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Meeting to Missions: Secure Video Collaboration for Defence Alliances

Nick Ross, Defence lead, Pexip UK&I

Feb 2025

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Why?
Collaboration is a Defence Priority

"The only way to defend our nation is through partnerships. Partnerships with allies, partnerships with industry. We've got to make sure we keep our people truly informed on what the reality of the situation is."

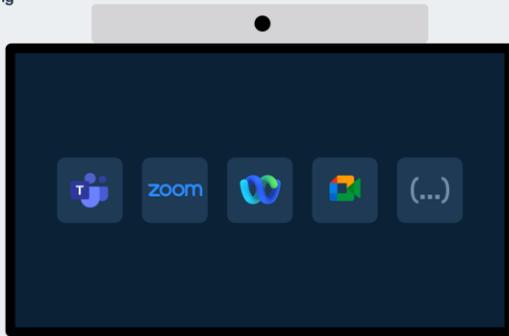General Jim Hockenhull - Commander, UK Strategic Command

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Pexip's Vision

To make seamless video communication available to all organizations, regardless of technology platforms and security requirements

Pexip Connected Spaces
Video meeting room interoperability

When several video technologies need to work seamlessly together

Pexip Secure & Custom Spaces
Video meetings that are self-hosted on-premises or in a private cloud

When complete privacy and control over data is required

From Meetings to Missions

Key trends in Defence video

1 Data certainty, everywhere

ON PREM →][→ HYBRID On prem & Private/ Hyperscale/ Edge Cloud

2 Video beyond the meeting room

MEETINGS →][→ MISSIONS

3 Shifting security paradigm

NETWORK CENTRICITY →][→ DATA CENTRICITY

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From Meetings to Missions

Solving problems in 4 key domains

Strategic - Enterprise	Strategic - Operational	Deployed/ Tactical	Industrial Partner
## Secure meetings	## Mission partners	## Deployed systems	## Collaborative environments
Connect people, rooms and teams across the defence enterprise.	Federate, meet and plan with partner organisations.	Video & chat for mission support.	Digital collaboration tools supporting programme delivery.
Unified Communications for Secret +.	Compliant to NATO standards.	Deployed hardware and tactical integration at the edge.	Secure advanced engineering.
Enhance or migrate Skype.	Data-centric interoperability.	Inform decisions on the battlefield.	Remain compliant.

Secure Meetings

Features designed to meet Defence demands

- "Second button" for easy scheduling

- Branding and Classification markers

- Custom layout designer

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Mission Partners

Connect, meet and plan with partners and alliances

Linking the international defence community through Data Centric Interoperability.

- **Collaboration for coalitions**
  Extend Pexip secure meetings to partner agencies through powerful interoperability. Federate VTC across domains and secure partner networks, with total data control.

- **Mission-specific controls**
  Deploy ZT-compliant session policy governance. Implement deny-by-default, authorize-by-exception meeting controls (classification, releasability, country, programme etc).

