

International Telecommunication Union

ITU-R
Radiocommunication Sector of ITU

Report ITU-R M.2317-0
(11/2014)

**VHF data exchange system channel
sounding campaign**

M Series
**Mobile, radiodetermination, amateur
and related satellite services**

15 
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Foreword

The role of the Radiocommunication Sector is to ensure the rational, equitable, efficient and economical use of the radio-frequency spectrum by all radiocommunication services, including satellite services, and carry out studies without limit of frequency range on the basis of which Recommendations are adopted.

The regulatory and policy functions of the Radiocommunication Sector are performed by World and Regional Radiocommunication Conferences and Radiocommunication Assemblies supported by Study Groups.

Policy on Intellectual Property Right (IPR)

ITU-R policy on IPR is described in the Common Patent Policy for ITU-T/ITU-R/ISO/IEC referenced in Annex 1 of Resolution ITU-R 1. Forms to be used for the submission of patent statements and licensing declarations by patent holders are available from <http://www.itu.int/ITU-R/go/patents/en> where the Guidelines for Implementation of the Common Patent Policy for ITU-T/ITU-R/ISO/IEC and the ITU-R patent information database can also be found.

Series of ITU-R Reports

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Series	Title
BO	Satellite delivery
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P	Radiowave propagation
RA	Radio astronomy
RS	Remote sensing systems
S	Fixed-satellite service
SA	Space applications and meteorology
SF	Frequency sharing and coordination between fixed-satellite and fixed service systems
SM	Spectrum management

Note: This ITU-R Report was approved in English by the Study Group under the procedure detailed in Resolution ITU-R 1.

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REPORT ITU-R M.2317-0

VHF data exchange system channel sounding campaign

(2014)

1 Scope

This Report presents the results of a VHF data exchange system (VDES) channel sounding campaign, supported by the administrations of United Kingdom and Australia. The campaign was conducted by the General Lighthouse Authorities of the United Kingdom and Ireland (GLA) and the Institute for Telecommunications Research (ITR) at the University of South Australia.

2 Introduction

The channel sounding campaign examined radio propagation conditions for all channels intended for use in ship-to-shore and shore-to-ship VDES and application specific message (ASM) communications. A comprehensive series of sea trials were conducted over five days during February/March of 2014, near Harwich in the United Kingdom. Five operational scenarios were examined, spanning four of the six IMO Maritime Service Portfolio area categories. System components and deployment were consistent with real world maritime use.

The resultant sounding campaign trials Report is contained in the Annex.

3 Conclusion

After considering the Report contained in the Annex, it was concluded that spectrum currently being considered for VDES and ASM use, under WRC-15 AI 1.16, is well suited to the purpose. The results provide valuable input into waveform and receiver design. Building upon the spectrum using a considered design approach may provide an optimal performance/complexity balance and deliver the maximum benefit for future maritime communications.

Annex

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VDES Channel Sounding Campaign Trial Report

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