

Disruptive Effects of Net-Centricity on Command and Control



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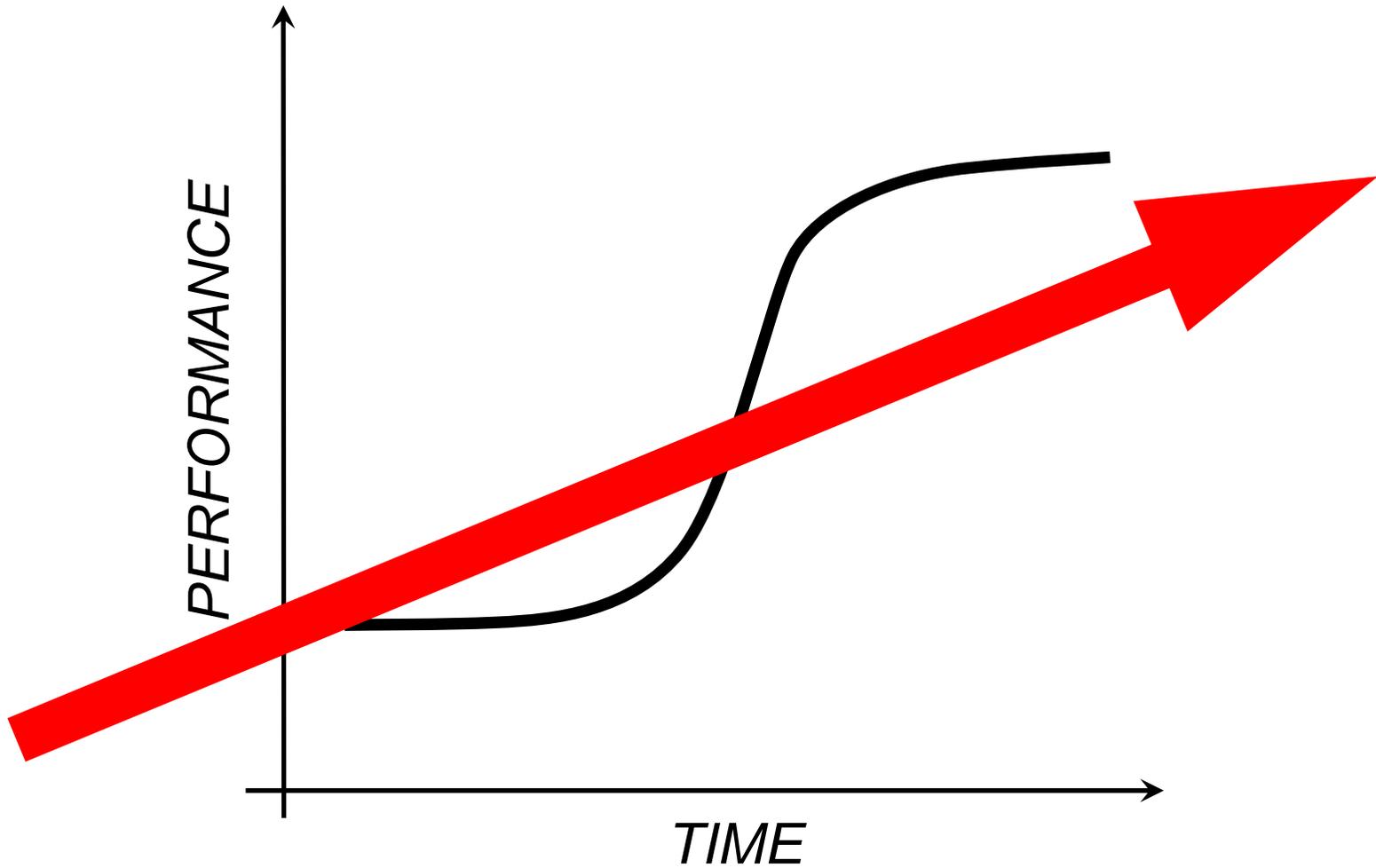
Overview



- **Philosophical view of net-centricity**
- **It's here! Power to the people!**
- **Wait! That's not how we do things ...**
- **Innovation at a cost**
- **The good news and the bad news**
- **Predicting and preparing for the future**

