



Track Management Capability on EX TS19

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COMMERCIAL IN CONFIDENCE

SYSTEMATIC

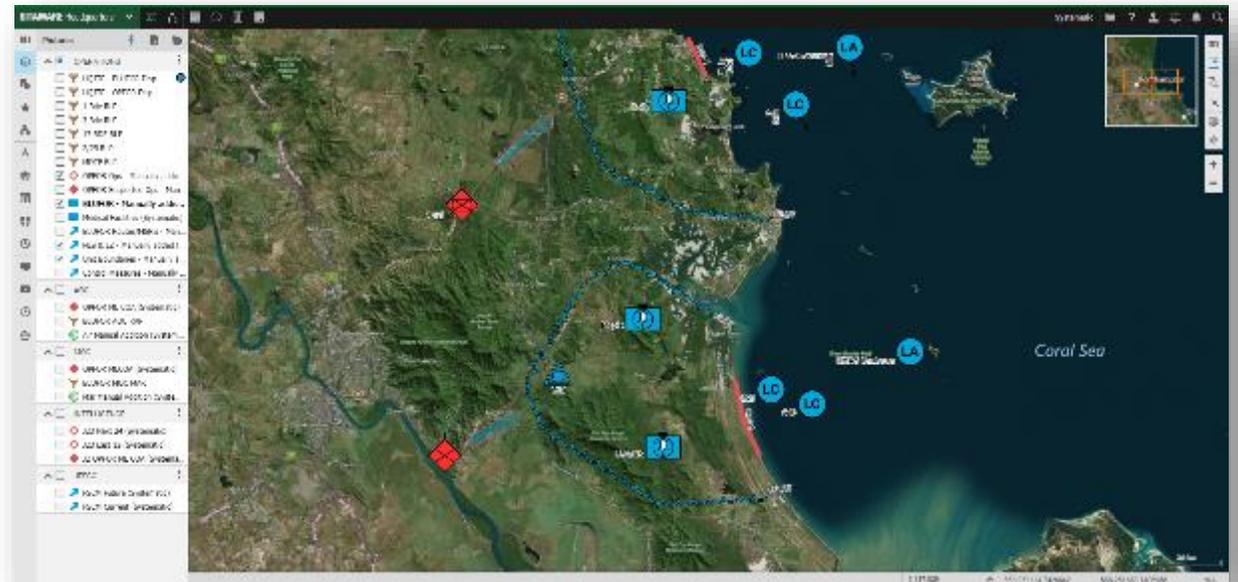
EX TALISMAN SABRE 19

- 34,000 Personnel
- 18 Participating Countries
- 30+ Ships
- 200+ Aircraft

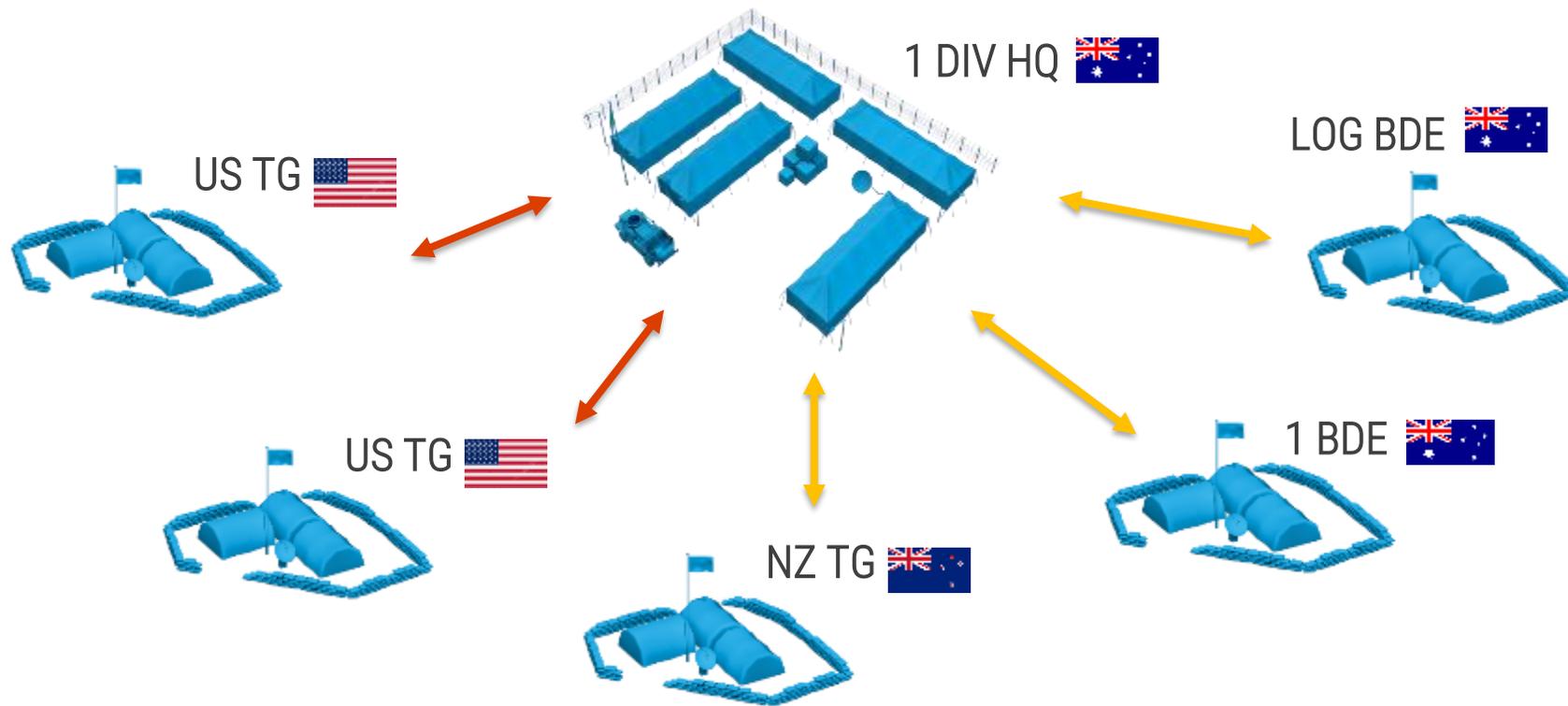


SitaWare as Track Management Capability

- Interim system purchased 31 May 2018
- One FSR (Andy Woodford - 32 years Royal Marines)
- Objectives on EX TS19:
 - Maintain RGP and contribute to CTP
 - Joint and Coalition Force interop
 - Interop with Land BMS
- Users hadn't been trained
- Contract signed 11 Oct 2019

