

# Inside Social Network Analysis

What it is, what it can do and what it means to you

# Objective

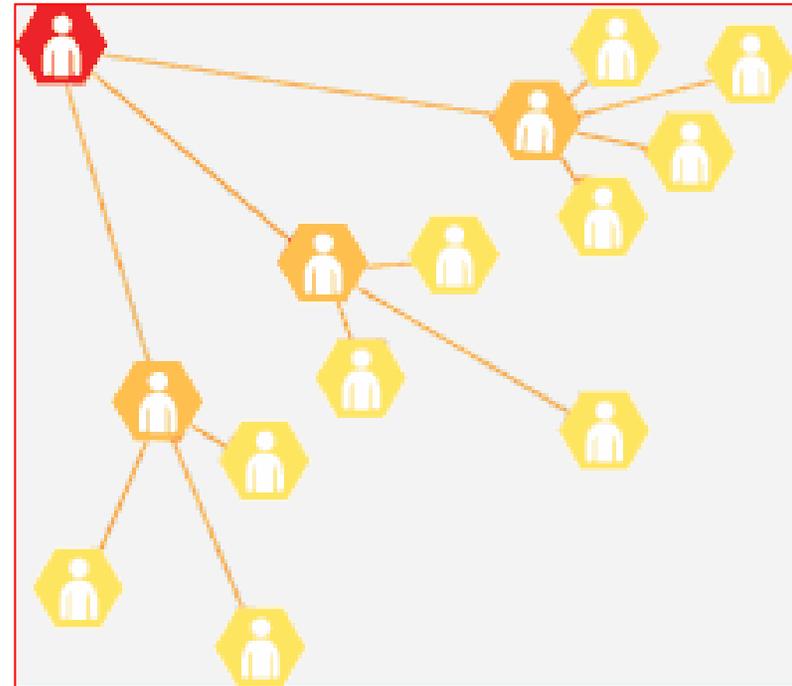
- To provide you with a brief introduction to the major concepts behind SNA
  - Give you some illustrations of SNA as an effective method for revealing the hidden connections that drive the way work gets done
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# Agenda

- What Social Network Analysis is
  - Brief History of SNA
  - How it differs from conventional approaches to solving business problems
  - The way we use SNA: typical business applications
  - How to conduct a social network analysis
  - Benefits of social network analysis
  - Questions
-

# What is Social Network Analysis?

- SNA is a way to examine the structure of social relationships within a group and uncover informal connections
- SNA is a management tool for mapping and measuring these connections
- It enables us to see how and with whom:
  - people interact
  - information flows
  - knowledge is channeled
  - decisions get made
  - ideas move from inception to innovation
  - resources are handled
  - problems are solved

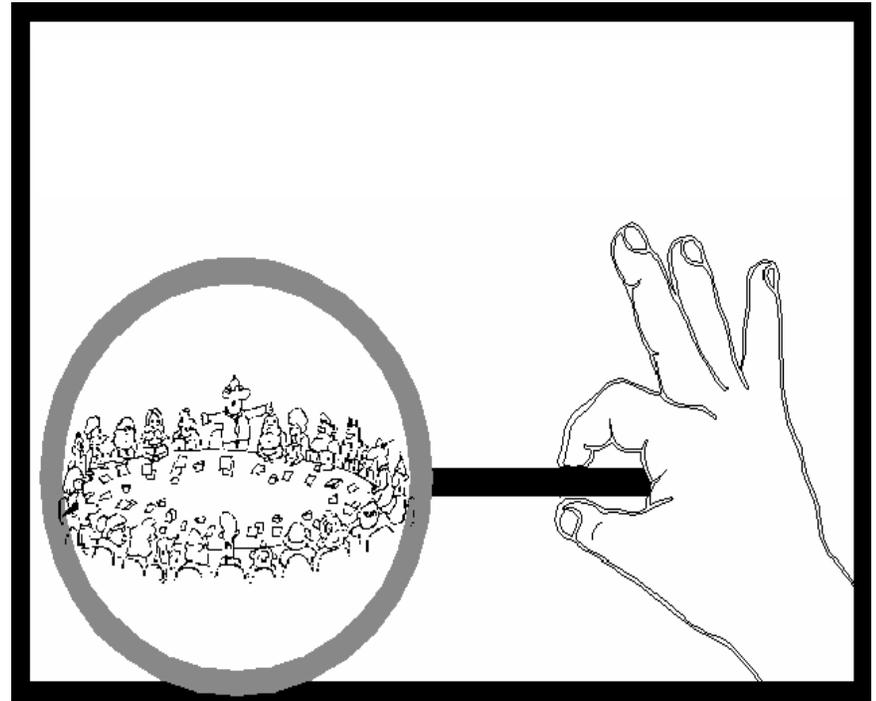


# History of SNA

- 1934 – Joseph Moreno’s work in sociometry
  - 1970’s – advances in computer technology made it possible to study large groups using Moreno’s analytical models and measures
  - Today – SNA is prominent in organizational behavior, anthropology, sociology, medicine and homeland security
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# How SNA is different

- SNA assumes that all people are interdependent
- This assumption is radically different from traditional research approaches
- They assume that what people do, think and feel is independent of who they know