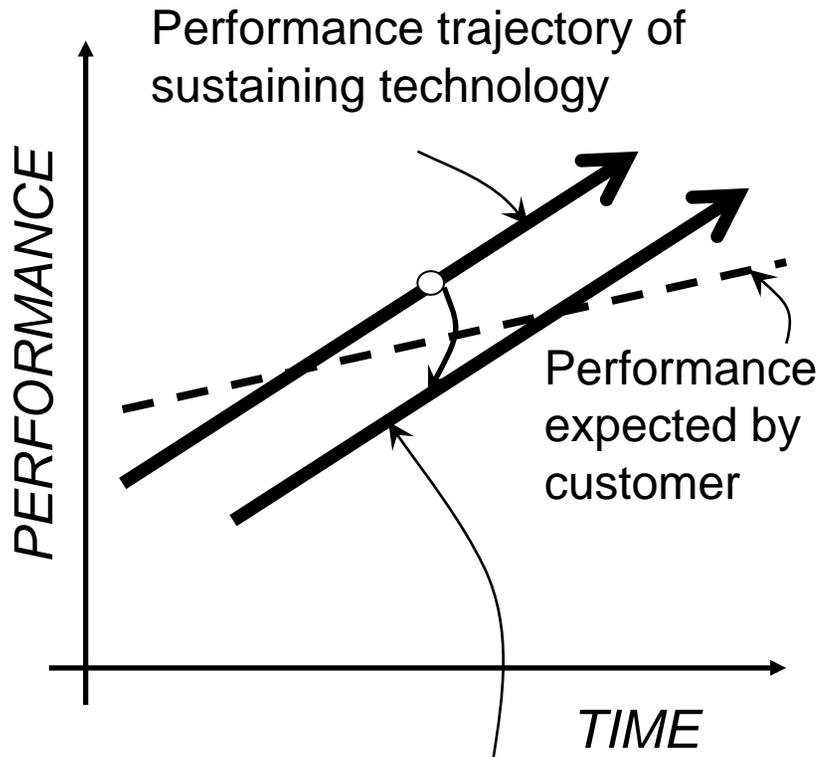


Disruptive Innovation

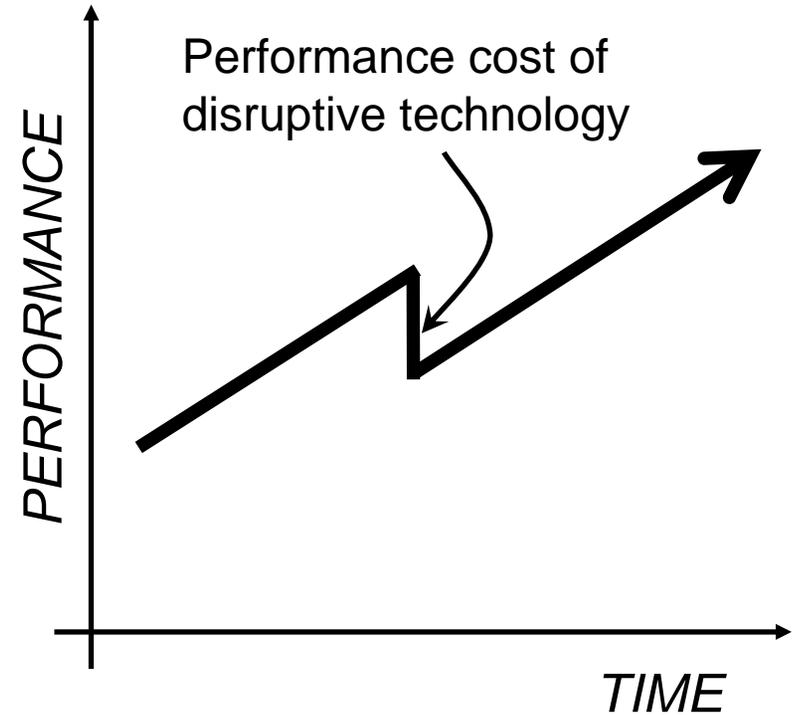




Disruptive Innovation



Performance trajectory of disruptive technology



Net performance as majority of customers defect to disruptive technology



Information Explosion



World War I: 30 Words per Minute

