

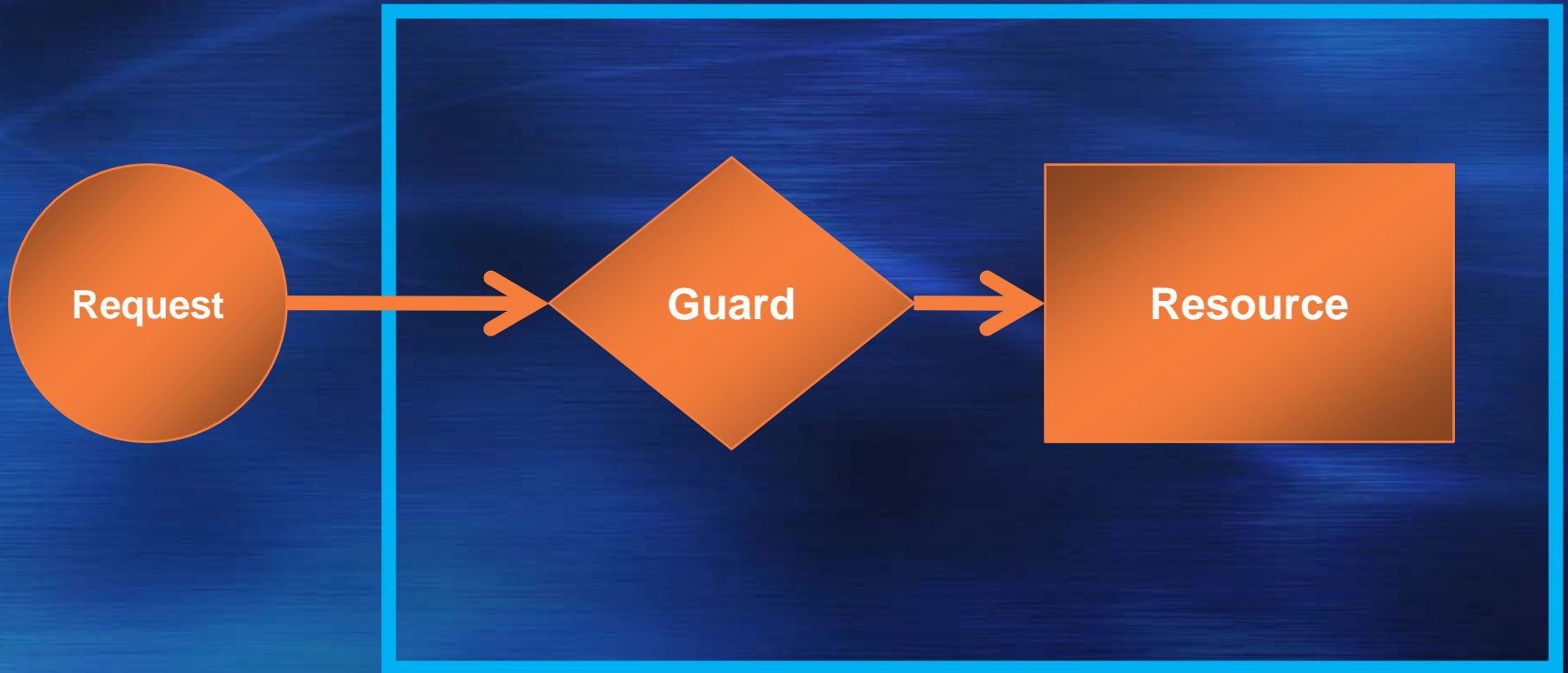
# **Security Architecture Implications of De-Perimeterization**

