

INTEROPERABILITY



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Given a Choice...

SYSTEM A



SYSTEM B



- Two systems identical in all specifications
- Equal in price
- However, System A cannot access the Internet

Which would you choose?

We are being challenged to change

- **Battlespace entities (platforms, units, sensors, shooters) must be designed “net-ready.”**

Network Centric Warfare, DOD Report to Congress, 27 July 2001

- **The Defense Department should take pains to ensure that when it draws up budgets, it invests in systems and programs that are interoperable ...”**

VADM Arthur Cebrowski, Director Office of Force Transformation



Everyone is expected to foster “transformation”; BUT...

“Change is an unnatural act, particularly in successful companies [and, by inference, in government and elsewhere]; powerful forces are at work to avoid it at all costs.”

Michael E. Porter, Professor, Harvard Business School



Interoperability

The ability of systems, units or forces to provide services to and accept services from other systems, units or forces and use the services to enable them to operate effectively together.

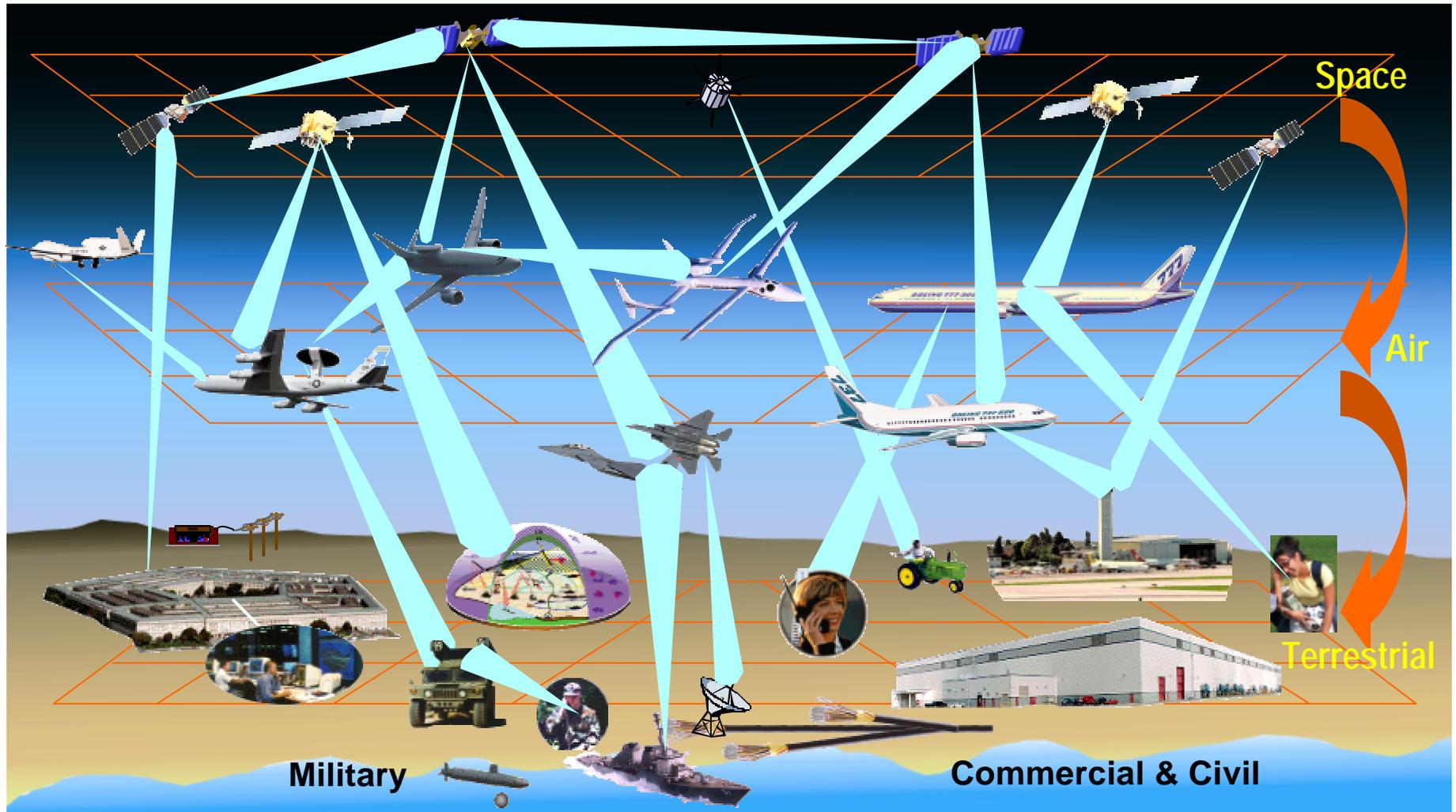
JCS Pub 1.02



How to proceed?

- **The goal is not to predict the future, but to imagine a future made possible by change**
- **The path to the future will likely be evolutionary, not revolutionary**
- **There is a profitable and affordable business case for DOD:
Conducting operations in a network centric environment
will dramatically increase mission effectiveness**
- **There is a profitable and affordable business case for industry**

Global Information Environment



Seamless access to information anytime, anywhere

Observations

- **Capabilities based RFPs have arrived—e.g.:**
 - **Future Combat System**
 - **Integrated Deepwater System**
 - **Others on the way (ForceNet? MC2A/C?)**
- **Commerce & industry drive technology—get used to it**
- **Commercial standards can, should drive interoperability in military systems**

Boeing has accepted the challenge

- **Organization with the charter and funding to lead transformation to network centric operations**
- **Common view of the Global Information Environment**
- **Strategy integrated across business organizations**
- **Strategy drives investment**



Strategic Architecture

“Transitioning Vision Into Reality”

- Lead Boeing transformation to network centric operations
- Develop comprehensive Network Centric architecture (Integrated communication and information architecture)
- Deploy in Boeing systems
- Continue to evolve the Boeing Integration Center



*“Ensure and certify the interoperability” ...
of all Boeing systems*

Environment is essential, but...

- **“All the high-tech weapons in the world won’t transform our Armed Forces, unless we also transform the way we think, train, exercise and fight.”**

Donald Runsfeld, Secretary of Defense, 31 January 2002

- **Transformation equally important in requirements, design, development, testing & deployment of new capabilities**
- **Industry must transform itself along with its customers**
- **Q.E.D.?**