- **Connect the right people, fast**
  Automate meeting workflows with Attribute-based access control (ABAC) via Pexip's unique support for Data-centric security (DCS).
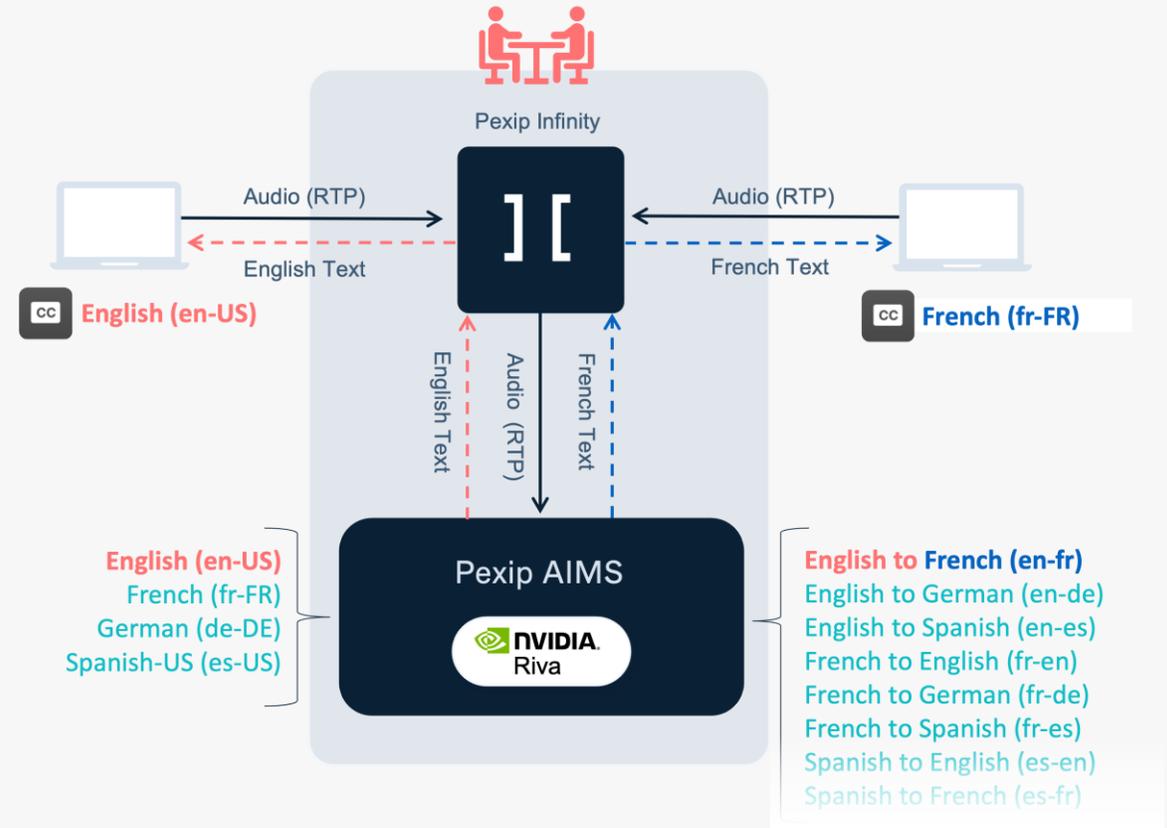
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Mission Partners

Pexip Private "AI for Meetings" powered by **NVIDIA**

AI Media Server (AIMS), fully self-hosted AI

- **Integration of NVIDIA's industry-leading AI**
  AIMS harnesses the power of NVIDIA GPUs and Riva AI SDK in speech-to-text, neural machine translation and text-to-speech.

- **v1 offers live captions, with live translation next**
  Available Q4 '24, offers low latency, high accuracy live captions. Next is live translated captions followed by speech-to-speech translation.

- **Fully self-hosted for full control over AI data**
  Deploy AIMS fully within your security domain (private cloud, on-prem or air-gapped) to have full control over your AI data in motion and at rest. This includes private language model customization.

Pexip Infinity

Audio (RTP) — English Text — **English (en-US)** CC

Audio (RTP) — French Text — CC **French (fr-FR)**

English Text — Audio (RTP) — French Text

Pexip AIMS

NVIDIA Riva

English (en-US)
French (fr-FR)
German (de-DE)
Spanish-US (es-US)

English to French (en-fr)
English to German (en-de)
English to Spanish (en-es)
French to English (fr-en)
French to German (fr-de)
French to Spanish (fr-es)
Spanish to English (es-en)
Spanish to French (es-fr)

High level diagram demonstrating live captions and live translated captions
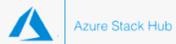
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Deployed & Tactical

Application integration and innovation for the battlefield

Pexip's platform stretches from HQ to the farthest deployed troops. Inform commanders to make better decisions and enable operators to provide a clear picture of the battlefield.

- **Video-enable your applications**
  Advanced APIs allow video-enablement of situational awareness, C2 and other apps.

- **Stay disconnected when you need to**
  Continue operating locally, even when links go Down. Deploy Pexip conference nodes on small form factor, portable hardware.