Carl Ellison

Microsoft

11 September 2007

# Standard Security Model



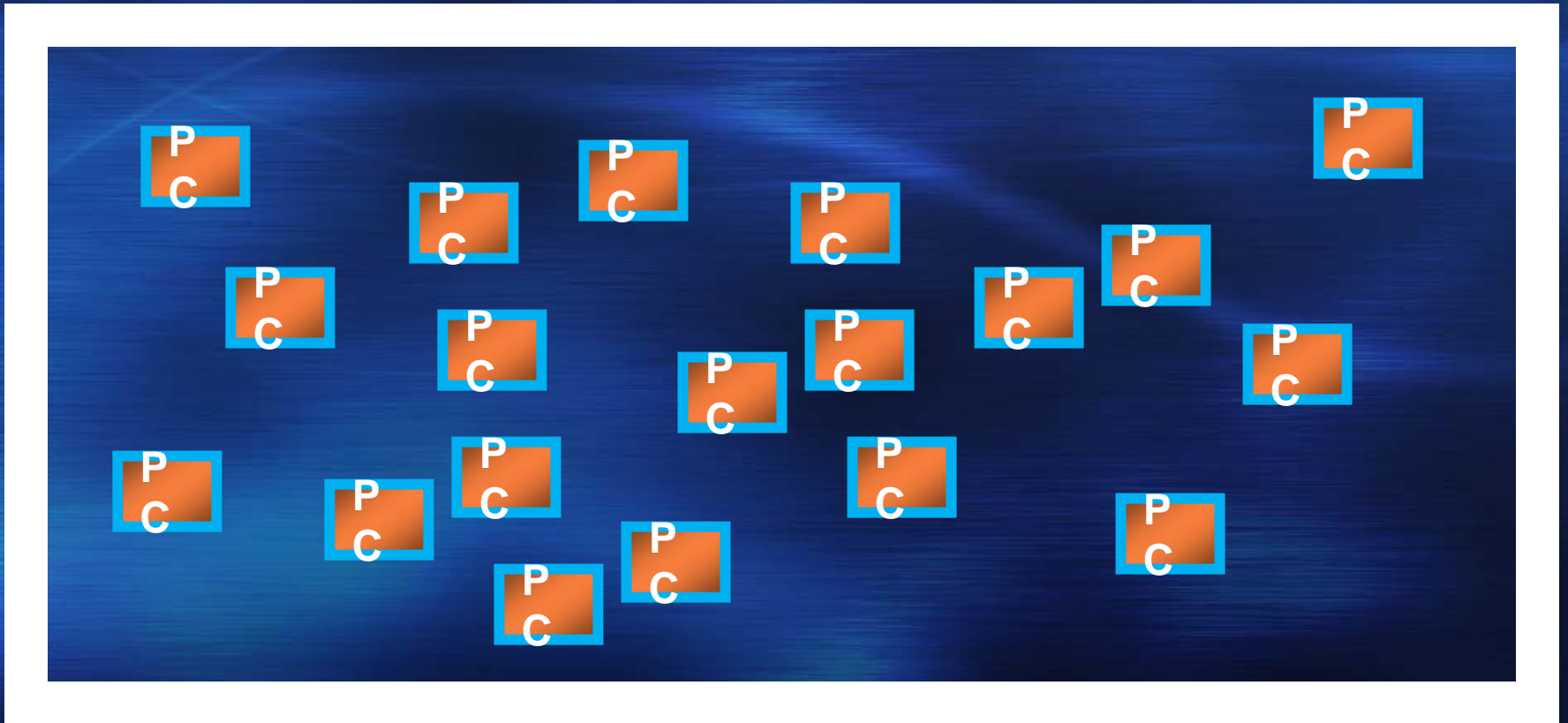
# History of Isolation

- 1940: “What’s a computer?”
- 1950: Raised-floor, glass room
- 1960: I/O Window
- 1970: Time-sharing on mainframes
- 1980: Emergence of workstations
- 1990: PCs; client-server; Intranet
- 2000: “What’s isolation?”

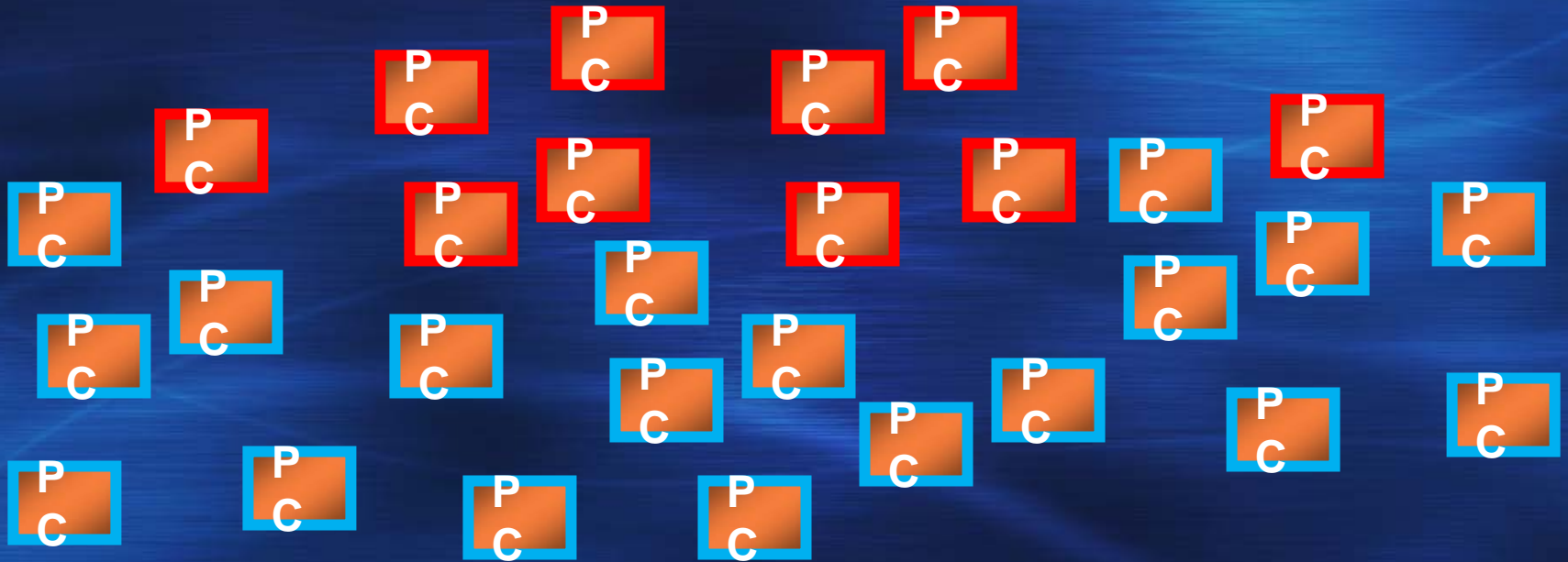
# Effects of Metcalfe's Law

- Value  $\propto N^2$
- Networking
  - E-mail – not just nice – DEMAND
  - WWW – DEMAND
  - Telecommuting
  - Collaboration
- Software
  - Success of PC > Mac > UNIX
  - Windows 95
  - ActiveX & Vista Sidebar