WW II: 60 Words per minute

Vietnam: 100 Words per minute



Gulf War: 192,000 Words per minute

War in 2010: 1.5 trillion Words per minute

U.S. News & World Report



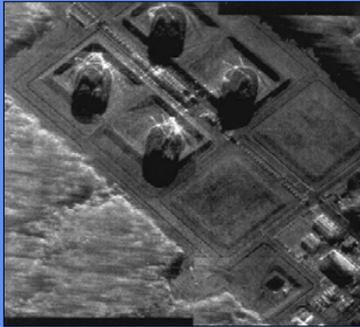
Managed Information



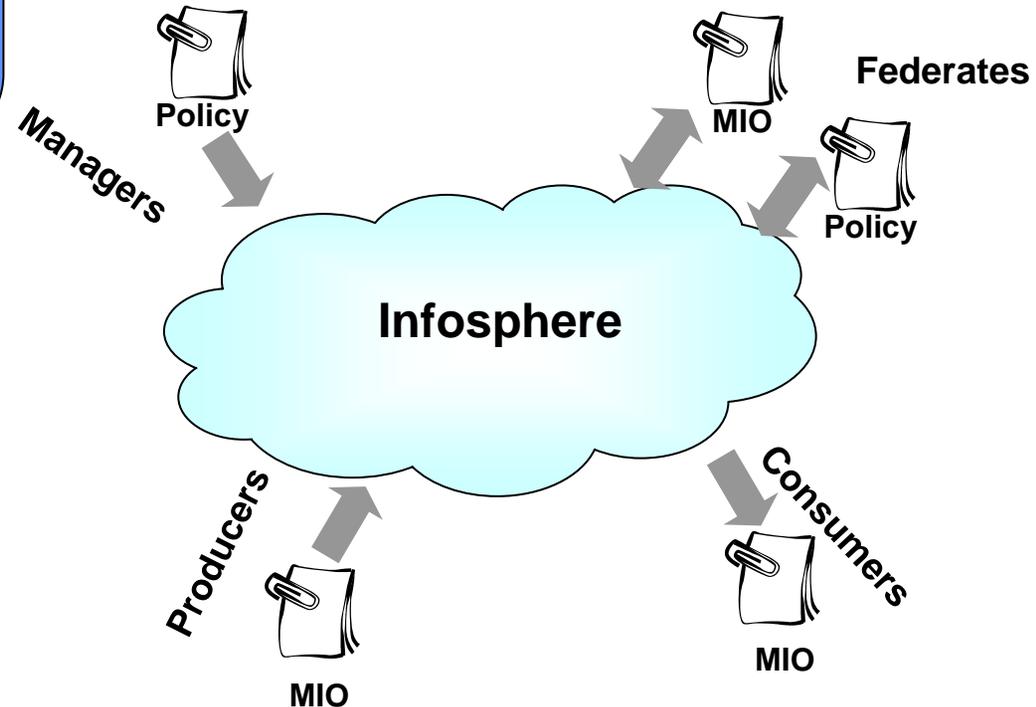
Infosphere Information Exchange Unit

Managed Information Object (MIO)