- **Pexip PULSE**
  Our lightweight, embeddable video framework for specialized use-cases such as drones, sensors and remote deployed devices.

Flexible hosting options

Microsoft Hyper-V | Azure Stack Hub | CITRIX XenServer | vmware vSphere | aws | ORACLE

Collaboration for Aerospace

Video-enabled collaborative working environments (CWE) for R&D teams

Protecting the worlds most advanced engineering development programmes whilst fostering creativity for dispersed teams.

- **Real-time digital teams**
  Leverage digital workspaces. Empower remote experts to share, view and modify digital assets in real time alongside a high-quality video service.

- **Video meetings from anywhere**
  Through our partnership with Cyber1st, mobile Team members can connect back via WiFi with BULLDOG High Grade crypto.

- **Enforce compliance**
  Meet regulatory compliance e.g. ITAR by maintaining data sovereignty by specific programme region. Automate detailed call records for audit and retain recording or transcription based on policy.

Flexible hosting options

Microsoft Hyper-V   Azure Stack Hub   CITRIX XenServer   vmware vSphere   aws   ORACLE

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Advancing a safer, greener, more connected world.

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PROLINX

Secure, Simplify, Collaborate
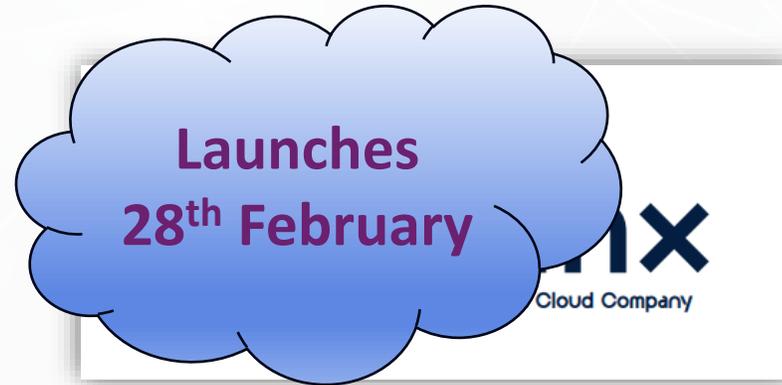
27ᵗʰ February 2025

Prolinx Investments in Defence

Team Defence SME Showcase

Mike Willmott

Sharing with you today

- Approaching out 1st anniversary of ownership as an EOT

- A founding member of the Open Cloud Coalition

- Continuing investments in our People and New **Products** for the Defence Market

EOT
Employee Ownership Trust

Open Cloud Coalition

Launch March 2025

red

Launches 28th February

Cloud Company

Launch March 2025

secure

Systecon Opus Suite Overview

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About Systecon

- Combination of expert consultancy and a strong software suite for optimisation and financial analysis

- Systecon founded in 1970, an independent, partner owned company

- Systecon (UK) founded in 2000, owned by Systecon Group.

- Serving multinational industry leaders worldwide

- International network of representatives

Opus Suite User Community - Defence Authorities

Sweden

Netherlands

Switzerland

Australia

Brazil

NATO OTAN

Norway

Belgium

Turkey

Singapore

OCCAR

Denmark

France

US Navy

Korea

UK

Spain

US Air Force

Taiwan

Germany

Italy

US Army

Thailand

Systecon

Opus Suite User Community - Defence Industry

Opus Suite – Core Applications

SIMLOX – Performance Simulation
- Operational Availability
- Resource Utilization
- Mission Effectiveness

CATLOC – Cost Analysis
- Life Cycle Cost Management
- Cost driver identification
- Financial Risk Management

OPUS10 – Strategic Optimization
- Maintenance and Support concept
- Design tradeoffs
- Spares and maintenance Resources

EVO – Tactical Optimization
- Short to medium time frame
- Incorporates dynamic aspects
- Optimize spares and support resources for:
  - Deployed operations
  - Annual budgets

Connect – Data Ingestion
- Extract –Transform - Load
- Integrate with PLM, MMS, LSA and ERP-systems
- Data quality assurance
- etc.

