

Working Group B

Collaboration Workshop-Coalition Working Group (CW²)

Randy Pherson, co-chair LorRaine Duffy, co-chair

LTC Tom Gaetjen Walter Perry

Don Harrison LCDR Mike Siracuse

Jim Lee LTC Jeannie Tibbetts

Mike Letsky David Vanderford

Mark Mandeles

Brian Mansir

Where Collaboration Contributes to Coalition Operations

- Complex problem which requires differing expertise for the solution
 - Where multiple inputs improve results
 - Navy in Kosovo, Haiti and Aristide, Tandem Thrust
- Crisis action involving quick response by coalition partners
 - One-of-a-kind problem vs. repetitive
 - Australian Drs. in Papua New Guinea, East Timor Elections
 - HA/DR, Hurricane Mitch, Mudslides in Ven.
- Where essential knowledge is distributed (push effect)
 - BTTR, Air Defense
- Where consensus is desired/needed.
 - Decision making/product needs to be owned by the group
 - NATO OPS., Negotiating Int'l Standards/Interoperability
 - Allied joint publications, ATO

Where Collaboration is Not Possible, Desirable, Useful or is Counterproductive

- Competence of Information
 - Information can not be validated or trusted
 - Rwanda, Data to Knowledge-Bosnia-Gen. does work of 0-4
- Cognitive overload
 - Inability for timely processing of necessary information
 - PACOM volume issue, CNN factor
- Where time precludes process completion
 - Time sensitive action required at the seconds level. e.g. Real time retargeting, East Timor command
 - Process overhead

Where Collaboration is Not Possible, Desirable, Useful or is Counterproductive (II)

- Where politics (or culture) precludes collaboration or degrades results
 - Information leakage
 - Gen. Clark seize airfield, French object to targetting(Chirac), UN Sec. Council, Kobe Earthquake, Soviet sub sinking. Italians warning Somali warlords, French warning the Croats in Mostar

Barriers to Collaboration

- Quality and availability of info/knowledge
 - lack of institutional knowledge (PACOM non-community vs. NATO)
 - No SOPS with emerging countries
- Capability and availability of infrastructure
 - connectivity--Internet not enough:wireless
 - software packages, no training
 - lack of hardware (computers)
 - Interoperability/shared standards

Barriers to Collaboration (II)

- Capability, motivation and credibility of participants
 - rice bowl effect
 - lack of trust
 - objectives
 - incentives and benefits
 - skills and abilities
 - language
 - motivation/risk aversion
 - dominant personalities
- Security
 - multi-level, multi-national

Ways to Overcome Barriers

- Leadership needs to buy-in to the system and require its use, ensures up-to-date training.
- Don't build a non-essential system that has to be used on a regular basis.
- Multi-level origination ensures security and accelerates dissemination.
- Create virtual exercises to encourage collaboration and develop a base for real life events.
- Build a body of knowledge on collaborative tools in decision making.
- Build teams of people who have worked the problem together before.
- User feedback embedded in all collaborative systems (metric based).
- Mechanism for user level access on a “need to know”.
- Peer-to-peer platform
- Develop agents (MLS, viruses)
- Include tools that authenticate data (detect deception).
- Training (embedded, wizards, etc.)

Research and Experimentation Needs

Cultural Considerations

- How do we integrate situational awareness of coalition forces into US military operations?
- How do you anticipate and measure differences in cultural approaches to collaboration?
- E.g. How do other cultures use metaphors (virtual rooms or color for displays)
- Risks and opportunities of using machine translation into existing collaborative systems? E.g. SouthCom Drug nets

Research and Experimentation Needs (II)

- What is the appropriate network infrastructure for supporting coalition forces? (Fly-aways) How do we accommodate disadvantaged users? What are the pros and cons of moving to a wireless environment? Are current collaborative systems easily adaptable to a wireless environment?
- How to build collaborative systems to support multiple, overlapping command structures? (Military, NGOs, AID) Do you utilize consensus decision making models? Employ gaming simulation? What collaborative tools are most appropriate?
 - Do the collaborative tools support multiple reorganization of the command structure?
 - What are the implications of other country management of coalition forces?
- How do you embed tools that evaluate the validity of information into the collaborative process?

Research and Experimentation Needs (III)

Building Systems from the Bottom Up

- What would the collaboration technology landscape look like 4 years down the road?
- Do peer-to-peer based systems represent a better model for fly-away systems? What kinds of agents, bots, etc need to be developed to give commanders confidence in allowing such systems to be deployed? How do you build appropriate standards/checks and balances into the systems? Are there any new applications that need to be developed?
- How do you build individual-aware network sensitive systems? And should we?
- How do you build a system with friends today, enemies tomorrow?
- How to leverage chaos and complexity to design collaboration systems? Is it appropriate to the problem?

Research and Experimentation Needs (IV)

Decision Making Tools

- Researching how organizations use decision making tools. Researching how decision making tools enhance collaboration.
- How individuals employ decision making tools. How do humans effectively interact with a collaborative system?
- How do you determine the quality and/or importance of rapidly arriving collaborative information?