Coolhunting Overview

Peter A. Gloor
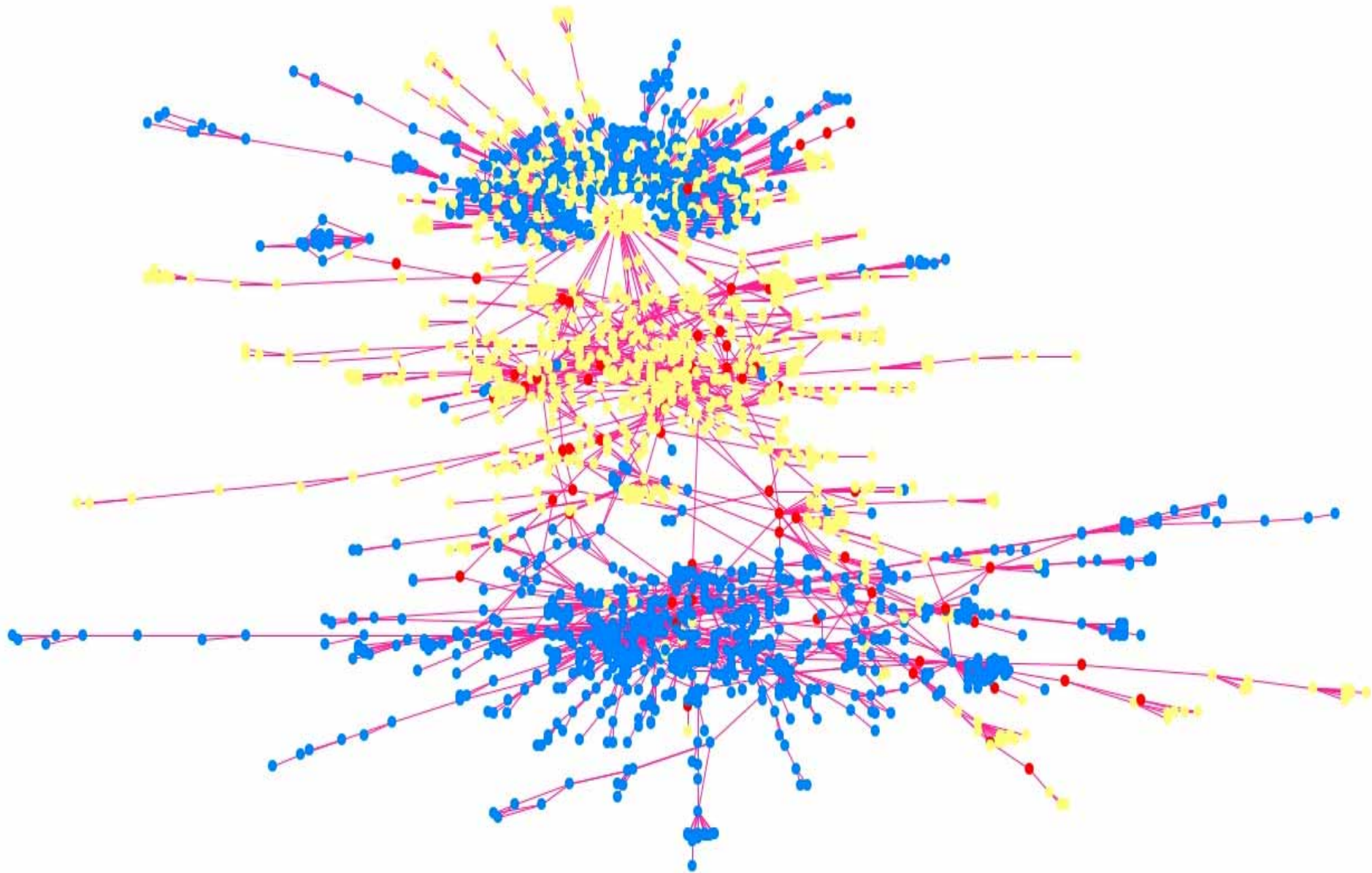### MIT Center for Collective Intelligence

