ABSTRACT SUBMISSION –– SOUMISSION DE RESUME

**Topic No.: / Sujet n° :** 4 **or / ou**

**proposed topic / sujet proposé:** Planning criteria for AIS Service and  AIS Infrastructure shorebased

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ABSTRACT / RESUME:

The AIS Service was implemented as the first Service of the German coastal-wide Marine Traffic Technology Systems (MTTS) according to the IALA Guideline No. 1114 “*A Technical Specification for the Common Shore-based System Architecture (CSSA)*”. The AIS Service consists of about 35 shore base stations along the German coast and transfers the data into three central nodes. The AIS Service consists of about 180 server components. Only 11 employees of the Maritime Traffic Technologies Center do the technical maintenance of the AIS Service.

Less employees, many shore base stations at shared locations, large coverage of the AIS-VHF channels, high availability and technical complexity of the AIS Service require to have resilient planning criteria for the AIS Service and the AIS infrastructure to ensure the operational availability of 99,9 % over 1 year as recommended in the IALA Guideline No. 1111 “*Preparation of Operational an Technical Performance Requirements for VTS Systems*” with the existing employees.

To achieve this aim it’s necessary to minimize the number of the onshore stations by an optimal positioning of the stations, an predominant automatically configuration of the AIS Service components and a service architecture which allows a low maintenance for the AIS infrastructure.

The experience during the last eight years of service operation was analysed. The report shows how the results can be used to optimize the operation of the shore base stations, to improve the technology and architecture and to minimize the maintenance efforts. As an add on the analysis shows some anomaly on the AIS- VHF channels which are presented too.

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