Insights – BI & Visualization
- Dashboards
- Tailored views
- Graphical reports
- etc.

SIMLOX   CATLOC

OPUS10   ANALYSE   EVO

CONNECT   INGEST   OPUS SUITE MODEL   SHARE   INSIGHTS

MODEL & EDIT

by Systecon
opus suite

Systecon

Opus Suite – 'Can Do' (snapshot)

TLS / PLCS (ISO 10303-239)

Performance & Cost Impact of Obsolescence (IEC 62402)

IPS / LSA (ASD 3000L, DEF STAN 00-600, GEIA-STD-0007)

Capability Requirement Analysis (CONOPS, SRD, URD)

Performance & Cost Impact of MTBUR Changes

Fleet Build Up / Fleet Draw Down

Supply Chain Resilience

'Sand Box' What If / Can Do

Life Cycle Management (LCM/RAM-C)

Performance & Cost Impact of Operational Changes

Deployed Operations

Performance & Cost Impact of Supply Chain Degradation / Disruption

Preventative Maintenance (ASD 4000P)

In Service Support DRACAS/FRACAS (ASD 5000F)

Comparative Analysis (PBL / CFA / VFM)

Sustainability LCA/LCIA (ISO 14040 & ISO 14044)

Systecon

Cost/Effectiveness - maximum operational effectiveness at minimum cost

SUPPORT SOLUTION (y)

WORKSHOP WORKSHOP WORKSHOP

STORE

DEPOT DEPOT

OP-BASE OP-BASE OP-BASE

EFFICIENCY

READINESS
MISSION SUCCESS
COST EFFECTIVENESS

OPERATION (z)

TECHNICAL SYSTEM (x)

Predict and assess the impact of decisions on performance and cost during the system's entire life cycle

by Systecon
opus suite

With Opus Suite, it is possible to analyse any technical system (x), operations (z) and support solutions (y), optimize for cost effectiveness, and evaluate how different decisions will affect performance and cost during the life cycle.

Systecon

LCM Decision Support through the Life Cycle

Common Scope and Objectives

The **Charter for Support Advantage**:

- Improved Support capability and resilience.
- Improved availability and readiness
- A more environmentally sustainable Defence Support Enterprise..
- Exploitation of data and technology.
- A culture of interoperability and integration

Support modelling and analysis is both end-to-end and through life, encompassing both Support services and enablers (including Support personnel and infrastructure).

Figure 1: Scope of Support modelling and analysis activities

Ministry of Defence - Climate Change & Sustainability Strategic Approach Defence's strategic ambition 2050

the development of superior, assured, environmentally sustainable and cost-effective logistic services (Support Advantage Charter)

Common Scope and Objectives

The S-Series Specifications of Integrated Product Support (IPS) are a set of guidelines developed by ASD, alongside our partners at Aerospace Industries Association in the US (and Airlines for America for S1000D) to ensure effective and efficient support for defence and civilian systems throughout their life cycle. These specifications provide a framework for implementing IPS across the entire system life cycle, from requirements development to disposal.

The S-Series specifications cover a range of topics related to IPS, including logistics, maintenance planning, supply-chain management, training and technical data, reliability and maintainability, and sustainment. They provide guidance on how to effectively manage and support complex systems, with an emphasis on maximizing system availability and readiness while reducing life cycle costs.

Source: https://www.asd-europe.org/standards-specifications/integrated-product-support/s-series-suite/

by Systecon

opus suite

Opus Suite enables analysis-driven decision-making in all phases of a system's life cycle. It is used in defence programs across the globe, by defence forces and suppliers to ensure fleet readiness, mission effectiveness, and cost-effectiveness through the lifecycle. It supports strategic and tactical decision-making to maximize readiness, agility, and robustness of defence systems while lowering through-life costs.