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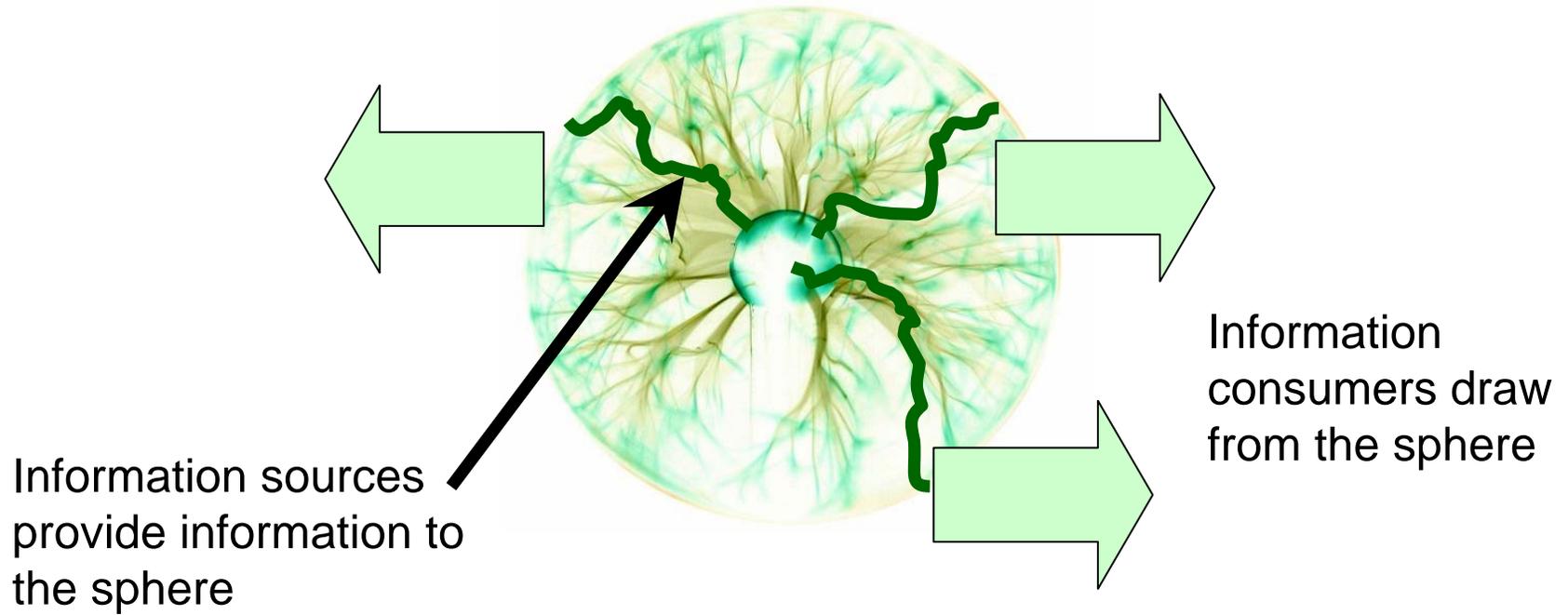