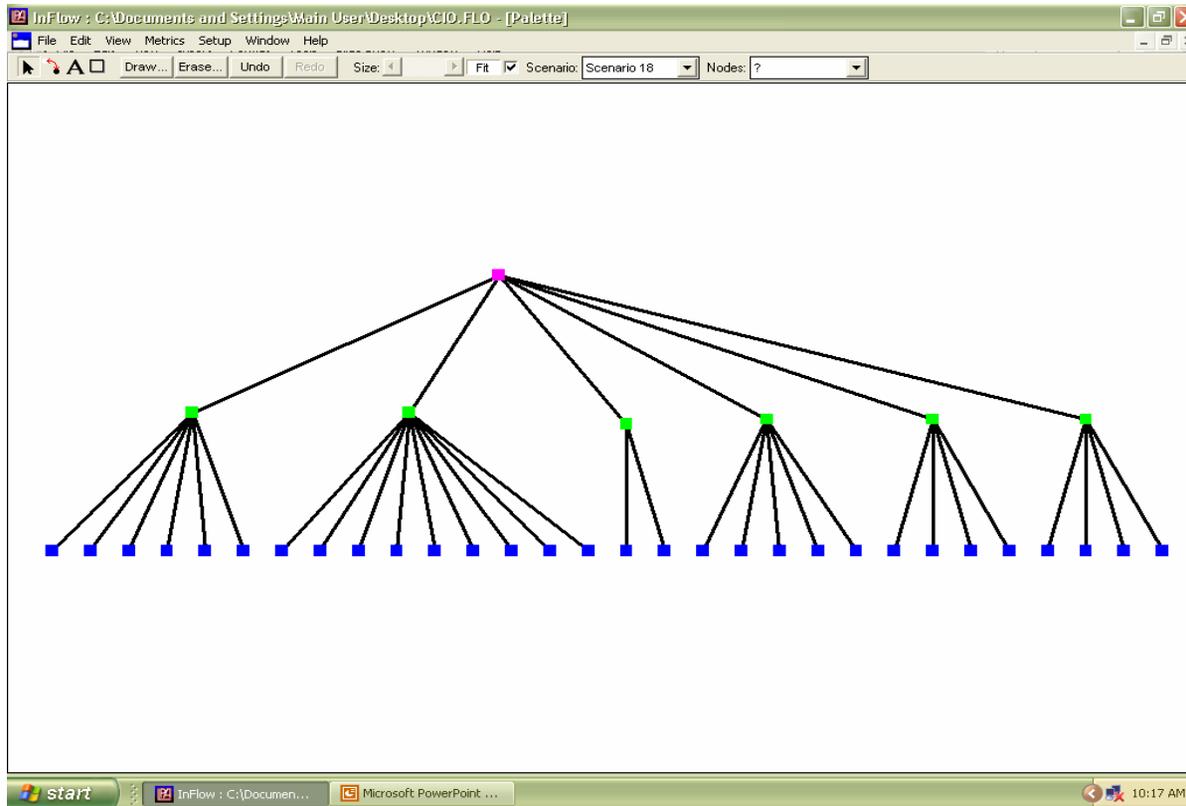


# Missed Opportunities vs. Success

- In the past, we relied on typical, flat surveys to understand root causes of missed opportunities
- In a networked world, success depends less on reporting structure and more on an informal web of contacts

