

Next Generation Deployable Communications for Military & Civil Operations

TechNET

Andy Warnes
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Agenda

- Deployable Communications – The Need
- Airbus Defence & Space – Our Heritage
- DCIS – The New solution for NATO
- Mobile IP Node (MPIN) – The Solution for Tomorrow
- Summary

Deployable Communications

TACIP® & Mobile IP Node



Multiple services

ISTAR Demands

Dynamic Setup

Secure

Meet the Mission

Scalable

Easily Used

Ubiquitous applications

Modular

Easily Maintained





Never Enough Communications in a Crisis

- Infrastructures damaged or destroyed
- No coverage in remote areas
- Inadequate capacity to meet enhanced need
- Can't reach all affected people
- Unauthorised/hostile use of systems



Be Prepared to meet enhanced need

- Build Resilience
- Provide backup capacity
- Make available deployable communications
- Build Population Warning communications
- Design in security

Airbus Defence & Space – Our Heritage



RTTS/
DLAN

Synergy
(Iraq)

Tetrapol
(PMR)

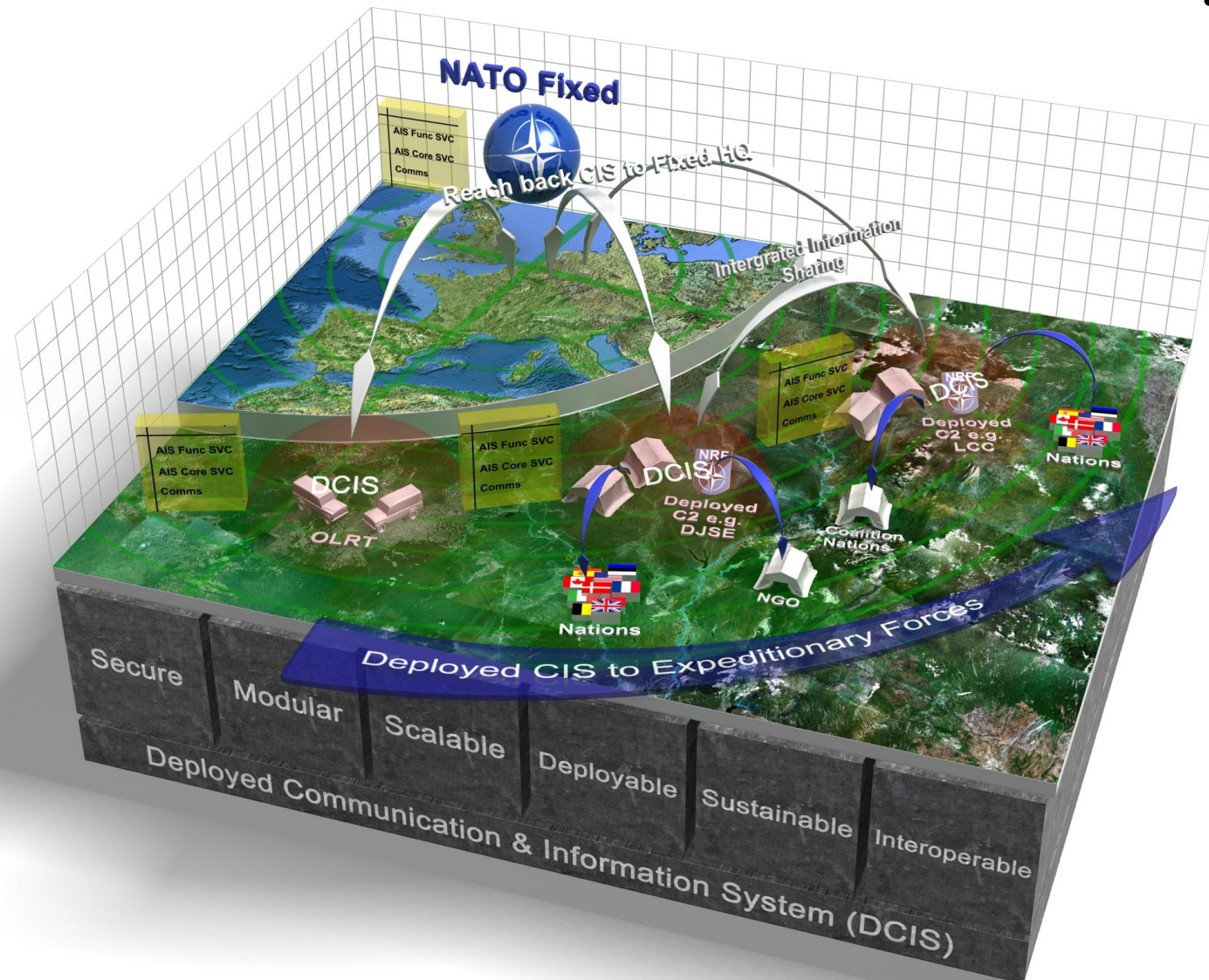
Cormorant

DII



NATO DCIS – Deployable Communication and Information System

- Providing forces with secure communication services between deployed command and control elements



