

# Status Report from the NATO Radio AHWG Meeting

March 2010

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# Meetings of 1-5 March 2010

- The Hague, Netherlands
- Parallel meetings of V/UHF and BLOS Comms Ad-Hoc Working Groups

# BLOS Comms Meeting

## 2 March 2010

# Administrative Matters

- Chairman: Will Tong, USN SPAWAR
- BLOS Comms and V/UHF AHWGs will hold separate meetings in September 2010
  - BLOS Comms 23-24 September 2010 in Rochester, NY
  - V/UHF following week in Canada
- New Terms of Reference approved
  - Adds responsibility for all non-SATCOM technologies for beyond line-of-sight comms

## WRC '12 AI 1.15

# Oceanographic Radar

- Briefing by Canada
- Swept CW waveform; around 80 W; 25 to 150 kHz
  - Hits our long interleavers multiple times
- Experimental operation since 1970s in US, GE, FR, UK, OZ, KR, India, JP
- Seeking shared use of fixed and (ground) mobile bands in HF. Not Aeronautical or Maritime, but helicopters would probably be affected.

# Troposcatter Communications

- Briefing by Comtech (US manufacturer)
- High-capacity BLOS technology
  - 4.4 – 5 GHz
  - 22 Mbps with dynamic adaptation (auto code rate)
  - 80 – 200+ km path
  - 100 – 2000 W transmit power (adaptive power control);  
100W solid-state modules
  - antenna 2.4 to 6 m
  - takeoff angle 1 – 2°

# STANAG 4415

- Very robust 75 bps waveform
- NATO-required test tape was missing
- Qinetiq producing new tape
  - Using off-air recording of RAF VOLMET weather broadcast

# STANAG 4444 (EPM)

- Will not be fitted to high-profile A-400M
  - Rockwell has radio contract for A-400M
  - No solution to aircraft coupler tune time problem
- NATO HQ urges dropping this standard due to lack of implementations, but agreed to maintain it
- Italy recommends incorporation of ECPs resulting from FR/IT implementation and publication as edition 2



# STANAG 4538 (3G Suite)

- Edition 1 amendment 1 is promulgated
- Edition 2 status
  - TAC formed; members from US, UK, and NO
  - IP interface in development
  - IP Multicast protocol candidate presented  
(also MILCOM paper in 2008)
  - Higher speed data link in development (IPR-free)

# STANAG 4539 (Modems)

- Data Modems (similar to 188-110 Appx C)
- Higher bandwidths are of interest
  - 64 kbps in 12 kHz?
  - SC/6: make HF standards “net ready”  
implicit tasking to get to at least 64 kbps
  - Three WBHF presentations
  - Channel bonding research underway in NLD

# STANAG 5066 (Data Protocols)

- Edition 1 amend. 1 promulgated as “ed 2”
- Edition 3 will add LAN features (channel access control protocols), Internet integration
  - Annex L: Token-passing channel access
  - Annex M: (future dynamic TDMA)
  - Annex N: regional address allocation scheme
  - Annex O: IP integration (deleted as redundant)

Questions?