C2 Issues & Challenges On The Stage of Global Conflict

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21 June 2006

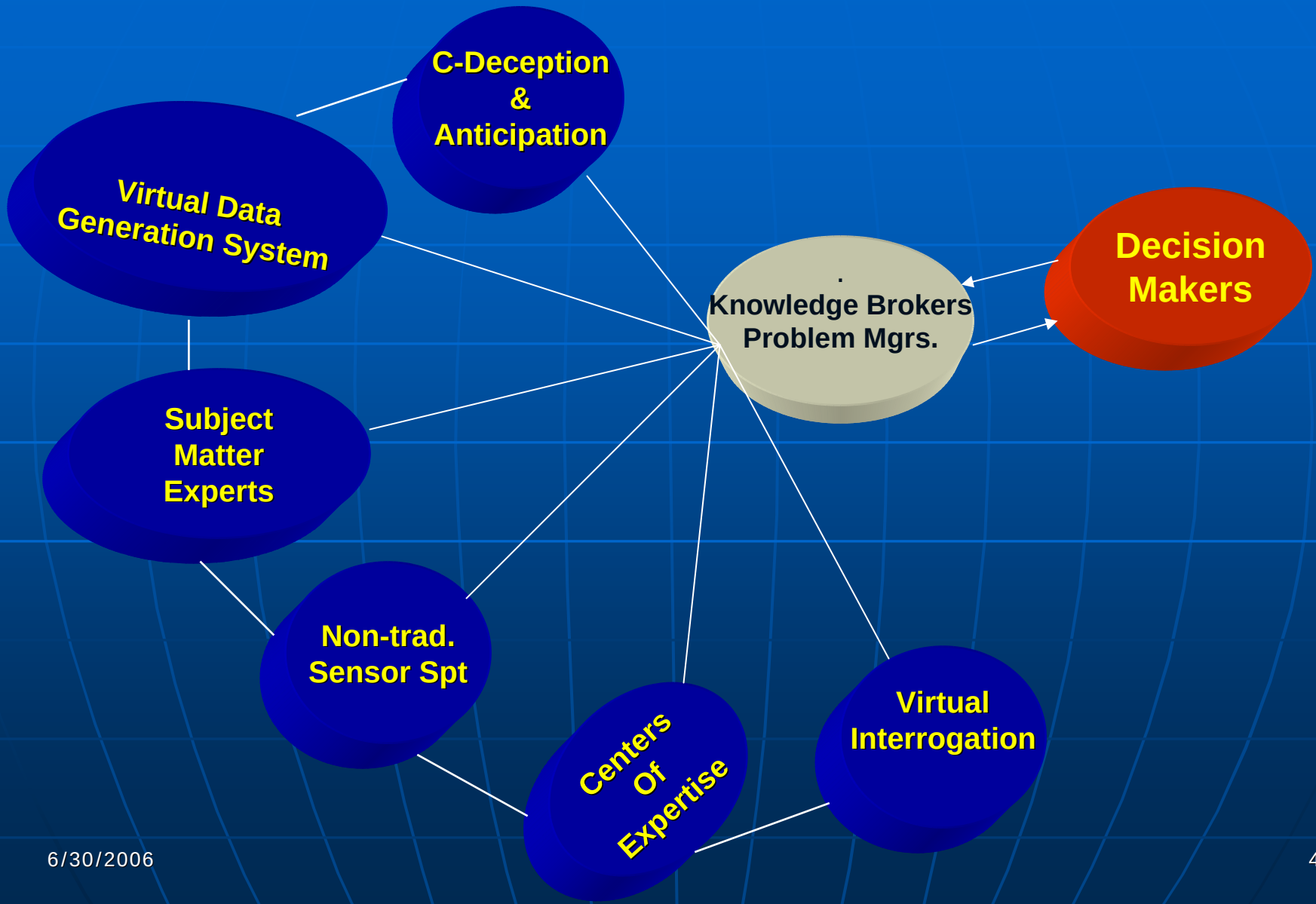
C2 Policy – Challenges & Issues

- Global, insurgent warfare & C2 policy
- Distributed minds, machines, knowledge – collaboration brings together
  - Unity of effort
  - Employing networks in global conflict
- New types of fires, maneuver & C2
- Agility – it takes a network to beat a network
- Challenging problem sets – zero density, info domain, dual nature of networks

Distributed Decision Support System (D^2S^2) Virtual Brain

- **Two underlying thoughts:**
  - OE too complex for ***self-contained staffs*** to provide knowledge over time to mitigate risk & reduce uncertainty.
  - Need organized distributed knowledge ops -- confluences of virtually integrated SMEs, COEs, data scientists, & machines led by *knowledge brokers* to add value to existing knowledge, develop new knowledge, disband upon completion, form new teams.
- **Underpinnings of idea:**
  - Collaborating, sharing good
  - Focused virtual collaborative work to solve problems
  - Many minds better than one
  - War of wits – rapid learning, adaptation, adjusting
- **C2 Policy implications:**
  - Prioritizing support – levels, activities, adjudication
  - Access to data
  - SME databases & contractual vehicles
  - Sharing data, info, knowledge in collaborative environ.
  - Guidance for working w/uncleared & host nation people
  - Training & education to work w/networks & collaborative, distributed knowledge environments
  - Procedures for "organized" reach back – best minds, machines

Distributed Decision Support System



Zero Density Operations

- Definition – Ops in urban OE in which objectives are accomplished by a range of activities, excluding conventional forces in the objective area, to achieve operational and/or strategic objectives
- Character – coalition, interagency, elements of power, on-again/off-again violence, intense media coverage, intense political interests, high stakes, fluidity, no troops on the ground other than SOF & intel
- C2 policy implications:
  - Authorities for fast, effective decision making
  - Intel/Ops – seamlessness
  - Exchange of data w/non-traditional sources – NGOs, police
  - Condition setting and shaping – info domain, interagency, coalition
  - Virtual knowledge environments
  - Effects design – military, interagency, non-government organizations
    - Orchestration, synchronization & deconfliction of effects, actions, assessment
    - Lethal & non-lethal

Joint Intelligence Operations Centers

- JIOC I – IT data distro architecture & repository.
  - People can access & input data
  - Architectures improve data distribution
  - Improvements – ops/intel integration, reach back, access to data, tactical support
- Issues:
  - Breadth & depth of the enterprise -- scalability
  - Organized reach back enterprise, access to variety of SME, COE, focused data mining
  - Intel/ops integration
  - Advanced analysis – tools and minds
- C2 policy implications
  - Authorities, roles & missions
  - Network of JIOCs – synchronized, unity of effort info domain
  - Standards for data immersion, data environment, latency
    - New ways of displaying data – e.g., cities of info
  - Network philosophy – it takes a network to fight a network
  - Authorities
  - Wherewithal to instantiate distributed knowledge capabilities
  - Increased proficiency in Virtual Collaboration – 50% of organizational time spent in virtual collaboration
  - Legitimatize new C2 requirements: -- maneuver: data, sensors, knowledge
    - C2 synchronization & deconfliction – new maneuver & fires – sensors, data, knowledge, CNA
      - Info as a weapon system & shaping mechanism
      - Presence – impacts shaping