# Corporate Intranet



# Host Firewall



**PC with Host Firewall**

# The Isolation Pendulum



ON

more secure

OFF

# The Isolation Pendulum



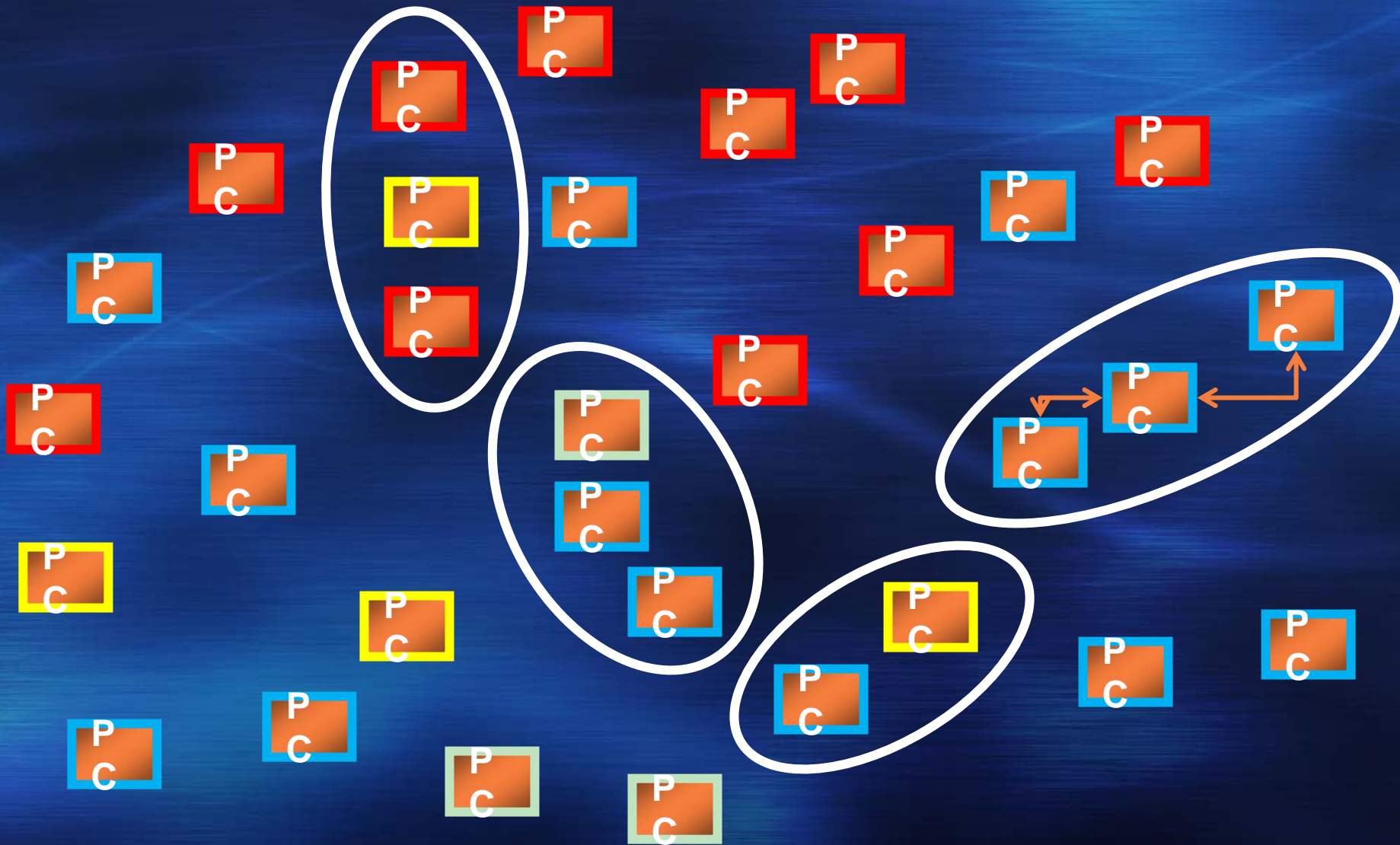
**ON**

more secure

**OFF**

more successful

# One Network



# Server and Domain Isolation

- Uses IPsec
- Created for the Intranet
  - Compliance – separating corporate functions
  - Security – unguarded Ethernet jacks
  - Security – Network Access Protection
- Applied on the Internet, we get both isolation and the single network.
  - [This usage hasn't been fully tested and may reveal additional work to do.]

# The ANSWER

Re-

~~De~~-Perimeterization

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