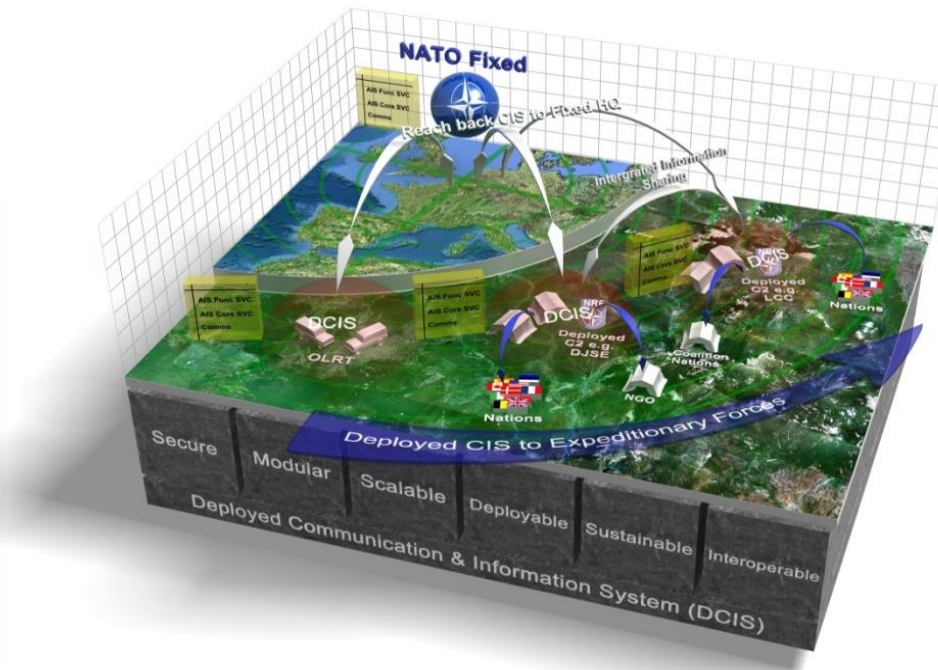
- DCIS Initial order:
 - Complete by June this year
 - Will support 8 of NATO's planned 46 Points of Presence (POPs)
 - Proving ground Operation Live Test in Poland

NRF DCIS

Capabilities

CONNECTIVITY

- SATCOM via **TSGT**, **DSGT**, Flyaway terminals
- Direct Fibre
- **SR/LR LOS** Radio bearers
- Bearers of Opportunity (e.g. Public Switched Telephony network (PSTN), **PTT**)
- User distribution via **INDS** (resilient fibre ring or **PtP** Radio)



DEPLOYABLE

- Supports 5 days **NTM** and is operable within 48hrs of arrival
- Capable of Roll-on Roll-off (Ro-Ro) via C-130 aircraft
- Tent provides Protection against Biological or Chemical (BC) attack
- Operates in adverse environmental conditions
- Equipment housed in ruggedised Indoor and Outdoor Transit Cases

INTEROPERABILITY

- Interoperable with fixed C2 nodes and Nations (including Tactical Communications (TACOMS))
- Interoperable with NGCS
- Use Commercial of the Shelf (COTS) equipment
- Alignment with current and future NATO programmes e.g. IP convergence, **MPLS** and PCN

SECURE

- Provides Communications and Information Systems (CIS) at the 3 protective markings (NATO UNCLASSIFIED, MISSION SECRET and NATO SECRET)
- Information Exchange Gateways between MISSION SECRET and NATO SECRET domains (Information Exchange Gateway Type C (IEG-C))
- Information Exchange Gateways between NATO and Nations (Information Exchange Gateway Type B (IEG-B))
- Deploys Firewalls, **IDS** and IP encryption
- TEMPEST Approved

MODULAR

- μ COM (Wide Area Network (WAN) Access and NU Core)
- Secret Core
- micro Information Services Module (μ ISM)
- Voice Core
- Interface to Nations Module (INM)
- Wireless Crypto and Router Module (WiCR)
- Break Out Box (BoB)