Stand with Occupy Wall Street

Reader ⟳ Q▾ Google

People for Innovation
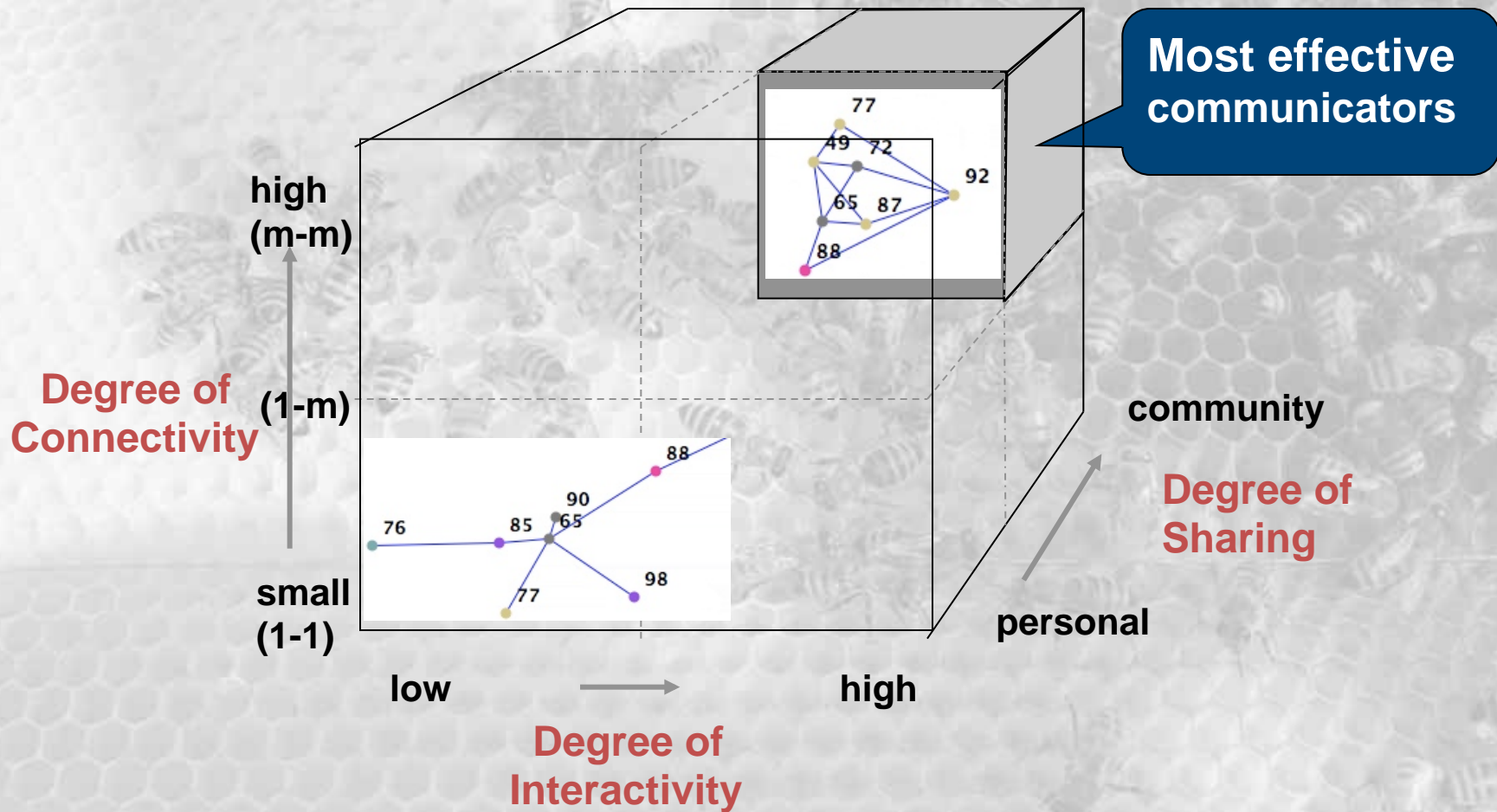