



NATO Communications and Information Agency

CP 9A0130: NATO Communications and Information Agency SatCom solutions

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Topics

- NATO SATCOM Background
- NATO SATCOM Requirements and History
- NATO SATCOM Current Approach
- NATO SATCOM Cooperation with LUX Government

Background

- NATO uses SATCOM to:
 - Support **Deployed Operations and Mobility**
 - Provide communications capabilities over a **Wide Area**
 - Operate in areas with **little or no infrastructure**
- SATCOM as used by NATO provides:
 - Support to **Command and Control** reliably
 - **Reachback** for Deployed Operations
 - **Survivability / Resiliency**
 - High **Assurance** of Resources
 - Additional resiliency for C2 communication links

Requirements and History

- NATO's specific requirements:
 - Availability and Access Assurance
 - Anti-jamming features and Hardeninglead to the use of Military Specific SATCOM (MILSATCOM)
- Up to 2004 NATO SATCOM was provided by a NATO owned Space, Ground and Control Segment
- Starting in 2005, SATCOM Space Segment capabilities provided through Service Provisioning
- NATO SATCOM Post-2000 (NSP2K) - Current
 - Implemented through a Capability Package
 - Covering Space, Ground and Control Segment Projects

Current Approach

- SATCOM Capability Package (CP5A0030)
 - Approved 2001
 - Space Segment Provisioning: 2005 – 2019
 - Ground and Control Segment: Additional Equipment and/or Upgrades of Equipment
- **Paradigm Shift:** Space Segment Capabilities no longer NATO Owned and Operated but provided through **National MILSATCOM Capabilities**
 - SHF (X-Band) – Majority of Capacity
 - UHF – Tactical Narrowband Netted connectivity purposes
 - EHF(P) – Not contracted, due to non-availability

Current Approach – Space Segment

- NSP2K Space Segment
 - Memorandum of Understanding with a three NATO Nation Consortium (FRA, GBR, ITA)
 - Providing Contracted SHF and UHF Capacity using the National MILSATCOM Constellations
 - MOU is supported by a Service Level Agreement (SLA) and addresses:
 - Contracted Capacity and Availability
 - Coverage
 - Payment schedule (Quarterly)
 - Cost reimbursements if not delivered
 - Re-assignment flexibility, subject to availability
 - Management: JPMO and NMAC

Current Approach – Management

- NSP2K Space Segment Management
 - Satellite Control by the consortium nations (FRA, GBR, ITA)
 - Payload Control on direction from NATO
 - Joint Program Management Office (JPMO) (Paris)
 - Overall management of the MOU on behalf of the nations
 - Open Dialogue with NATO on emerging requirements, changes in constellations etc.
 - NATO Mission Access Centre (NMAC) (Mons)
 - Daily management and execution of the NSP2K Assigned Capacity on behalf of the nations
 - NCI Agency manages the MOU on behalf of NATO
 - NCI Agency NATO Network Control Centre (Mons and Brunssum) provide service allocation and network monitoring

Future (CP9A0130)

- NSP2K MOU will end in 2019
- Follow-up Capability Package (CP9A0130) under approval process at NATO HQ
 - Expected approval end 2015 / early 2016
- CP9A0130 Provides:
 - SHF, UHF and EHF Space Segment Capabilities: 2019-2034
 - Ground and Control Segment Capabilities: new and/or upgrades for ground terminals, modems, network control
- Takes into account:
 - Existing and future user requirements
 - NATO threat environment
 - NATO Level of Ambition
 - Affordability
 - Sharing agreements that balance band capacity with security
 - Consideration for Commercial provisions

Future SATCOM Requirements

- Envisaged Protected Core SATCOM Capability
 - Continues X-band SATCOM
 - Introduces new Ka-band SATCOM for smaller ground terminals and higher bandwidth
 - Introduces new EHF SATCOM for highly protected services
 - Increased use of UHF SATCOM for tactical users
 - Increased coverage flexibility
 - Enhanced capacity extension flexibility (pre-arranged contracts)
 - Potential use of national anchor capabilities where necessary
 - Provided as leased capacity or managed services through national military programmes

Future Ground Requirements

- Envisaged **Ground Segment Capability**
 - New **Transportable and Deployable Ground** segment (multi-band capable)
 - Additional **modems and remote control** capabilities (where necessary in deployable racks)
 - New high data rate **broadcast** capability with asymmetric return channels (static and deployed)
 - **Enhanced UHF control** capability (allows more users per UHF channel)
 - **NATO acquisition** from **commercial providers**

NATO's Cooperation with LUX Government

- Current Arrangements
 - Contribution in Kind (CIK) **Ku-band capacity** and services
 - 36 MHz Ku-band transponder on Afghanistan
 - SkyWan Ku-band network services including ground segment (8 deployed nodes)
 - Occasional use Ku-band capacity on Europe (4 MHz, 45 days/yr)
- Future Arrangements
 - CIK **Ku-band services** for AGS (**under development**)
 - Multiple transponders and multiple coverage areas
 - Provided by SES as a managed service
 - NCI Agency provides contracting support and through life support
 - Start of services Q2 2016

QUESTIONS