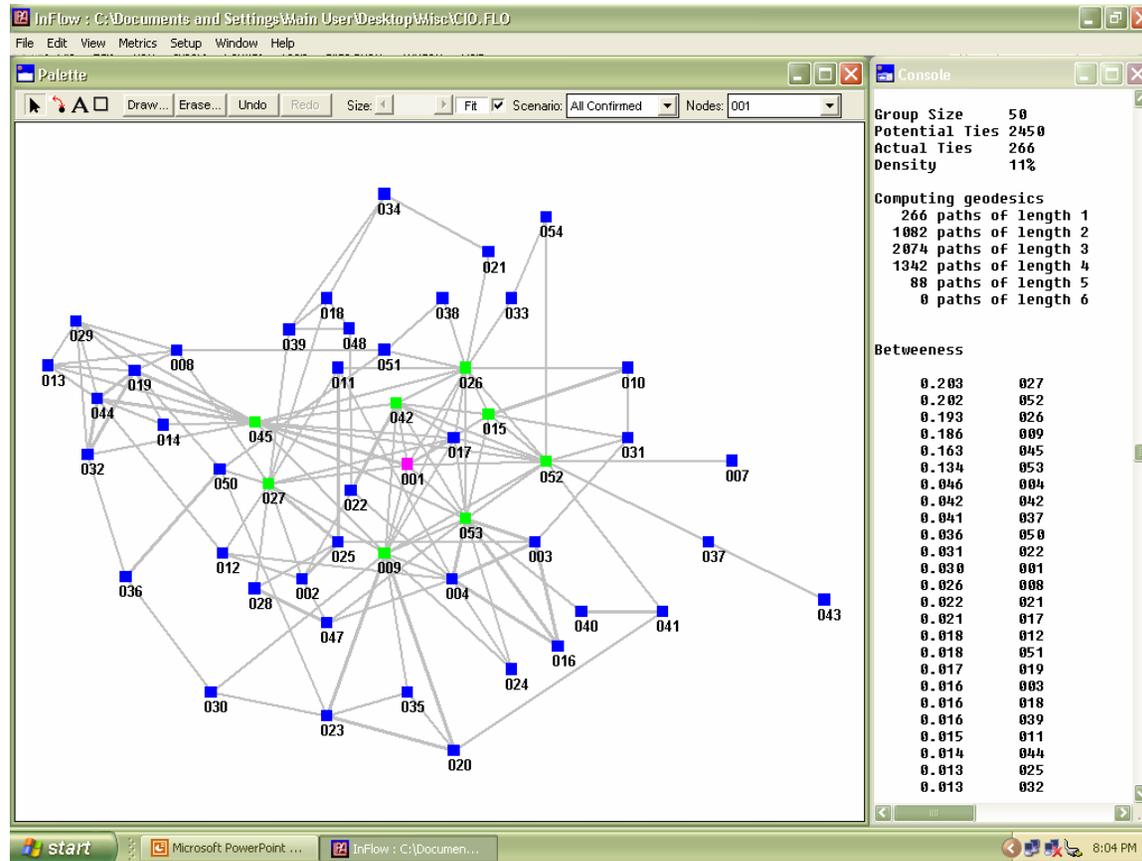


# Traditional Structure



***Network Map 1:** Traditional Hierarchical Organization Chart (prescribed network). Pink dot is the CEO, green are his direct reports, blue are their direct reports.*

# Networked Structure



*Network Map 2: Same organization, with connections “mapped” where collaboration occurs and information flows (emergent network)*

# Typical SNA Applications

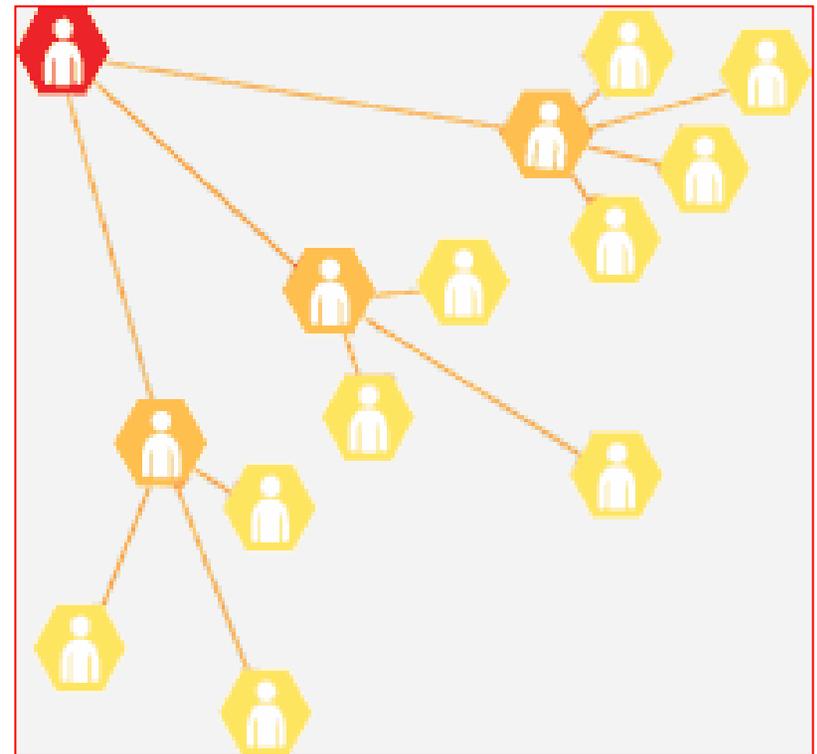
- Cross-Boundary Teams
  - Project Management
  - Succession Planning
  - Leadership Development
  - Onboarding/Assimilation
  - Post Merger Integration
  - Leadership Alignment
  - Diversity & Inclusion
  - Large Scale Change
  - Knowledge Management
  - Organization Design
  - Expert Location
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# Conducting a Social Network Analysis

- Three important elements
    - A group
    - Interactions
    - Attributes
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# How SNA Works – The Process

- Project Shaping and Data Collection
- Border Mapping™
  - Network Mapping
  - Quantitative Analysis
  - Reporting
- Border Crossing™
  - Client Feedback
  - Next Steps



# What can “ties” reveal?

- Whether ties are direct or indirect
  - Whether a person is “central”
  - What is the average path length within a group or organization
  - Whether ties are reciprocated or one directional
  - Whether the people are “bridgers,” “bonders,” or “isolators”
  - The range of relationship types
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# Prominent Ties

- ***Bridging***

- = Brokering
- = *between* “them”
- ***Yields:***
  - Access
  - Resources
  - Innovation
  - Impact
  - Profit

- ***Bonding***

- = Becoming “us”
  - = *within* groups
  - ***Yields:***
    - Affinity
    - Efficiency
    - Trust
    - Support
    - Community
-

# Weaving Healthy Networks

- 5 Patterns of Healthy Networks:
    - Birds of a feather flock together
    - Diversity is important
    - Several pathways between any two points
    - Some points are more prominent than others (*hubs, brokers, boundary spanners*)
    - The average path length is very short
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# Your Turn:

## A Self-Assessment



# Examples of SNA Projects

SNA “maps” were produced using InFlow software by  
Valdis Krebs of OrgNet.

