

# Status Report from the NATO BLOS Comms AHWG

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# Meeting of 29–30 May 2007

- Lisbon, Portugal
  - Hosted by Portuguese Navy
- Chairman has resigned
  - No nominations to date for a replacement
  - Secretary served as chair for this meeting
  - Lack of funding may limit secretary availability

# ITU Update

- Nur Serinken, WP-9C chair briefed WRC'07 AI 1.13: reallocation to broadcasters.
- SG-9 will propose 12 kHz allocations WRC'11
- Surface wave radars could be on WRC'11 agenda:
  - Measurement of sea state
  - Maritime domain awareness beyond the range of microwave radars

# NATO Improved Link 11

- Laboratory interop testing revealed shortcomings in specifications
  - Slot structure
  - User data bit mapping (lsb vs msb)
- No link management capability
- Throughput too low to be considered net centric

# STANAG 4444

- Frequency Hopping (EPM)
- Two implementations
  - Joint French / Italian
  - German
- Incompatible approaches in two areas
  - AES mode of operation
  - MELPe (OK at 2400? incompatible at 1200)

# STANAG 4538

- Third-generation HF technology
- Edition 1 amendment 1 is promulgated
- Edition 1 amendment 2 in development
  - IP interface will accommodate STANAG 5067
  - Multicast protocol in development
  - IPR issue with HDL+

# STANAG 4538

- Norway measured HDL+ and STANAG 5066 performance
  - HDL+ clearly superior for short messages
  - 5066 same or better for long messages (72 kB)
- Harris has offered IPR-free variant of HDL+

# STANAG 5066

- Edition 1 amendment 1 out for ratification
- Edition 2 will add LAN features (channel access control protocols), Internet integration
- More in NC3A briefing later today



# “Net Ready” STANAGs

Amendments / enhancements required:

- 4203: accommodate wider bandwidths (e.g., 6 kHz ISB)
- 4444: higher data rates, faster hopping
- 4538: almost ready; lacks multicast and media access controls; harmonize with 5066
- 4539: nothing more needed
- 5066: doesn't cross-reference waveforms in 4538; should be harmonized with 4538

# Digital HF Broadcasting Study

- DRM for delivery of non-mission-critical data
- Field trials by VT Communications from Austria to UK Navy
  - 2 transmissions per day, 30 minutes each
  - 2-3 minutes of data, repeated
    - Examples: Fishing Vessel Position Reports, BBC web pages, NAVTEX messages
  - 1m active loop antenna
  - WinRadio on ruggedized laptop as receiver
  - Required  $\geq 10$  dB SNR to be decoded

# Next Meetings

- Lubljana, Slovenia  
16-18 October 2007
- May reduce meeting schedule to one per year

Questions?