

Recent activities of the Far East Radionavigation Service (FERNS)

A meeting of FERNS was held in Tokyo at the end of September 1999. Representatives of the People's Republic of China, Japan, the Republic of Korea and the Russian Federation attended, as well as observers from IALA, the USCG and NELS.

The signal availability of the China North Sea, East Sea and South Sea chains had been between 98.4% and 99.45% during the last year. Work had also been undertaken to improve the integrity and reliability of stations in the China North and East Sea chains.

The problems being experiencing by Russia in trying to maintain an adequate service from the Chayka stations with insufficient funds being available to ensure the provision of electrical energy were explained. Details of the availability of their transmitters were given to the meeting, as well as information on the additional funding needed to provide continuous operation of the stations.

The meeting noted that the US Department of Transportation is reviewing the decision previously announced regarding the proposed termination of the Loran-C system at the end of next year, 31 December 2000. The review is based on a proposal to continue the system until 2008 to allow users more time to change to other navigation systems.

Problems had been experienced with lightning strikes in both Japan and China and suitable protective measures had been introduced. Although the solutions given in the two reports differed from each other, it was recognised that both solutions had substantially reduced the extent of the problem. It was noted that modern solid state transmitters are more prone to damage from lightning strikes than earlier designed transmitters.

A meeting between Korea and Japan had agreed on how the communication network between the two countries would be improved, as well as other measures intended to make the communications more efficient.

Following a presentation on Eurofix, there was a discussion about the development of the system and the role it could play in the provision of radionavigation services in the Far East. Reservations were expressed about the need for another service. Russia and NELS explained that EUROFIX was a new development intended to provide integration of satellite and terrestrial

services and was capable of providing navigational facilities not currently available from any other service. It was noted that independent tests had concluded the system operated in the manner claimed by NELS and Delft University, and that the provision of a system with similar characteristics is under consideration for some areas of the US.

The view was expressed that more technical and operational information was needed before further consideration could be given to the possible advantages and disadvantages of transmitting EUROFIX type signals from FERNS Loran-C and Chayka stations.

It was noted that 55 DGPS stations in the frequency band 285-325 kHz are being provided by China, Japan and Korea and all are scheduled to be operational by the end of the year 2000. Some sky wave interference was being experienced between a few stations and it was recognised that there is probably a need to revise the frequency planning of the band to minimise such mutual interference.

A third draft of the proposed new intergovernmental Agreement was introduced and comments on its technical content were invited. The meeting agreed that the technical content was suitable to all FERNS members and should form the basis for the formal document to be signed by authorised government representatives.

The next FERNS meeting is scheduled to be held in Moscow during September 2000.