

Command & Control at the Edge

**10th International Command & Control Research and
Technology Symposium**

*June 15, 2005
McLean, Virginia*

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Thought Piece on Edge Organizations

- *Edge Organizations Best Suited for Realizing Power to the Edge*
- *Humanity at the Nodes Complicates Things*
- *Machines' Lack of Humanity Can Potentially Enable True Peer to Peer Constructs*
- *3 Layer Interactive Dynamic May Require Alternate Models of Command and Control*
 - *Man to Man, Man to Machine, Machine to Machine*
- *Effective C2 at Layers 2 and 3 May Require Some Surrender of Human Control*

Power to the Edge Vision

“People throughout the trusted, dependable and ubiquitous network are empowered by their ability to access information and recognized for the inputs they provide.”

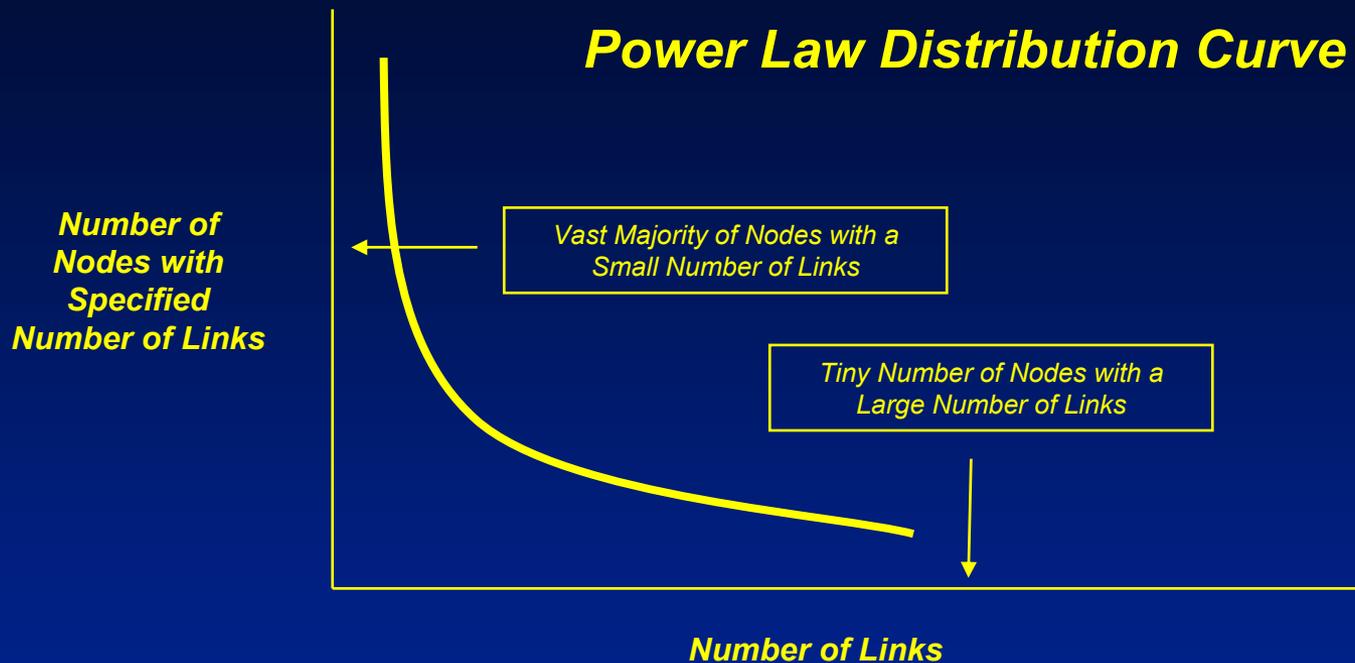
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About the Empowerment of Individuals at the Edge...

Human Nature and Edge Organizations

- ***Hierarchy and Power***
 - ***Horizontal Competition Between Independent Agents Exerting Free Will***
- ***Enlightened Self Interest vs. Altruistic Reciprocity***
 - ***1st Person vs. 3rd Person Analytical Constructs – Every Person Has Standing in this Field***
 - ***Examples***
 - ***Cultural Resistance to Change – e.g., NCW Concepts***
 - ***Commercialization of the Internet***
 - ***Corporate Boardrooms, Playgrounds, Politics, Religion***
 - ***Radical Extremism***
- ***Hierarchy and Non Self Interested Behavior***
- ***P2P Nodal Equivalence vs. Human Differentiation***

Ubiquitous Connectivity Implications



- **Scale Free Philosophy Implies Nodal Expendability**
- **Small Failures Bred into System to Avoid Fatal Breakdowns**
- **Dynamic Trade Off Between Hub vs. Node Exposure**

Implications – Increasing Substitution of Machines for Man

The Machine World

- ***Cognitive/Social Realms***
 - ***Price of Admission – Human Consciousness***
 - ***Shared Awareness / Self Synchronization Prerequisite***
- ***Cannot Perceive Self and Think About Thinking***
- ***Lack of Sentience, Ambition, Volition***
 - ***Absence of “I” or “Me” – No Social Environment for Free Agent Interaction***
- ***Pure 3rd Person Dynamic***
- ***Doing vs. Being***
- ***Transducer Physiology***
- ***May Overcome Human “Defect” of Whimsicality***

Man vs. Machine – a Continuum of Dualities

Man to Man

- Hierarchy vs. Peer to Peer
- Individual vs. Organization
- Selfish vs. Selfless Behavior
- Self Awareness vs. Shared Awareness

Man to Machine

- Sentience vs. Unconsciousness
- Self Awareness vs. Nonexistence
- First Person vs. Third Person
- Being vs. Doing
- Higher vs. Lower Level Existence

Machine to Machine

- Response / Stimulus vs. Knowledge / Thing Known
- Supervised vs. Competitive Learning
- Transducer Physiology
- Small #'s vs. Large #'s

*Synchronous vs.
Asynchronous Transactions*

***Edge Organization Constructs
Must Account for Interaction
Within & Across All Three Layers***