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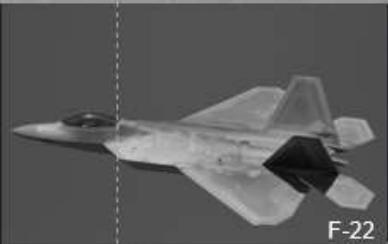# PROGRAMS USING OPUS SUITE

F-35 · GRIPEN · F-16 · TYPHOON · RAFALE · F/A-18 E

F-22 · AH-64 · UH-60 · CH-53E · GLOBALEYE

GRIFFON · ARCHER · BOXER · GIRAFFE · CV-90 · BV-206

LCS · TYPE-26 · QUEEN ELIZABETH · MKS180 · VISBY · AEGIS AMDR / SPY6

FREMM · DDG51 · 212A · GOTLAND · KSS-III · COLLINS

Systecon International Conference
London - 22nd & 23rd October 2025

https://www.systecongroup.com/gl/international-opus-suite-conference

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CEO Systecon UK
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https://www.systecongroup.com/gl

Thank you.

Systecon

TIA | TIA GROUP

INNOVATION ENGINEERED IN BRITAIN

Product development and manufacture for the defence industry.

- UK Owned Operated
- Formed October 2015
- Located outside Cheltenham, UK
- Secure site – security cleared staff
- Co-located engineering & production capability
- Purely focussed on Defence & Government
- ISO 9001:2015 accredited
- NCSC & NATO Approved TEMPEST Vendor
- Cyber Essentials Plus
- JOSCAR Member
- Armed Force Covenant
- Members of MakeUK Defence & TD Info

TIA GROUP

Commercial in confidence

Company overview

One engineering company, two brands, offering innovative products solutions.

The TIA-Group brings together a great set of engineering skills and capabilities to the Defence and Government markets. Both brands are supported by our highly skilled design, engineering and production teams.

Our team pride themselves on listening to customers and users, capturing clear requirements and bringing their exceptional engineering expertise to bear.

TIA | **TOTAL-IA**

Security Hardened/Ruggedised ICT products and solutions for specialist users.

TIA | **TRX-WORKS**

Emerging technologies and innovative tactical solutions for defence applications.

Product Development Services

Mechanical Design
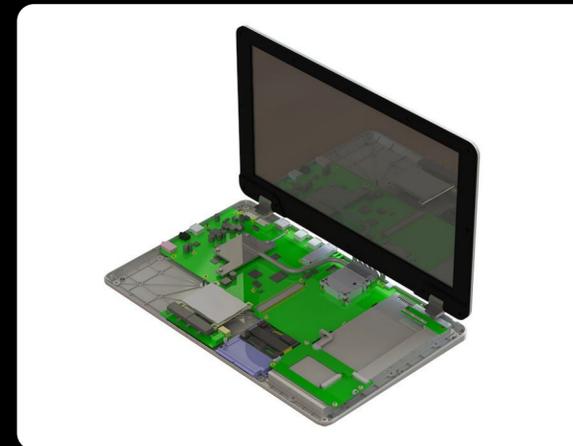## Electronic Design
Production
Test & Qualification

TIA GROUP

Commercial in confidence

Company overview

Our mechanical design & production engineering team have extensive experience in the development of bespoke electronic enclosures.

- Complete product development

- Modification, integration and uplift of COTS products

- Hardware Design for TEMPEST, EMC & harsh environments

- Drone payload integration

We constantly challenge ourselves to produce designs which effectively utilise modern production techniques allowing us to meet agreed specifications, on time and budget.

Good electronics design is at the core of ensuring product performance & compliance.

• Analogue / Digital Design

• Embedded Microprocessor / FPGA Systems

• Video Conversion

• Circuit design for EMC & TEMPEST

• SW/FW development through trusted partners

Our electrical design team understand that component selection, circuit design and PCB layout are key to functional & RF performance.

A thorough design process and test compliance do
not complete a product development program.

Control in the production environment is key.

TIA are experts in planning, managing and executing production builds ensuring quality is
the focus.

ZeroTop Shipment
1000+ delivered

RoIP Enterprise Unit
Delivered OTIF

TDTD-1
Delivered OTIF

Aircraft Technician
Training Units
Delivered OTIF

TIA GROUP

Commercial in confidence

Company overview

Product and platform compliance are the technical back bone of TIA.

