# Evaluation of Organisational Interoperability in a Network Centric Warfare Environment

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# Interoperability

*"Interoperability is the ability of systems, units or forces to provide the services to, and accept the services from other systems, units or forces and to use the services so exchanged to operate together effectively."*

# The Organisational Interoperability Model (OIM)

- Developed in 1999 by Thea Clark and Richard Jones

- Focus on the human-activity factors affecting the exchange of information

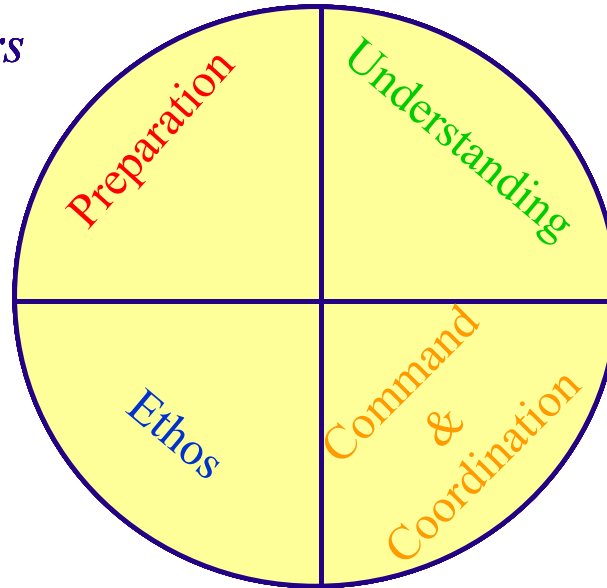- Not predicated on any particular approach to warfare

# OIM Levels & Attributes

| | Preparedness | Understanding | Command Style | Ethos |
|---|---|---|---|---|
| **Level 4** *Unified* | Complete – normal day-to-day working | Shared | Homogeneous | Uniform |
| **Level 3** *Combined* | Detailed doctrine and experience in using it | Shared comms and knowledge | One chain of command and interaction with home organisation | Shared ethos but with influence from home org |
| **Level 2** *Collaborative* | General doctrine in place and some experience | Shared comms and shared knowledge about specific topics | Separate reporting lines of responsibility overlaid with a single chain of command | Shared purpose; goals, values signif. influenced by home org. |
| **Level 1** *Cooperative* | General guidelines | Electronic comms and shared information | Separate reporting lines of responsibility | Shared purpose |
| **Level 0** *Independent* | No preparedness | Voice comms via phone etc | No interaction | Limited shared purpose |

# OIM2003 Attributes

*How well prepared are collaborators to perform the goals?*

*How well developed is the level of mutual understanding and knowledge sharing?*



*What impact do socio-cultural factors have?*

*How well do collaborators fit into the command structure and adapt to the command style?*

# An illustration of future

- Unilateral operations are rare
- Coalitions are often formed on an
- Coalitions are fluid - partners
- Increase in operations other than

# Interoperability

- Is it possible to collaborate without high levels
- A high level of interoperability is not sufficient
- There are a range of strategies for improving
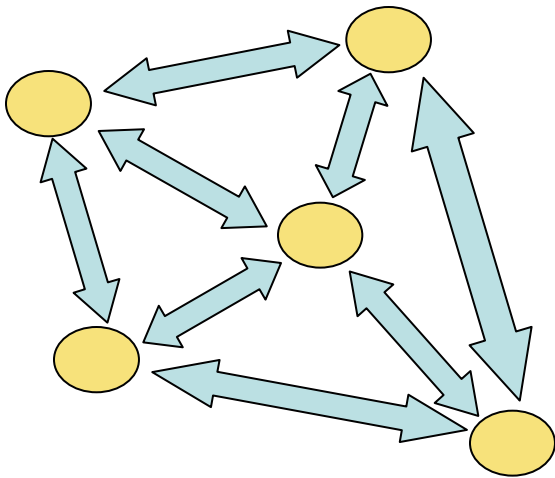- How important is interoperability, especially

# Review of the OIM

- Is the OIM suitable when one or both

- Recognition that there may be a range of

- Resulting in a change in emphasis from jointness,

# Potential interoperability issues

- NCW doctrine may be
- information disclosure policies
- NCW organisations may need

# Potential Interoperability Issues

NCW organisations may

- use command intent to a greater extent,
- necessitate more mixing of forces and a
- be trained to think and act differently,
- have different promotion and recruitment

| | Preparation | Understanding | Command and Coordination | Ethos |
|---|---|---|---|---|
| 4. Seamless. Transparent and flexible interfaces. | Comprehensive and congruent preparations resulting in normalised day-to-day working arrangements. Compatible doctrine covers all aspects of interactions. All other necessary formal agreements are in place. Harmonised training and experience using compatible doctrine, communication and information system, tools and agreed operational processes. | Seamless and comprehensive sharing of information. Harmonised knowledge building. Shared interpretation. | Comprehensive, harmonised co-ordination and command arrangements in place. Seamless accommodation of differences in command and leadership styles. | A high level of commitment to shared goals, allegiances and values throughout the organisations. Harmonised processes in place to minimise the impact of differences in external constraints. Very high levels of mutual trust and respect that enable rapid support for interactions outside of the scope of pre-existing arrangements. Seamless accommodation of differences in personnel arrangements and organisational culture. |

# Organisational Interoperability

- To evaluate those aspects of OI that enable
  - Check for completeness
  - Unpack and extract fundamental and orthogonal

# Agility Attributes

- For example, we will examine the attributes
    - Robust OI
    - Flexible OI
    - Responsive OI
    - Resilient OI
    - Adaptable OI
    - Innovative OI.

# Conclusion

- Review of the OIM
  - new version OIM2004
  - insight into the OI issues - NCW and
- Future development of OIAM.

# Questions?

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