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# Post-Merger Collaboration

- SNA revealed...
    - Where a cross-border collaboration and integration was working and where it was not
    - Continuing divisions between employees in a merged department that affected productivity
    - Opportunities to improve innovation in a research lab that had experienced 3 mergers in 4 years
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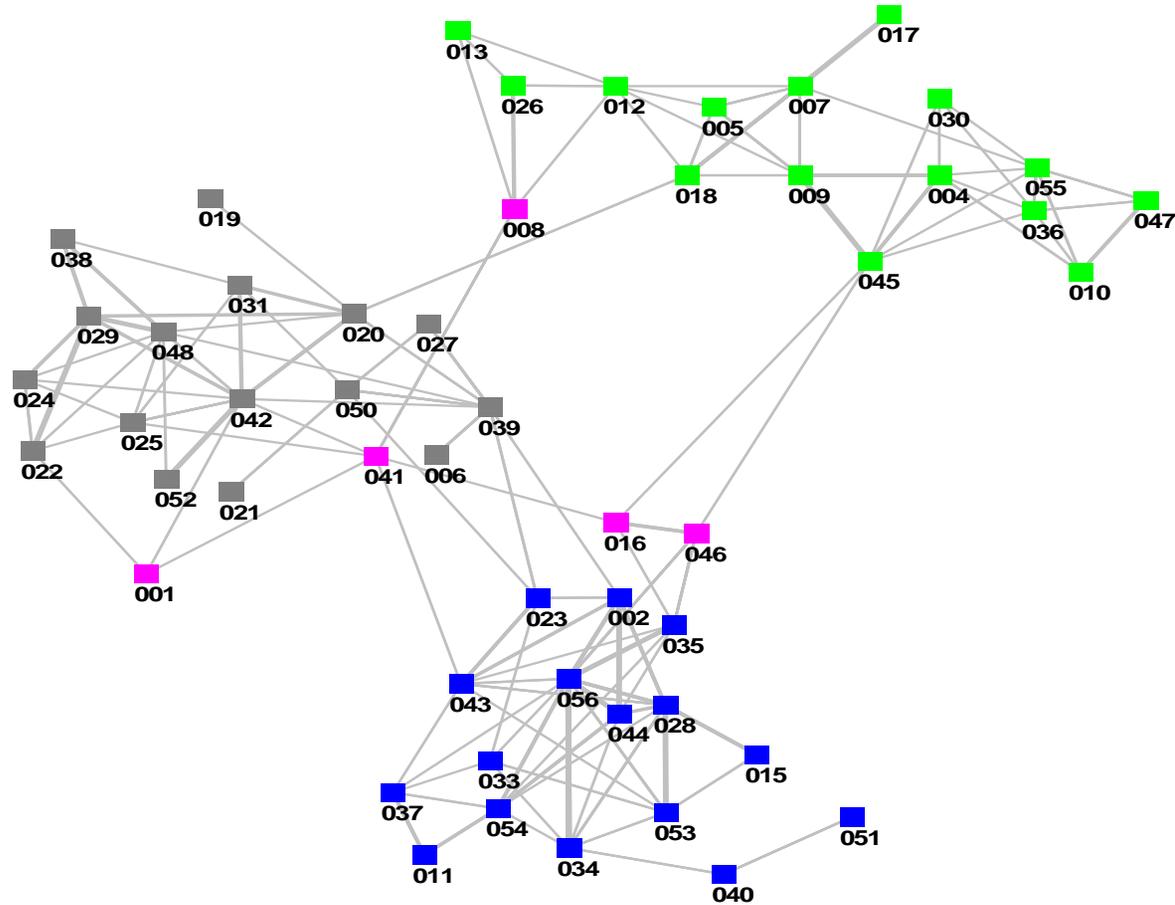
# Post-Merger Global Collaboration

*To:*



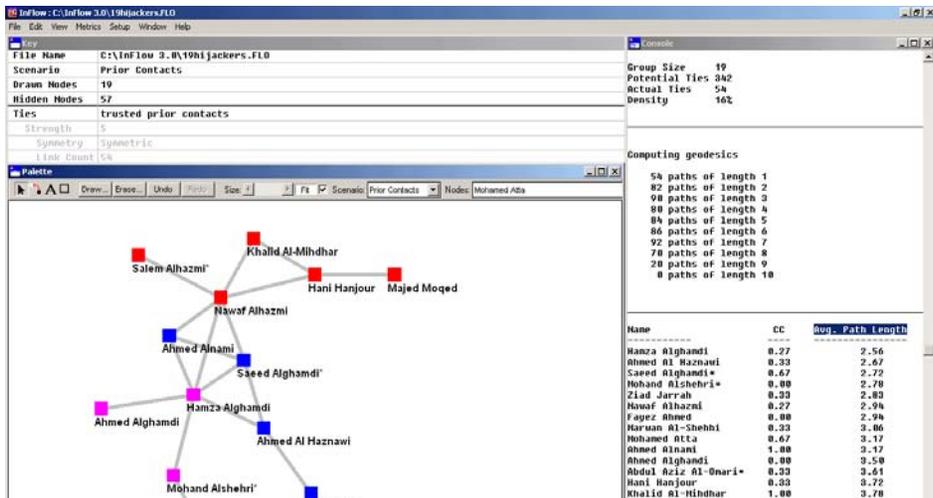
<i>From</i>	<b>C1</b>	<b>C2</b>	<b>C3</b>	<b>C4</b>	<b>C5</b>	<b>C6</b>	<b>C7</b>
<b>C1</b>	50%	3%	0%	19%	0%	5%	16%
<b>C2</b>	3%	100%	0%	0%	0%	0%	6%
<b>C3</b>	0%	0%	42%	0%	0%	2%	2%
<b>C4</b>	25%	0%	0%	75%	0%	0%	9%
<b>C5</b>	0%	0%	0%	0%	77%	2%	4%
<b>C6</b>	6%	1%	1%	0%	2%	45%	1%
<b>C7</b>	11%	4%	0%	2%	1%	1%	38%

