**ABSTRACT SUBMISSION**

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**ABSTRACT**

Title: The new wave of GMDSS modernization and the revolution of maritime mobile communication services over 3GPP systems in the 5G era

Keywords: new wave, 3GPP, paradigm shift, maritime communication service, IoT service, 5G, GMDSS modernization

Abstract: This paper introduces the global standardization trends of the 3rd Generation Partnership Project (3GPP), that has developed the technical specifications for GSM/GPRS/EDGE, UMTS, LTE and now studies candidate technologies and solutions to develop 5G technical specifications, where the new movement, the application of 3GPP technologies that enable mobile users on land to enjoy innovative mobile broadband services to the maritime field, started. 3GPP is working the feasibility study on maritime communication services over 3GPP system for mobile broadband services between users on land and users at sea or between users at sea, for IoT services inside a vessel, between vessels at sea or between devices afloat at sea and for ship entry and departure clearance, ship navigation support and maritime safety etc. in the maritime communication environment. Such maritime digital convergence based on 3GPP technologies is expected to create the paradigm shift of the maritime communication services including the port services and it would become the new wave of GMDSS modernization and the revolution of maritime mobile communication services that enable the innovation of maritime safety and shipping to be achieved and the information gap of mobile users at sea to be revolutionarily reduced.