Establishment of Shared Information Space



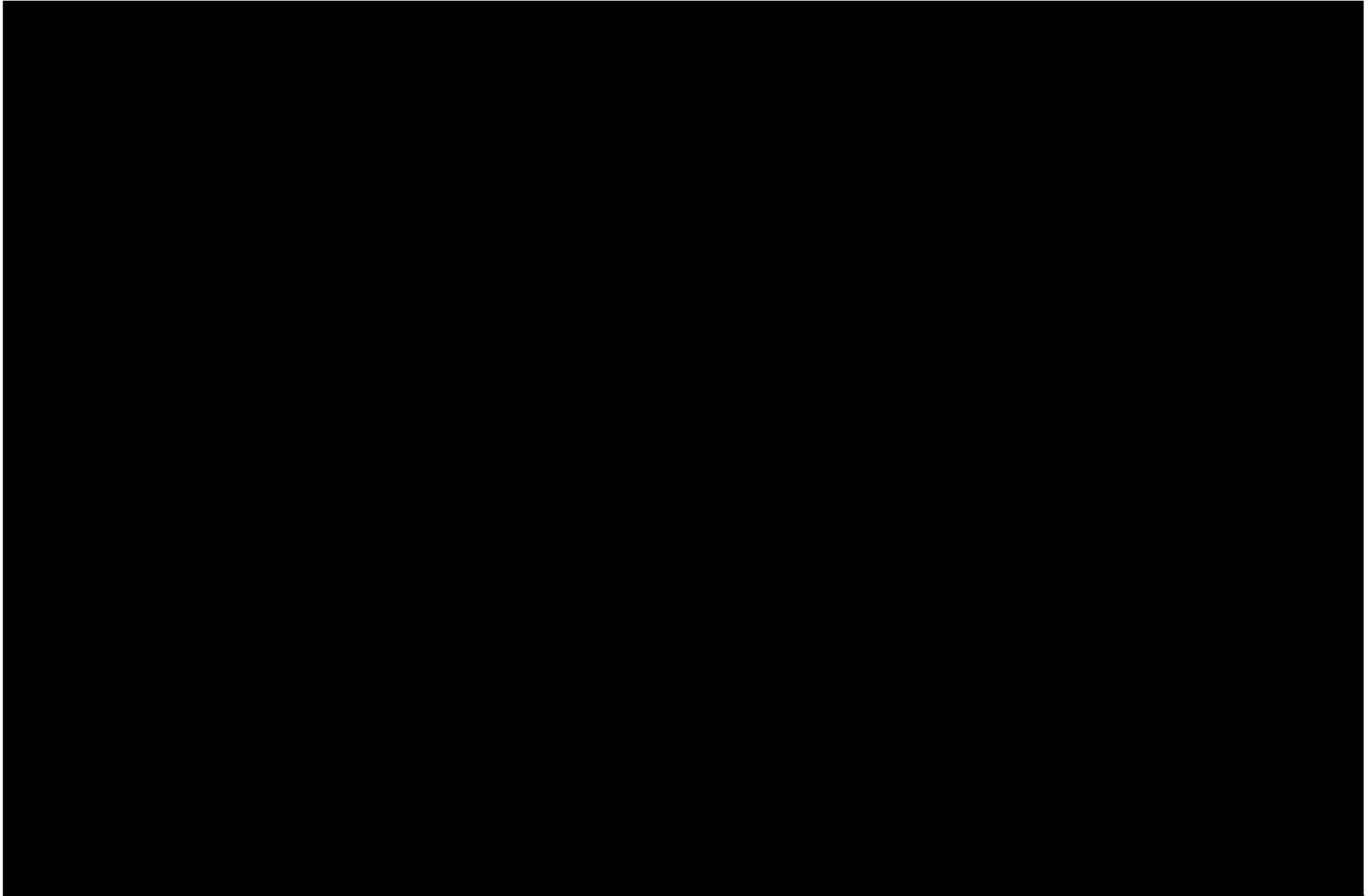


Net-centricity



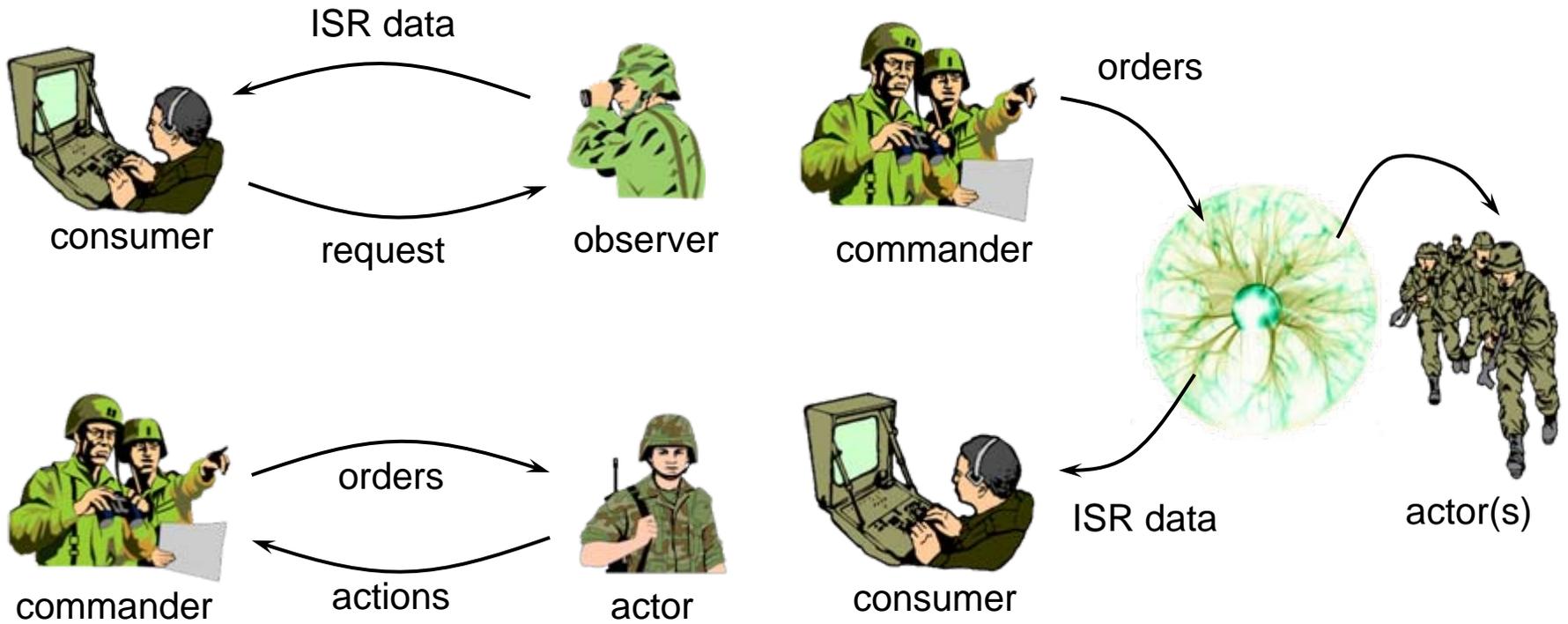


Net-Centricity, The Movie





Implications



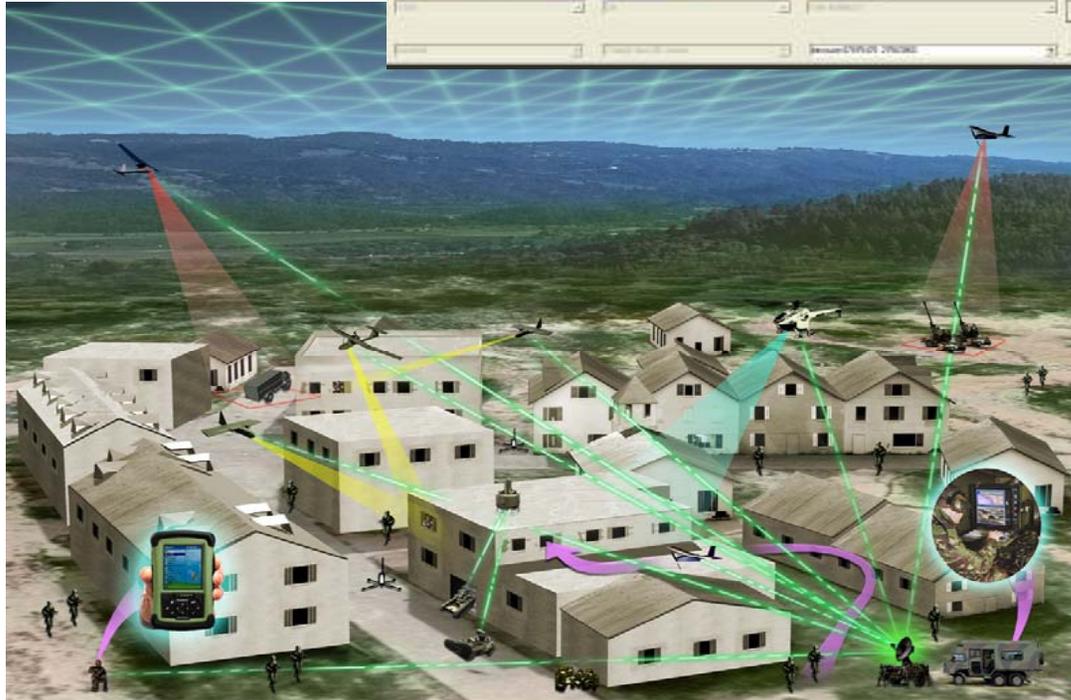
Traditional point-to-point C2

Modern net-centric C2

Information Non-Attribution



HURT Program





Command Modes



- **Command-by-direction**
 - Centralizes uncertainty
- **Command-by-plan**
 - Prioritizes uncertainty
- **Command-by-influence**
 - Distributes uncertainty





Centralized vs Decentralized Control?



- **Does this dynamic encourage micromanagement or decentralized control?**
- **Consider other social networking capabilities/phenomenon**



Control Decentralization



- **Contrast to command-by-direction**
- **Fully supports *commander's intent***
- **Compare to *loosely-coupled complex dynamic system***
- **Ultimate realization: *C2 in cyberspace***
 - No physical AORs
 - Actors are remote
 - Threats are distributed
 - A driver of *policy-based decision-making*



The Future



- **Increasing role for *commander's intent***
 - Formal M2M expressions
 - Role as the *information manager*
 - Authorization agent
- **Disguising Innovation**
- **Less *direction*, more *orchestration***
- **Cyber warfare**
- ***The gatekeepers of information***



Questions/Discussion