# Research Lab (Communities of Practice)

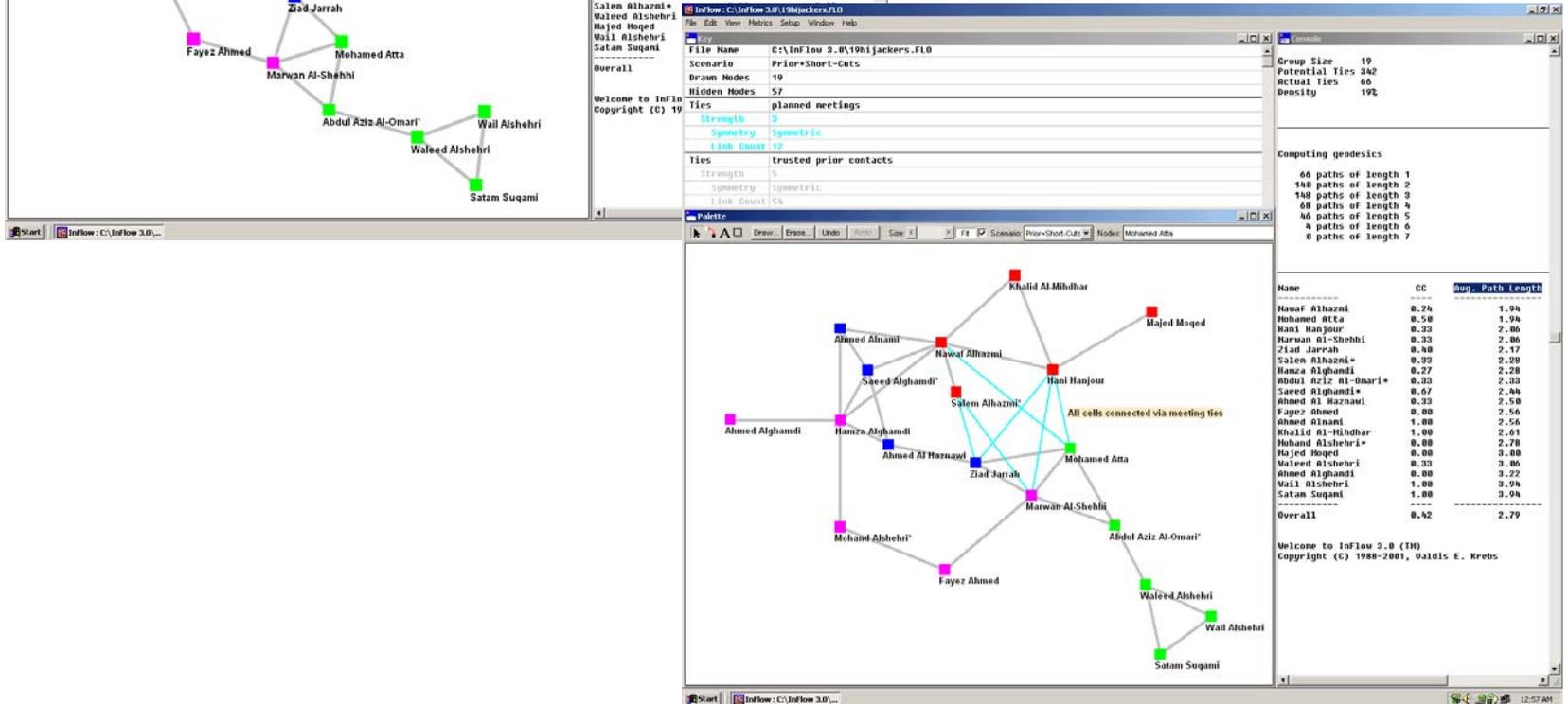


# Project Management Teams

- SNA revealed...
    - Disconnects in knowledge exchange between client's employees and hired contractors
    - Poor communication by sub-project managers
    - Isolation of project manager from key stakeholders
    - Disconnects between two vendors' on-site personnel
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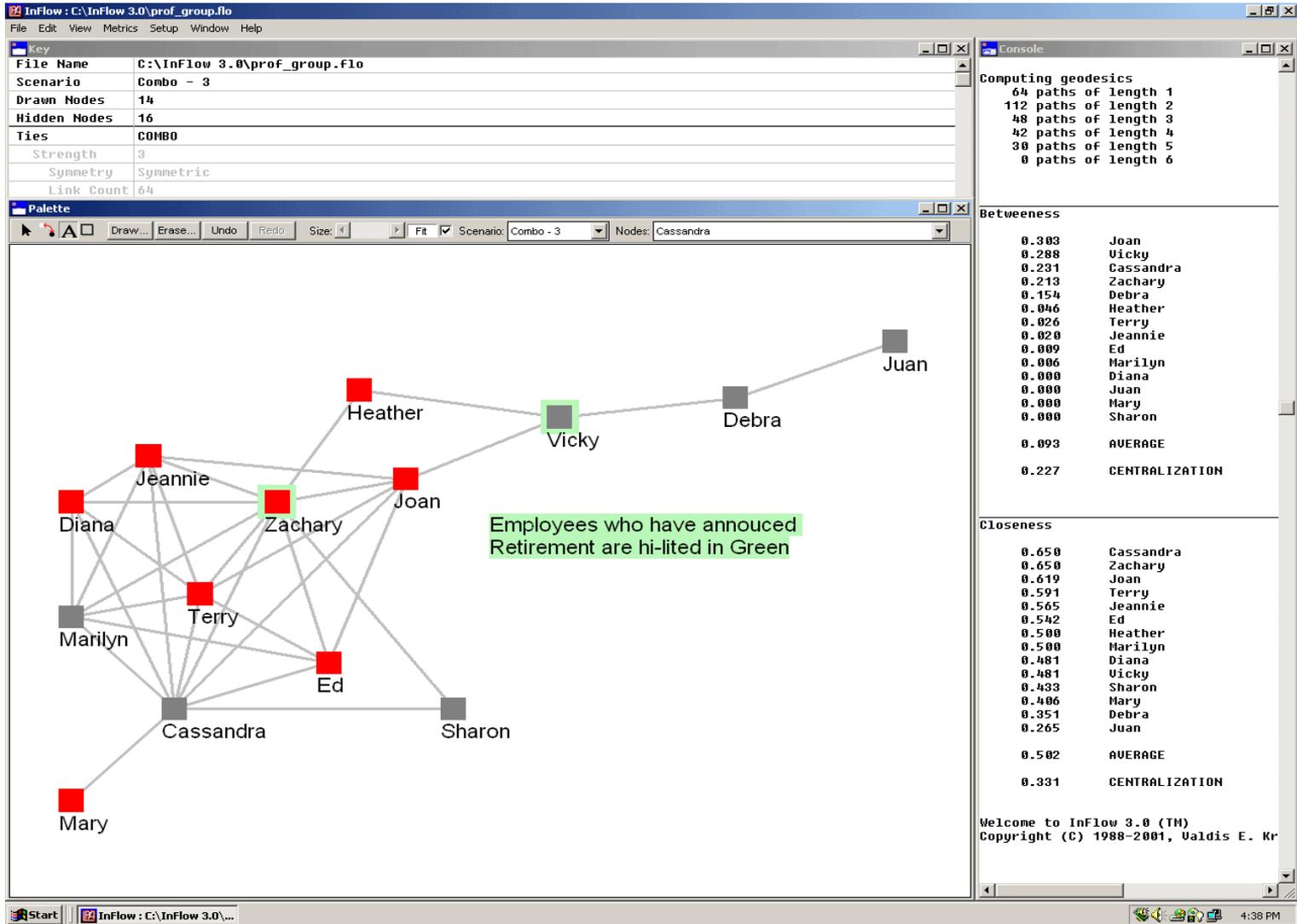


