

SESSION PROGRAMME AND CONTENTS

Monday, 15 August

EMC AND MONITORING Page

(Jürgen Escher) Monday 15 August 08:00 – 10:00

Ben A. Witvliet	Ambient outdoor electromagnetic noise measurements in the conflicting perspective of spectrum planners and spectrum users	1.1
Lars Weberg	Green power for HF in the field – A possibility?	1.2
Anders Svensson and Leif Johansson	SDR for strategic COMINT applications	1.3
Johan Lundqvist	A MUSIC subspace algorithm applied to a legacy 3-channel Watson-Watt short wave DF system	1.4

LINK ESTABLISHMENT Page

(Danie van Wyk) Monday 15 August 10:30 – 12:00

Alfons Sailer, Jürgen Escher and Yehuda Eder	Direct sampling HF radio for next generation link setup “staring ALE”	2.1
Steve Kille	Not using ALE for frequency selection	2.2
Rickard Berg, Kennert Andersson and Håkan Bergzén	Can staring ALE become a game changer in HF military broadcast	2.3

TRIALS, PERFORMANCE AND USER SCENARIOS Page

(Rolf Gustavsson) Monday 15 August 13:30 – 15:00

Karl-Arne Markström	A generalised approach for performance evaluation of HF systems	3.1
Jean-Yves Bernier, Bertrand Ravera and Catherine Lamy-Bergot	HF-XL airborne trials over the Atlantic	3.2
William M. Batts, William N. Furman and John W. Nieto	A comparison of wideband high frequency data link protocol performance	3.3

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EQUIPMENT **Page**

(Harald Wickenhäuser) Tuesday 16 August 08:00 – 10:00

Arnie Johansen	An alternative approach to HF receiver architectures	4.1
Nathalie Haziza and Jean-Yves Bernier	HF Red-Pitaya-based experimentation platform	4.2
Karl-Arne Markström	Rise and fall of a major HF supplier – Standard Radio & Telefon AB	4.3

SYSTEMS AND TECHNIQUES **Page**

(Sue Trinder) Tuesday 16 August 10:30 – 12:00

Germano Capela and Eduardo Bolas	Systems engineering challenges for future NATO HF capability deployment	5.1
Jens Zander	Multi-band channel aggregation in meshed wideband HF radio networks – Implementation aspects	5.2
Jouni Salmi	Multihop functionality in cognitive networked HF system	5.3

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(Olov Carlsson) Tuesday 16 August 13:30 – 15:00

Ben A. Witvliet	Near Vertical Incidence Skywave – The propagation mechanism, the impact of antenna, backscatter and solar flares	6.1
Christopher Jeffery	Development of a new HF tool that tracks covariance information for propagation studies through disturbed ionospheres	6.2
William N. Furman, Richard Buckley and Ryan Seeber	Application of machine learning techniques to HF propagation prediction and deployment considerations in tactical HF radios	6.3

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MODULATION AND CODING **Page**

(Jens Zander) Wednesday 17 August 08:00 – 10:00

Brandon T. Hunt, David B. Haab, Thomas Cameron Segó, Tom V. Holschuh, Hussein Moradi and Behrouz Farhang- Boroujeny	Evaluation and comparison of a new robust waveform against direct sequence spread spectrum for HF	7.1
Mark Jorgenson	Robust HF waveforms: Maintaining communications in challenging conditions	7.2
John W. Nieto, William N. Furman and William M. Batts	A comparison of published waveform design techniques used for reliable HF communications	7.3
Danie van Wyk, Riekert Jansen van Vuuren, Louis van der Westhuizen and Paul Zietsman	Performance of WB-RDL with 4G-ALE (WALE) for wideband HF radio systems	7.4

ANTENNAS **Page**

(Karl-Arne Markström) Wednesday 17 August 10:30 – 12:00

Harald Wickenhäuser	Vertical antennas, an “old hat”?	8.1
Sambhav Malhotra and Jens Zander	Portable/rapid deployment HF antennas for multi-band channel aggregation systems	8.2