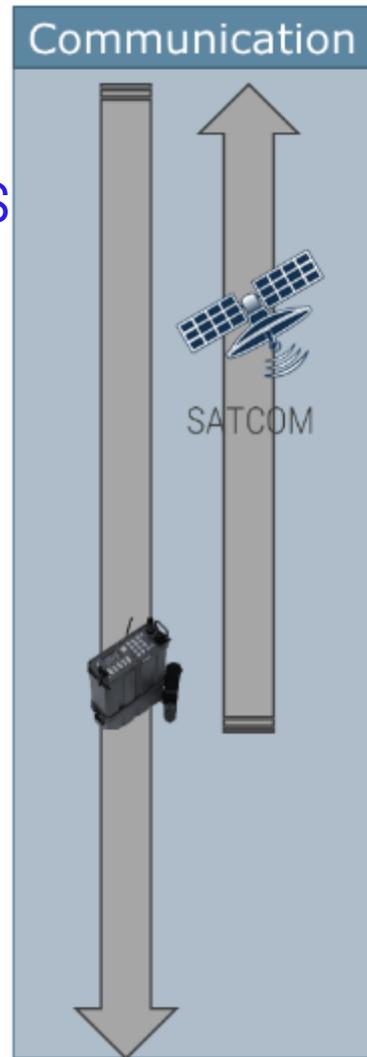


Situation at Start Ex

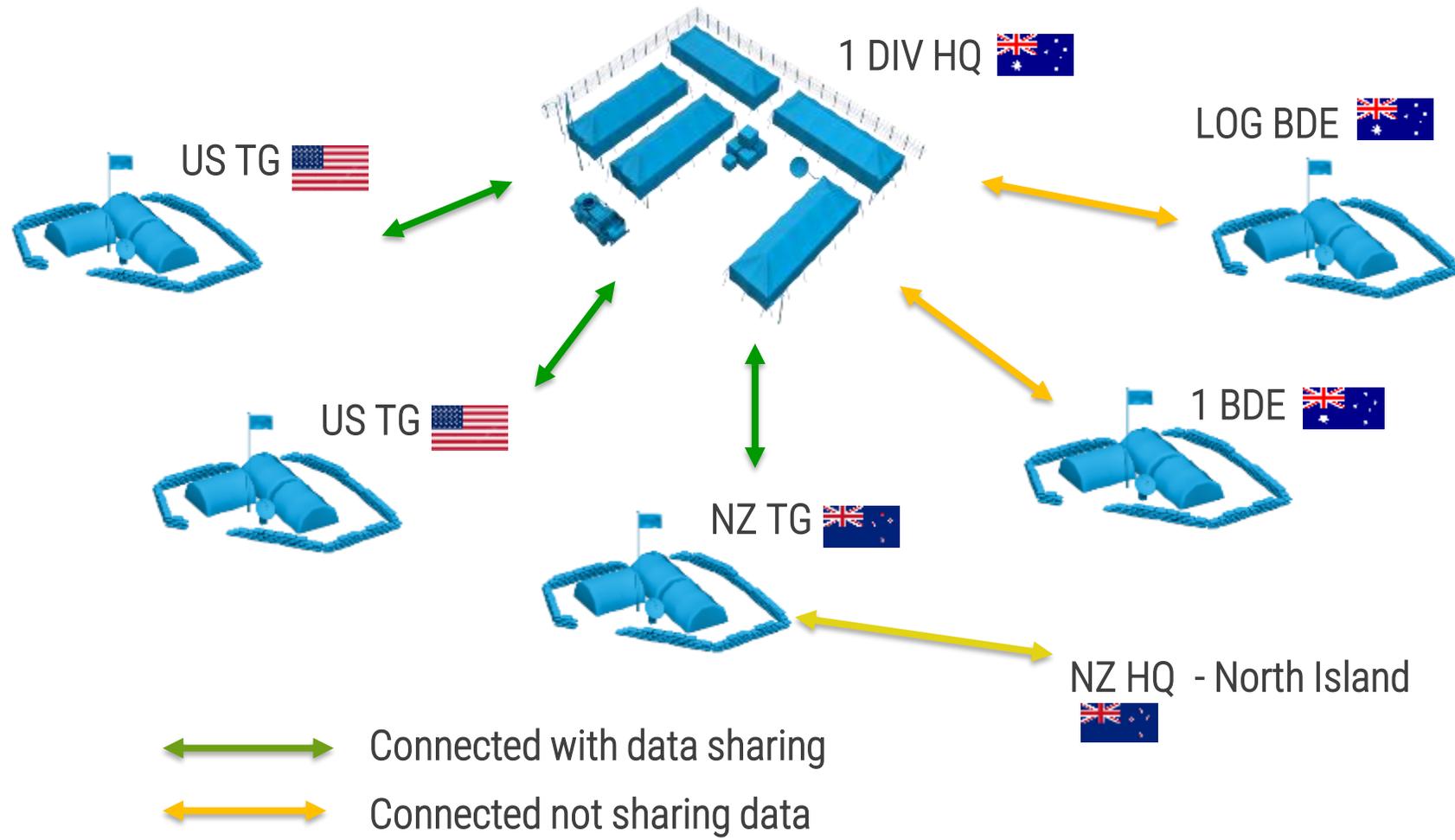


↔ Not connected
↔ Connected and data sharing capable

Strategic
CORPS
DIV
TG
BDE
BG
Tactical
Coy/
Sqn
Pl/Tp



Situation at End Ex



↔ Connected with data sharing
↔ Connected not sharing data

ZZZ_Stevenm.xx.xx.5

What was achieved?



