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**□** ARM **□** ENG **□** PAP **X** Input

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Workplan Task Number / Technical Domain 2 …………………………………

Working Group 3

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VDES conference 2017 – Cape Town

# Overview

The conference was arranged with the goals of:

1. Raising the awareness of VDES in Southern Africa

2. Gaining support for the VDES satellite frequency decision at WRC-19

3. Gaining insight from the local authorities and stake holder on their view of VDES

# Highlights

The highlights of the conference were:

1. The release of a VDES mobile and base station module that is fully compliant with current standards by CML of the UK that integrates all of the required submodules to enables trials and system deployments

2. The presentation by SAMSA that identified some of the primary concerns of an authority with regards to VDES

3. The announcement that the Cape Town University of Technology (CPUT) is developing and launching a CubeSat with an AIS capability that can be upgraded to VDES capability while in space

The conference was arranged and sponsored by IMIS Global, Senro and Stone Three Venture Technology.

# Conference summary

A one day conference on the VHF data exchange system (VDES) was held in Cape Town, South Africa on 13 February 2017. The event was sponsored and arranged by IMIS Global, Senro and Stone Three Venture Technology. The Chairman of Senro, Dr John Hirst CBE, chaired the sessions.

There were two keynote presentations. The first keynote presentation was provided by Peggy Browning of Exact Earth and Chairperson of the IALA eNav Working Group 3 that introduced the delegates to VDES and it roles in the eNavigation environment.

The second keynote presentation was presented by Sobantu Tilayi, the Acting Chief Executive Officer of the South African Maritime Safety Authority (SAMSA). Mr Tilayi presented on the role of SAMSA in the local maritime environment and raised a number of discussion points that SAMSA were interested in with respect to VDES and its role within the larger maritime environment, and specifically the eNavigation concept. These discussion points were initially dealt with in discussion by Peggy Browning, Jillian Carson-Jackson and Ernie Batty and referred to during the conference.

The third presentation of the day by Ernie Batty of IMIS Global dealt with the integration of VDES into the Common Shore Side Architecture (CSSA0 as described in IALA Guidelines 1113 and 1114. This included a high level examination of the IALA International, Regional, National and Local components of the CSSA taking into account the Maritime Cloud concept of Geo-Messaging.

The fourth presentation by Malcolm Lyman from CML of the United Kingdom detailed their participation in the maritime products industry to date. CML announced the availability of a VDES mobile and base station module that is fully compliant with the current standards, the VDES1000, that could be integrated and certified in a short period of time. This VDES module was designed and developed in cooperation with Senro (prime contractor) and Stone Three Venture Technology.

The fifth presentation by Pieter Winter of Senro discussed the CML VDES1000 module in some technical detail and described the technology and its implementation and methods of integration. The primary features discussed were its small size (100mm X 150mm X 25mm) and its compliance to the standards in that the module includes the Radio Frequency (RF) Power Amplifier (PA), a maritime compliant Power Supply Unit (PSU) and a full AIS+ASM+VDE compliant receiver that covers the entire maritime VHF band.

The sixth presentation by Dr Robert van Zyl CPUT described the South African AIS satellite project that is part of the South African Project Phakisa under the direction of the Department of Science and Technology (DST). The important part of this project is that it contained a Software Defined Radio that could be upgraded from AIS to include VDES and that this satellite was a step to the launch of a constellation of satellites that would be used for the national maritime domain requirements.

The seventh presentation by Lars Loge and Hans Haugli of Space Norway covered the current state of the art with regards to VDES on satellites and the actions that are required to resolve the VDES frequencies that are required by VDS in space (S-VDES). This highlighted the amount of works that had to be completed a year in advance of the WRC19 conference. The support of ICASA (the South African communications regulator) was obtained.

The eighth presentation by Jillian Carson-Jackson of IALA covered the need for VDES and its uses in the maritime sector to address the safety, security, as well as the environmental and economic goals of the maritime sector. She highlighted the requirements from IMO for means to support communication in the six areas of operation as identified through e-navigation, and the role the VDES could play in each of the areas of operation.

The last presentation by the Chief Executive Officer of Stone Three, Eugene Jansen, dealt with the need to achieve interoperability between the initial VDES manufacturers and included the offer to set up a ‘golden’ VDES unit (a version that has been tested and the test data declared to participants) against which other VDES units can be tested for interoperability.

# Conclusion

The VDES conference was successful in raising awareness of VDES in the Africa’s and enable frank and robust discussion on the various issues facing administrations as the technology moves from concept to implementation. The conference also provided an opportunity to clarify the approach that could be used at a regional level for support of the VDES satellite frequencies at WRC-19. and it is recommended that this concept be extended in the 2017 time frame to include a similar event in Europe and the Americas.

The conference web site that contains the photos and presentations will remain available for the next 9 months. The URL is <http://www.VDESconference2017.co.za>.

1. Input document number, to be assigned by the Committee Secretary [↑](#footnote-ref-1)
2. Input papers should be assigned to a work task as listed in the Committee work plan which is available in input papers. Leave open if uncertain but consider how the paper is to be processed if not relevant to a work task [↑](#footnote-ref-2)