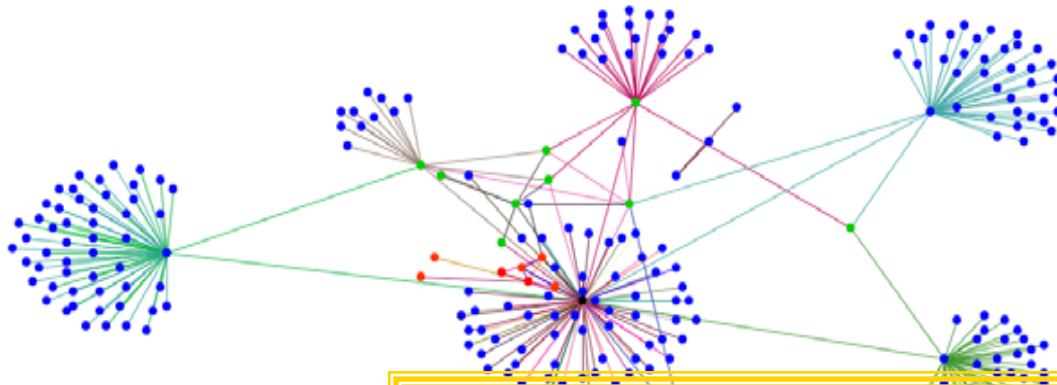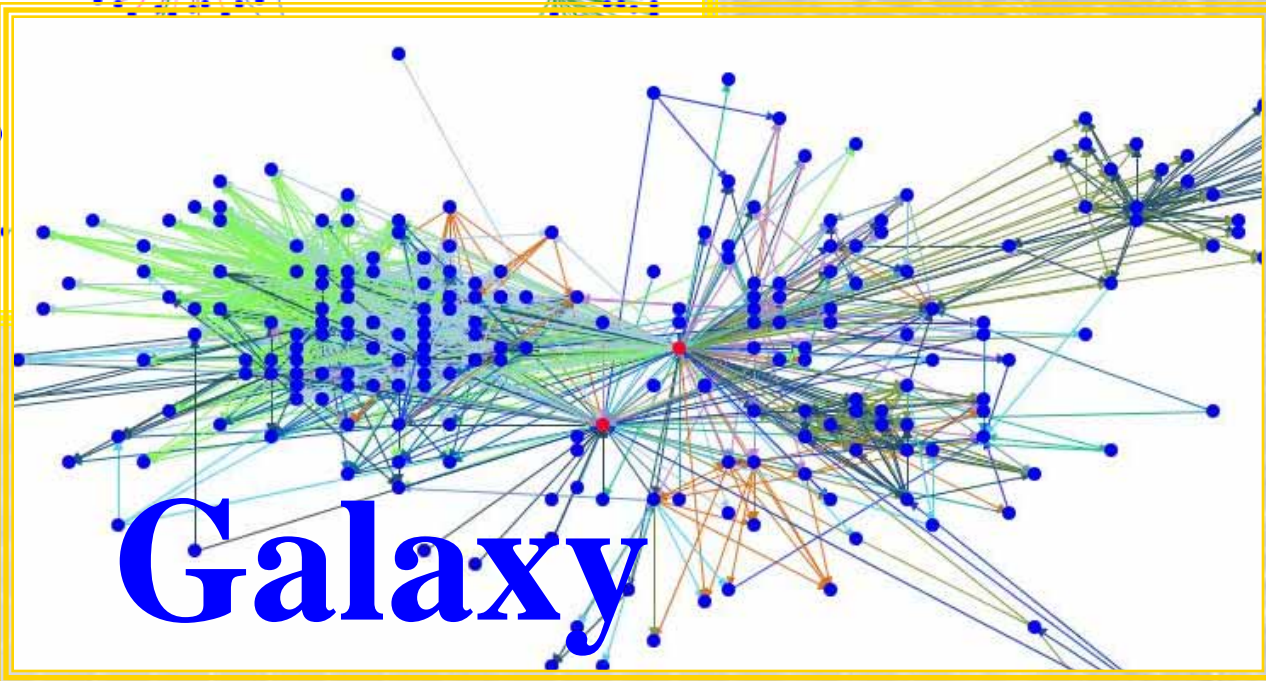
Star