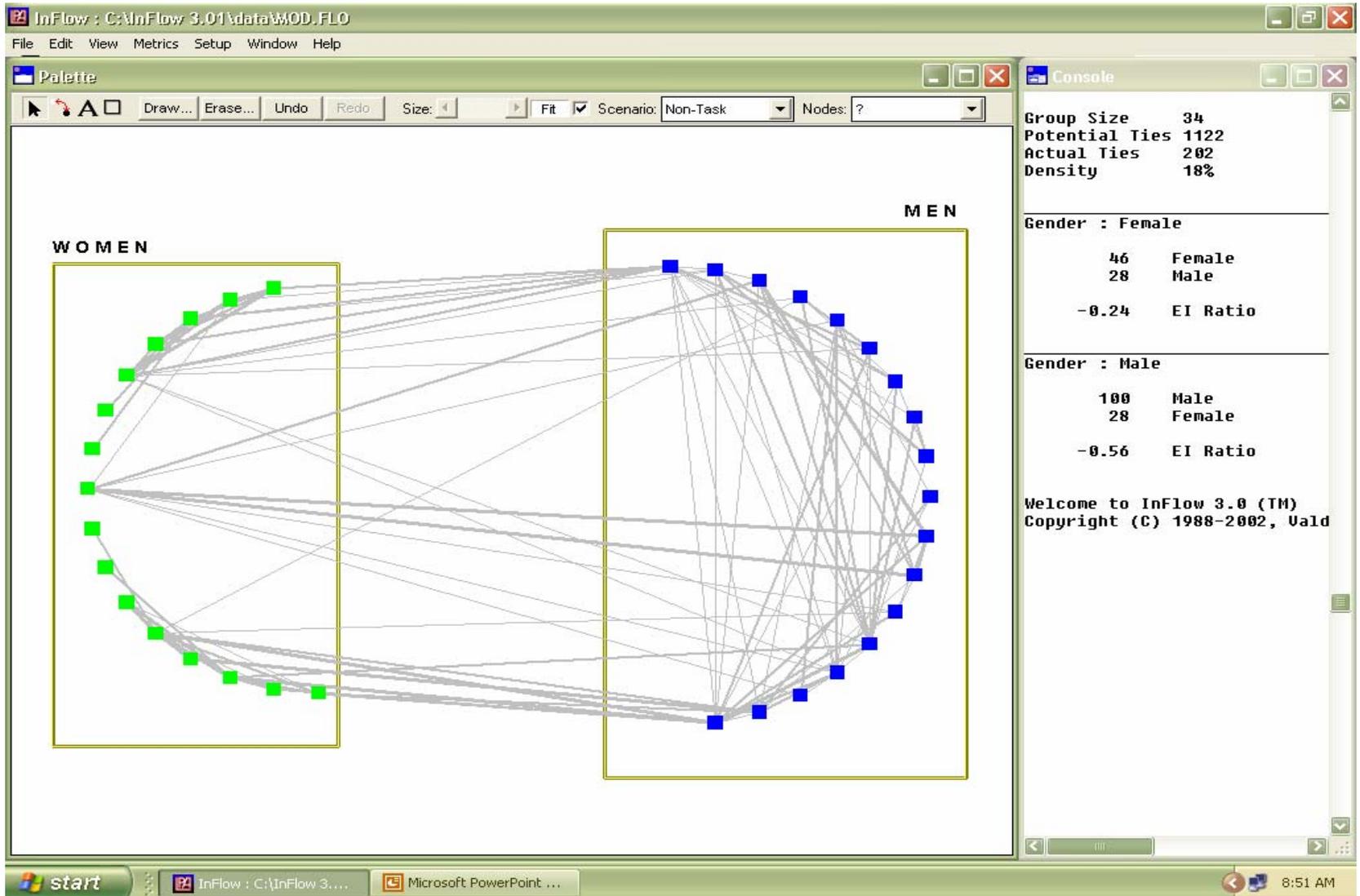
Adding a few **short-cuts** to the network reduces average path length significantly



# Human Resource Planning

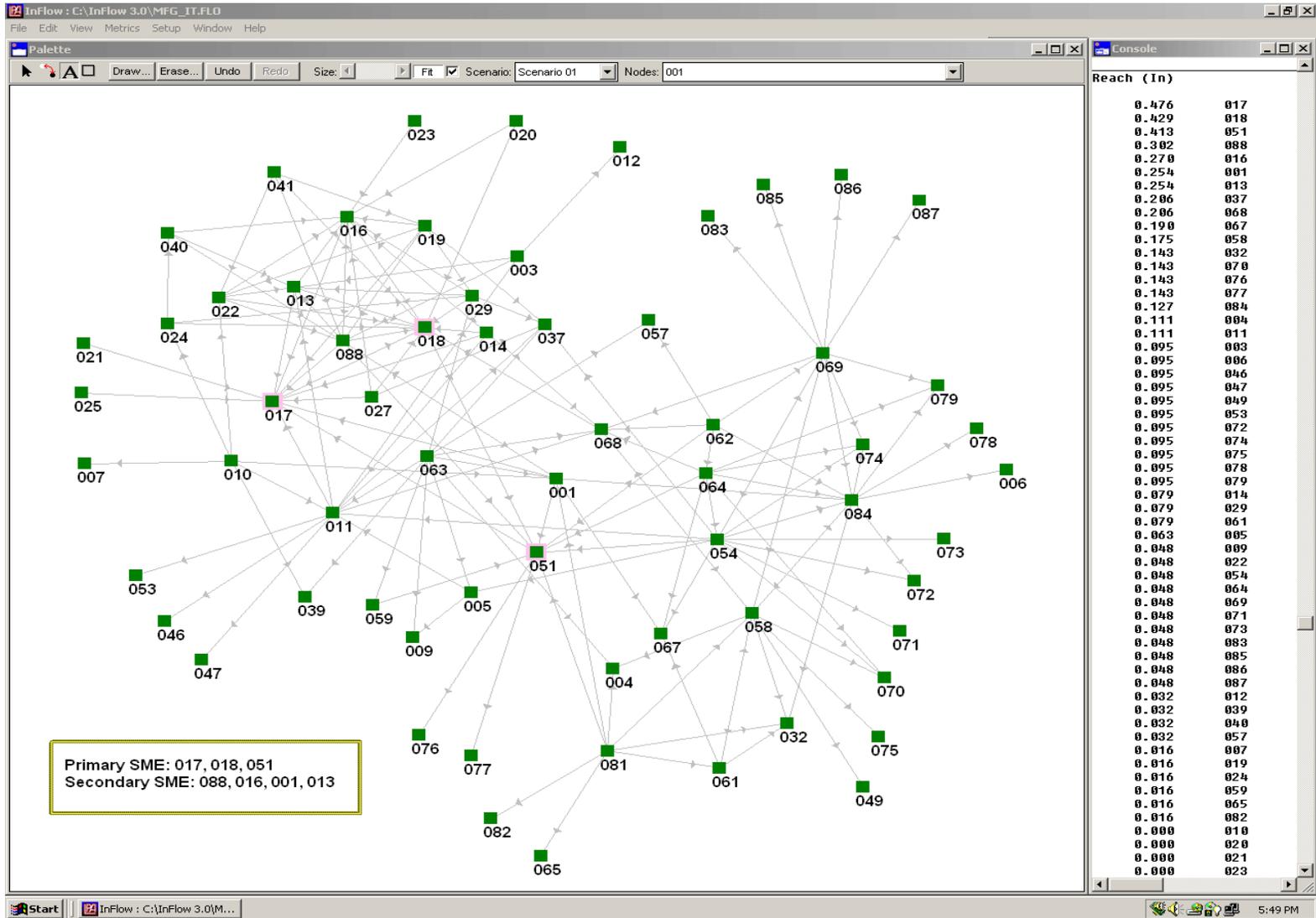
- SNA revealed...
    - What would happen to a management team when two key members retired
    - Need to target diversity efforts
    - The exclusion of some employees from advice and mentoring networks
    - Employees who could connect far reaches of the organization (i.e., key integrators for change management initiatives)
    - A better candidate for managing a key department
    - Bottlenecks in key business processes
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# Knowledge Management and Information Flow