SCALABLE

- Scalable to meet the deployment scenario - up to 126 Active Users

Challenges for NATO Going Forward with DCIS

Post-Afghanistan the need is to make sure that the Connected Forces Initiative (CFI) is real:

- NATO provide corporate 'glue' to allow full data sharing and situational awareness
- Available and effective DCIS a fundamental enabler.
- Current delays to approving the way forward not compatible with NATO plans

Suggestion: One Large procurement for residual DCIS post IFB2

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Suggestion: One Large procurement for residual DCIS post IFB2

Clear linkage between new initiatives (CFI/Future Mission Network) and IERs for DCIS
ISTAR key driver with significantly large bandwidth needs especially to tactical level

- Time Sensitive Targeting/Dynamic Targeting
- Future applications (support of)
- Encryption, its management and consequences
- Changing Standards
- Potential future bearers and their characteristics
- Linkage to the NATO Cloud

Suggestion: CP amendment should be followed by an update of the Target Architecture

TACIP® - Airbus Deployable CIS

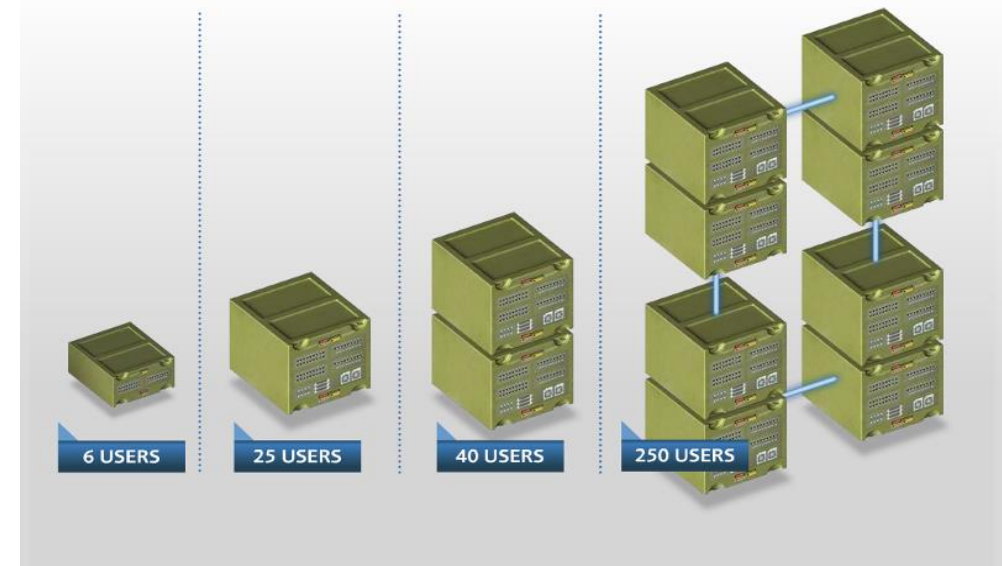
Rapidly Deployed - established and operational within very short periods of time on arrival at destination.

Dynamic Communications Network - ideally equipped to support mobile communicators, especially to support high tempo operations.

Easy to Use - designed for simplicity of operation

Cost Effective - exploits Commercial Off The Shelf (COTS) components make it a highly cost effective

Scalable - modular tactical capability supporting 6 to 250 without any re-engineering or expert technical support



Mobile IP Node – The Future

Proven MANET (Mobile Ad Hoc Network) solution

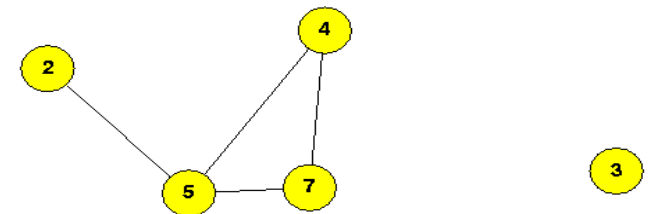
- Automatically and dynamically create and maintain (ad-hoc) network
 - multi-bearer intelligent routing
- Self forming and self healing
- Automatically find the most suitable path for your information
- Identify other Mobile IP Nodes and automatically form an efficient network

