council by the end of 2007. It mentioned that after discussions with the Member States the Transport Council reached conclusions at the end of 2007 on the future developments of Galileo.

The European Commission seems to have created a basis to implement the next phase of the European GNSS programmes the next phase to be carried out and financed by the Community including the operational availability of EGNOS1 within the next 1-2 years as well as the procurement of Galileo and leading to a Galileo operational system by 2013. This also seems to positively affect ERNP developments. The Transport Council mentioned in its report that in addition, that the Commission must develop new regulatory initiatives and a range of detailed measures like: access policy to governmental services, concept of operations, pricing policy, IPR policy, liability policy, a European Radio Navigation Plan, a specific Galileo technology export control regime.

Finally, the global dimension of the programme will require negotiations and direct contacts with international partners all along the implementation phase. A working group has been given a task to bring experts together from several countries for a brainstorm session how ERNP can be put on track in such a way that in the summer of 2008 it can be presented to the European Commission. EUGIN has in the past respectfully asked the EC for information on ERNP's progress and drawn attention to the effects of any (unwanted) delay and will continue do so.

EUGIN is a non profit-making association entitled «European Group of Institutes of Navigation». Its main strength is the voluntary service and expertise of its members.

One of EUGIN's main activities is the organisation of the European Navigation Conference. In 2006 the conference was organised by Siwss Institute of Navigation in conjunction with the EFTF conference. The amount of papers and participants indicated that ENC has an important role to fulfil in the navigation community with a view to advising European institutions in the fields of navigation, traffic management and related issues. Items of interest to the community such as e-Loran and the European Radio Navigation Plan were discussed. This fulfils EUGIN's aim to foster human activities in the area of navigation in combination with a contribution to the development of the science and practice of navigation and related information techniques.

In the mid-1990s, the Institutes of Navigation of some European States decided within this framework to gather with a view to advising European institutions in the fields of navigation, traffic management and related issues, the word 'navigation' covering all modes of navigation, i.e. air,

land, maritime and space navigation. Originally established by the Institutes of Navigation of France, Germany, Italy, the Netherlands, the Scandinavian countries and the United Kingdom, the European Group of Institutes of Navigation (EUGIN) has since then welcomed the Institutes of Austria, Poland, Portugal, Spain and Switzerland, and the Swedish Radio Navigation Board.

EUGIN also comprises honorary members who are persons or entities appointed by the General Assembly and are able to assist in achieving the aims of the Association.

UVS International and Galileo Services are honorary members of EUGIN. EUGIN is proud to be associated with UVS International. Working together, where possible, in the study of developments in navigation towards our common future.

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