- SNA revealed...
    - Subject Matter Experts in growing I/T organization
    - How scientists shared knowledge, information and discoveries with their peers and partners
    - Key knowledge integrators that management was not aware of
    - How tacit knowledge was and was not being shared in a global high-tech consulting organization
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# Matrix of Information Flow

	<i>Partner</i>	<i>Manager</i>	<i>Senior</i>	<i>Staff</i>
<i>Partner</i>	67%	23%	13%	3%
<i>Manager</i>	56%	46%	34%	27%
<i>Senior</i>	25%	24%	21%	18%
<i>Staff</i>	33%	36%	30%	21%

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# Marketing and Communications

- SNA revealed...
    - Key opinion leaders in a professional community
    - Key influencers among companies within an industry
    - A community's access to political leaders
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**Degrees (Out)**

0.250	Bottineau
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0.167	Dunn
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0.083	Billings
0.083	Divide
0.083	Golden Valle
0.083	Henry
0.083	McLean
0.083	Williams
0.000	McKenzie
0.000	Mercer
0.000	Renville
0.102	AVERAGE
0.174	CENTRALIZATI

**Degrees (In)**

0.583	McKenzie
0.417	Mercer
0.167	Renville
0.083	Henry
0.083	Mountrial
0.000	Billings
0.000	Bottineau
0.000	Burke
0.000	Divide
0.000	Dunn

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# Your Personal Network

- Research from David Krackhart of Carnegie Mellon says that, to be effective, you:
  - Need to be well connected in the network
  - Need to know the “map” of good connectors
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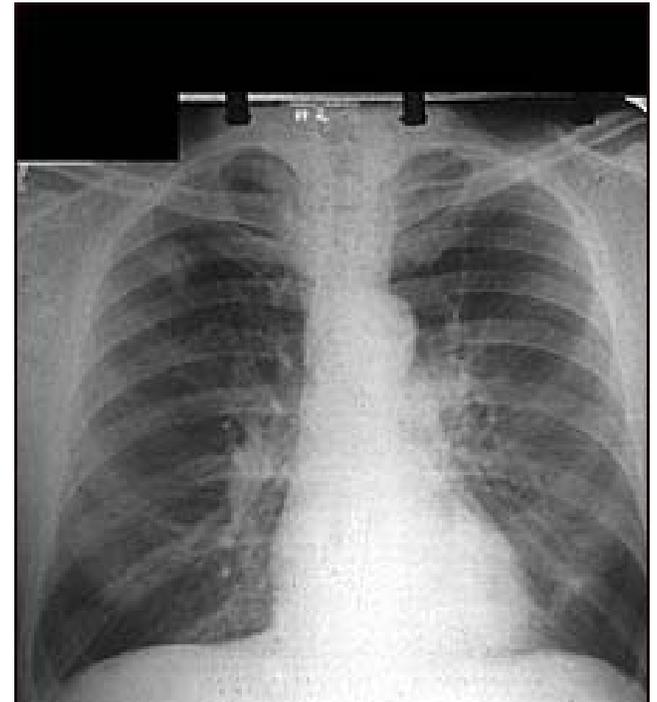
# Strategic Networking

- **Critical Points:**

- Strong positioning through strategic networking relationships can make the difference between career derailment and career success
  - Don't fall into the trap of dealing only with your immediate chain of command and support
  - Engage your team in building effective relationships beyond the team
  - Think strategically. There may be relationships that are not currently “bridgers,” “brokers,” or “connectors,” but will be later
  - Build a wide net of credibility and value
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# Benefits of Social Network Analysis

- By providing management with an X-ray of the internal relationships within the organization:
  - SNA uncovers blind spots that are not visible in traditional organization charts and they can influence performance and productivity in important ways



# Questions?

