

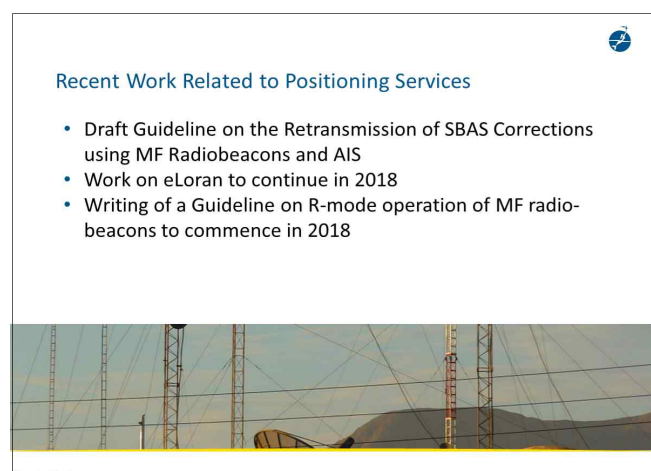
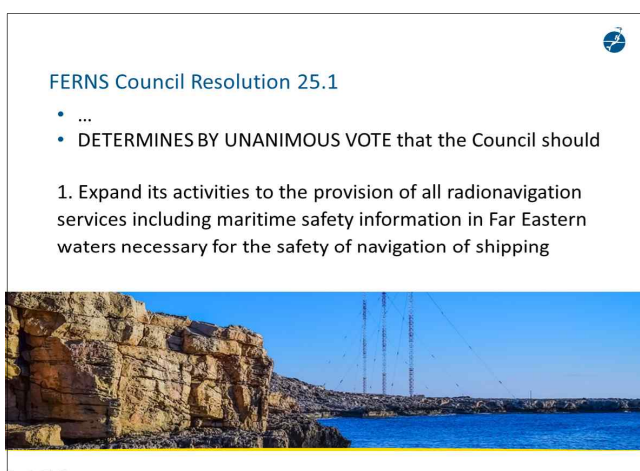
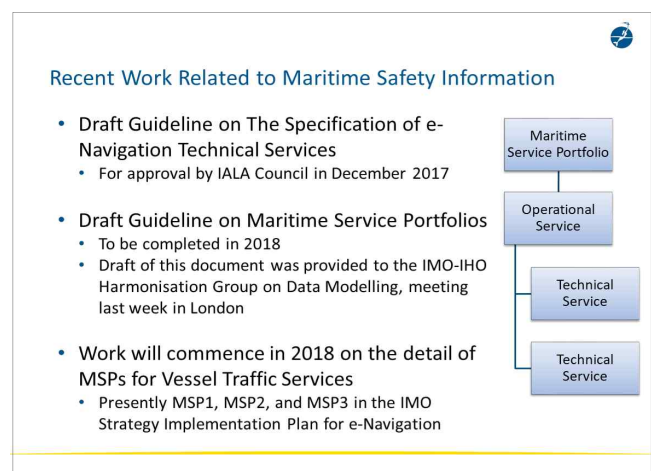
Technical Notes on Radio Navigation Services, Including MSI

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요 약 : 극동지역에서 Loran-C 국제협력 체인의 구성에 따라 한국, 중국, 러시아 3개국에 상호호혜원칙에 따라 이용범위의 증대 및 전파표지의 연구 발전을 도모하는 등 전파표지분야의 협력과 발전을 위하여 협정서에 명시된 정책수행과 협정 체약국간 활동을 조정하는 역할을 하며 초기('92.9.7)에는 기관간의 협정으로 시작하였으나 '00.12.22에 정부간 협정으로 변경되어 그동안 Loran-C 국제 협력체인을 구성하는 한편 전파표지에 관한 정보 교환 및 운영절차 마련 등으로 해상교통안전에 크게 기여하고 있다. 최근 해사안전정보(MSI) 제공과 GNSS 전파 간섭에 대비한 위치정보 제공에 관한 관심이 대두되면서 향후 FENRS에서 협력하고 발전해나갈 방향을 제시하고자 한다.

핵심용어 : FENRS, IALA, Radionavigation, Maritime Safety Information(MSI), eLoran, R-Mode, e-Navigation



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Further Work Related to Positioning Services

- Increasing interest in the use of VDES for R-mode positioning
 - Timing synchronisation
 - Caesium clocks now available economically
 - eLoran station could give timing signal
- Baltic MF R-Mode trials project to commence October 2017
 - IALA to be advisor



Suggestion of FERNs Council Meeting Agenda Item

1. Loran / eLoran / Chayka System
2. DGNSS and GNSS Reinforcement System
 - Current State of DGNSS station in FERNs area
 - SBAS : WASS(USA), MSAS(Japan), SDCM(Russia), BDSBAS(China), KASS(Korea)
3. R-Mode Development
 - Use DGNSS station
 - Use AIS, VDES, NAVDATA
 - Map Matching Navigation development utilizing AtoN Facilities
 - Maritime Portfolios
4. FERNs Loran/eLoran/Chayka Chain Timing Synchronization
5. e-Navigation Support and Standardization
 - (S-245, 246, 247 etc.)
6. Any Other Business

Recent Work Related to Digital Communications

- Revision of the IALA Marine Radio Communications Plan
 - For approval by IALA Council in December 2017
- Further work on draft ITU document ITU-R M.2092 on the technical specification of VDES
- Continuing preparation for ITU WRC 2019
 - At which IALA hopes to secure the satellite downlink frequency allocations for VDES
- Updates to ITU-R M.1371 on AIS



Possible FERNs TWG activities for consideration

VDES trial in FERNs area

- China-Korea-Russia cooperative project
- MSI broadcast tests

VDES workshop in China

- Recent discussion in China with IALA Secretary-General
- VDES-SAT?

R-mode development

- Using DGNSS stations
- Using VDES
- R-mode development forum within FERNs

Participate in the Maritime Connectivity Platform

Work with IALA on MSP coordination