Friendly Force Tracking
with high refresh rates



Intelligence Pictures
Report, Aggregate, Correlate



Current Operations
Managing operations and maintain SA



Logistics and Holdings
Reporting and Aggregation



Collaborative Planning
With Microsoft Office integration



Tactical Communications
Proven on a wide range of low bandwidth radios



Operational Status
Reporting and Aggregation



JChat and Tactical Chat
with message attachments



Formatted Messages
Integrated with C2 Database



Geo Tools
Finding visibility and vantage points



Bookmarks and Briefings
With export to Microsoft PowerPoint



Synchronization Matrix
Timing, resources, actions and objectives



Route Planning
and Honesty traces



Journal / War Diary
Automatic and manual Event/Action Recording



Site-to-Site Communication
Connecting multiple servers



Coalition Interoperability
Using modern standards



Filters and Guard Zones
with Alerts and Notifications



Track History
for After Action Review



ORBAT and TaskOrg Management
With attachment and detachments



Automatic Aggregation
FFTs to Units based on Current Organization



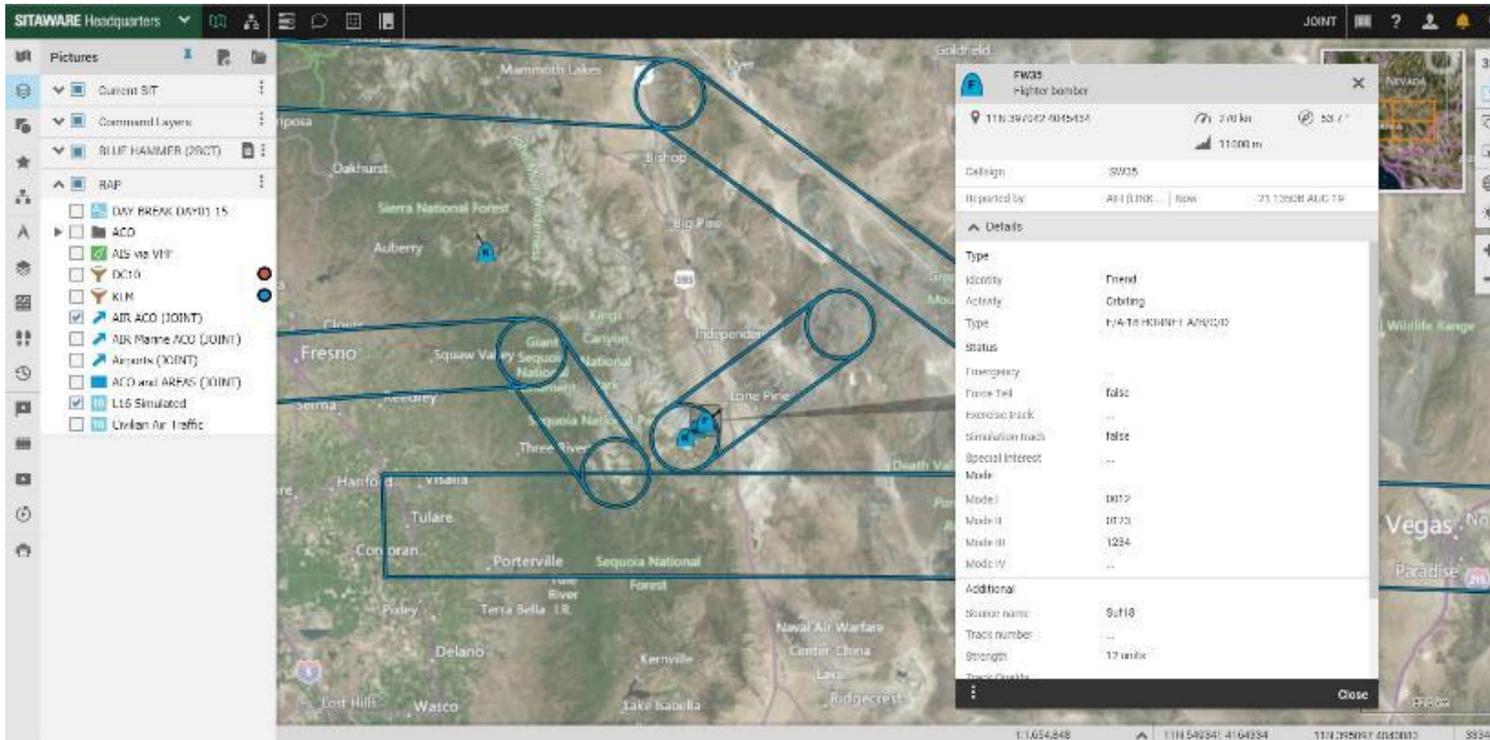
Print Maps to Scale
With overlays and annotations