Radios

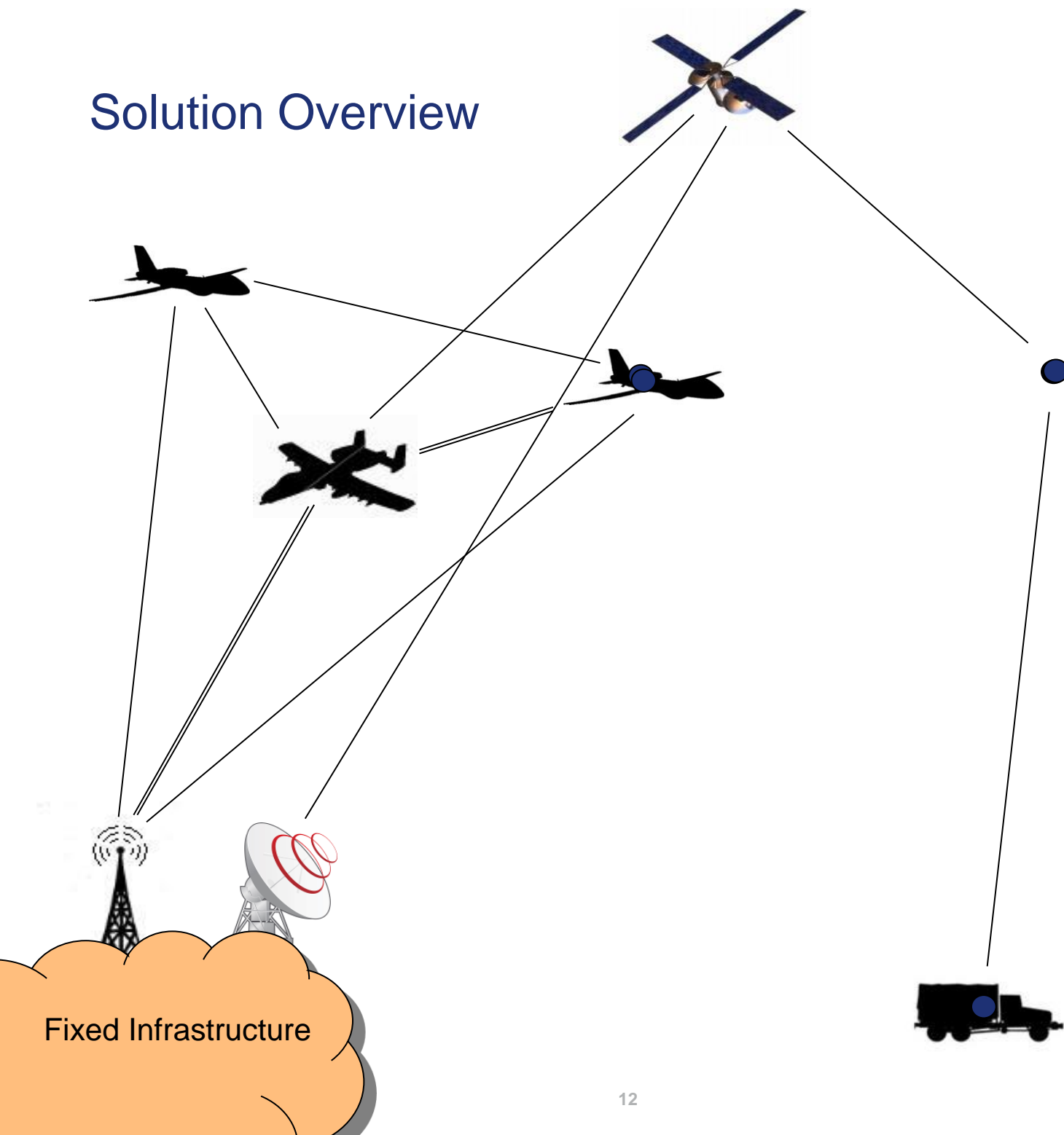
- Automatically detect the quality of a radio network
 - Bandwidth
 - Latency
 - Link Quality

Modernised Application Suite/Network aware applications

- Applications can adapt to the network
- User data is adapted to fit the capabilities
- Network can make decisions based on transmission types
- Designed and Tailored to Customer Needs
- Automatically changes how it handles and interprets data
- Transparently Encrypt all your data via Ectocryp®



Solution Overview



Discover Nodes

Discover Best Routes

Multiple Networks Can Merge

Any Allowed Node Can Join

No End-User Intervention

Summary

DCIS will be with NATO soon

- Successful initial testing deployment to Poland ongoing

IFB2 should be released as soon as possible if we are to progress with state of the art capabilities

- Backward compatibility required with previous procurement activities

CP amendment should be followed by an update of the Target Architecture

Deployable Communications

TACIP® & Mobile IP Node



Thank you - for your attention!