We have extensive experience testing products to meet the most stringent standards and supporting customers through complex qualification programs.

- Specialists in product and platform testing to meet TEMPEST SDIP's, MIL-STD 461, DEF STAN 59-411, RTCA DO160, UKCA and CE.

- Environmental testing to MIL-STD 810, DEF STAN 00-35 and RTCA DO160.

- Site Electromagnetic surveys and RF Safety (HSE Legislation) assurance

TIA Group - Products

TIA GROUP

Commercial in confidence

Company overview

Total-IA - RMW7680 Rugged Mobile Workstation

The RMW7680 is based on the dell precision 7680 mobile workstation. Housed in a rugged chassis to enhance the environmental and shock performance. The platform offers high-end processing and graphics performance via a 13th Gen intel i9 processor and a 16 GB NVIDIA RTX 5000 Ada graphics card.

- Based on Dell 7680 Precision Workstation
- 13th Generation Intel® Core™ i9-13950HX Processor
- 16.0" Screen, FHD+ 1920 x 1200 WLED
- NVIDIA RTX 5000 Ada 16GB GDDR6 Graphics
- RAM 32 GB 5600MT/s CAMM Module
- Viasat DARC-ssd™ compatible or M.2 NVMe 1 TB SSD as standard
- Option to add 10GbE SFP+ port.
- Robust Aluminium machined chassis
- Integrated rugged keyboard and touchpad
- TEMPEST versions available upon request

Total-IA - SRL1501 Semi-Rugged Laptop

The SRL1501 is a customisable semi-rugged laptop from TOTAL-IA. Designed, manufactured and supported in the united kingdom, this lightweight and portable laptop was designed specifically for military users and is a gamechanger in terms of adaptability to meet exacting requirements.

- TIA designed semi-rugged laptop chassis
- Chassis base can be customised to house multiple computing options
- Space to house other devices like crypto unit, SDR's or modems
- Bespoke TIA owned IP rated keyboard
- Variants can be produced at low volumes
- Chassis customised to meet EMC or TEMPEST requirements

TIA GROUP

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Company overview

Total-IA – TTC3000-A TEMPEST Thin Client

The TTC3000-A TEMPEST Thin Client is based on the Dell Optiplex 3000 Thin Client. The Dell donor offers security and versatility across a range of operating systems which includes Windows 10 IoT Enterprise & Ubuntu® Linux® 20.04 LTS.

- Based on Dell Optiplex 3000 Thin Client
- OS options include Windows 10 IoT Enterprise & Ubuntu® Linux® 20.04 LTS
- Certified to CFTCS TEMPEST Level A
- TEMPEST Compliant commercial connectors
- Fibre Optic Network Connection
- Shipped with TEMPEST Level A keyboard & mouse
- Option to integrate Dell Optical Drive

TRX-Works – Aurelia Aerospace Range

Flexible drone platforms can be modified to meet a wide range of mission requirements. Platforms offer payload capacity from 1.5kg to 11kg.

Complete payload integration services through our experienced engineering team.

Available Systems & Payload Capacity

X4 Standard – Max payload 1.5kg. 40 Minutes Extended

X6 Max – Max payload 6.0kg. 70 Minutes Advanced Power System

X8 Max – Max payload 11.0kg. 50 Minutes Advanced Power System

TRX-Works – RSV, Remote Sight Viewer

The TRX-RSV, remote sight viewer, is a semi-rugged remote viewing display for use with modern weapon sights. Taking an analogue video feed from thew weapons sight, the TRX-RSV allows operatives to remote themselves from their weapon. The unit is self-powered, allows users to control screen brightness and is NVG compatible.

• 6.5" Colour display
• Robust aluminium enclosure
• Internal battery, capable of powering sight systems
• NVIS compatibility
• Multiple mounting options
• Environmentally sealed enclosure, with pressure valve

See you at DE25

For more information on TIA-Group products
or to discuss a project collaboration

Call: 01452 668 057
Email: sales@tia-group.co.uk
Visit: www.tia-group.co.uk

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Company overview