 Partially used



OTH-Gold fed Air Picture

Lesson: Use the right link, with the right data, at the right time, on the right system



Functional Areas	L11	L16	L22
Status monitoring platform	X	X	X
Air Survl	X	X	X
Land Survl	-	X	X
Surface Survl	X	X	X
Subsurface Survl	X	X	X
Space Survl	-	X	X
EW	X	X	X
Weapons Coord	X	X	X
Command	X	X	X
Aircraft Control		X	X
Network Management	-	X	X
Images	-	X	-



JREAP: SIMPLE and 'C'

- JREAP SIMPLE. SitaWare Headquarters support:
 - conforms to STANAG 5602 (SIMPLE)
 - can act as a client (consumer) receiving Link-16
- JREAP C: SitaWare Headquarters support:
 - conforms to STANAG 5518 Ed2 and MIL-STD 3011 30 Sep 02
 - for sending and receiving Link 16 messages
- Both are supported over:
 - TCP/IP
 - UDP Multicast
 - UDP Broadcast

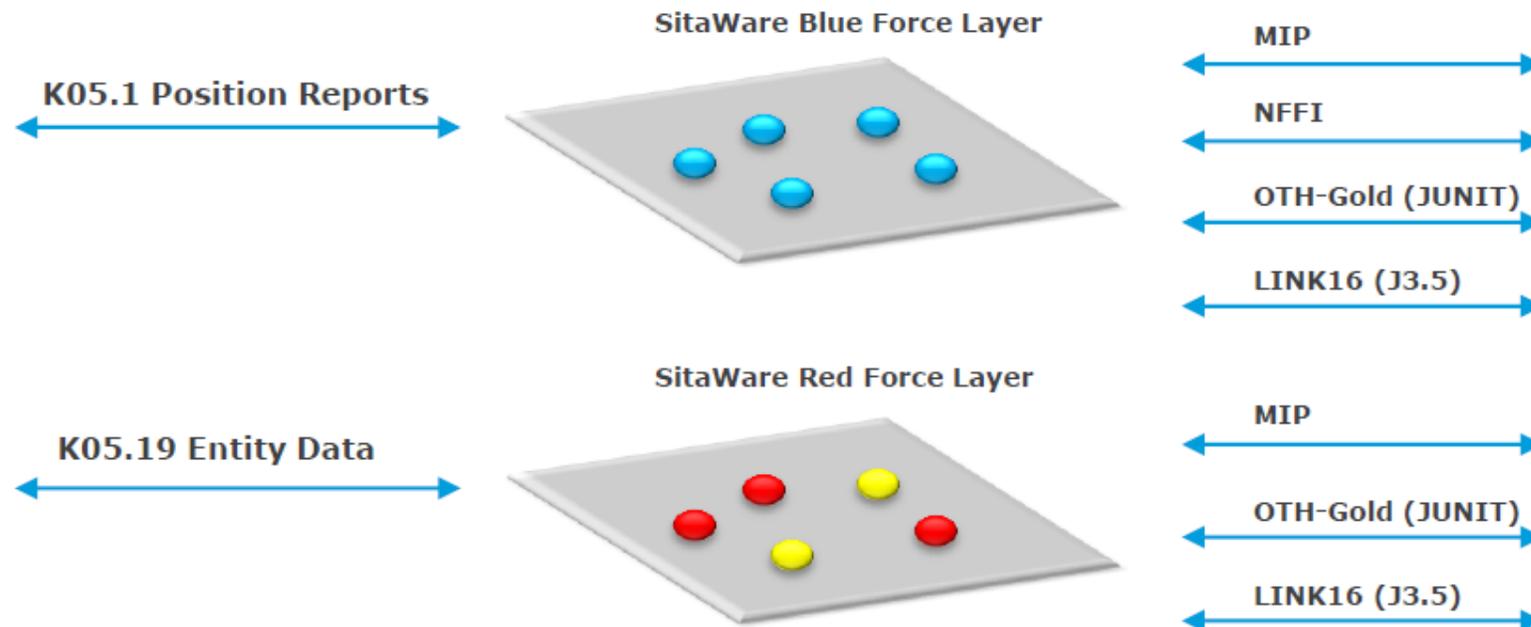
NB:

- JREAP: Joint Range Extension Applications Protocol
- SIMPLE: Standard Interface for Multiple Platform Link Evaluation
- JREAP C support is licensed separately from SitaWare Headquarters



SitaWare VMF Gateway

- Automatic exchange of blue and red picture
- TCP/UDP VMF contract in SitaWare Headquarters
- Support for VMF headers MIL-STD-2045-47001(C)
- Support for VMF MIL-STD-6017 (flat) and 6017A+



- SitaWare Headquarters 6.8 supports two MIL-STD-6017 messages:
 - K05.1 Position Report Message
 - K05.19 Entity Data Message Summary (Case 8 – Observed Position)
 - (K01.2 from SitaWare Headquarters 6.10 onwards – *Jan 2020*)
- Supported over:
 - TCP/IP
 - UDP Multicast
 - UDP Broadcast
- Unit identification
 - K05.1 supports URN look-up files. Assign temporary URN if no lookup file available
 - K05.19 Support for automatic assignment of unique entity ID reference numbers
- MIL-STD-2525C representation
 - K05.1. Received units represented as a basic ground track if no match found in URN look-up file. When sending units, the unit ID is looked up in the URN look-up file provides Unit ID. If match found, unit is sent with that URN. If not, unit is assigned a URN from designated range.
 - K05.19. 2525B symbols identical to 2525C received and sent as is. If no direct match, the symbol is mapped to a more generic symbol higher in the hierarchy. If not, default to a basic ground track for both sending and GIS representation.



- Information Management...Information Management.. Info...
 - IM – The function, processes and the technology together
 - Templates – SOPs & R4 (Reports, Returns, Requests (RFI) & Responses)
 - Data Transfers
 - Bandwidth Management
- Training – staff training, interop testing, data transfers
- Understanding the feeds required
 - OTH-Gold default (due to GCCS), but not always the best
 - Optimise interop for different scenarios?
 - ACO/ATO ingestion – not just APP-11, also AS/USMTF
- Easy to use, but need to manage & control its use:
 - Operators were never going to just use it for TM



Interop Standards

Category	Name	Information Complexity	Near-Real-Time Tracks	Complex RP/COP	MIL-STD-2525 Symbols	MIL-STD-2525 Graphics	Messages
SitaWare	SHC	Medium	●	●	●	●	
	STC	Low	●		●	●	●
Two-Way	ADATP-3 / APP11	Medium		●			●
	LINK11	Medium	●				
	LINK16	Medium	●				
	MIP	High		●	●	●	
	NFFI / FFI	Low	●		●		
	NVG	Low			●	(●)	
	OTH-GOLD	Medium	●		(●)	(●)	●
	VMF	High	●		●	●	●
One-Way	WAIS	Low	●				
	AIS	Low	●				
	ADS-B	Low	●				
	ASTERIX CAT 048	Low	●				
	WMS	Low		●	(●)	(●)	
	KML	Medium			●	(●)	(●)

(●) = partially supported

ZZZ: Steven@xxxxx



What do we want to achieve?



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Summary

- GOAL: Introduce a TMC into the exercise, noting users had received no prior training!
- Challenges:
 - Information Management and SOP provision
 - Staff training
 - Connection to the correct feeds
 - Making interoperability common place
 - Use of other tools in Sitaware: Plans, ORBAT, Holdings