Galaxy

Don't be a star, be a galaxy!
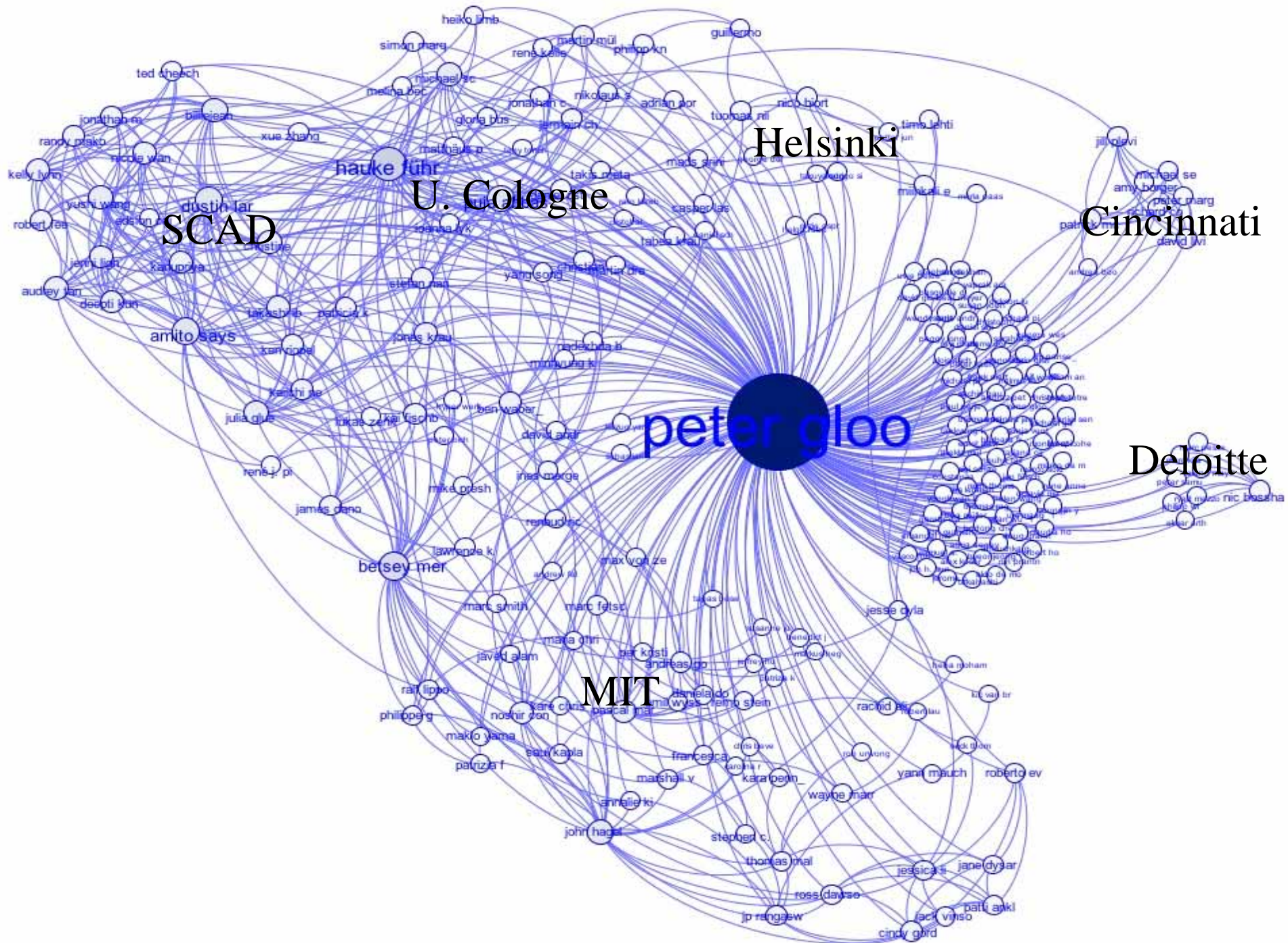
E-Mail Network (Jan 1, 2009 to Oct 17, 2011, >100 msgs)

Static Comm View for pgloor

Bipartite View Measure

Graph, TO and CC edges

Edges : 1293   Nodes : 164

ICIS panel

EC proposal

Cincinnati

fischbach@wim.uni-koeln.de
jkrauss@ikm.uni@scad.edu
j.gluesing@wayne.e
hfuchres@mit.edu
pgloor@mit.edu
snann
jermain@t-online.de

Coolhunting

Coolhunting Process

Input

Analysis

Output

Crowd
Twitter/Web
(Google, Bing, Yahoo)

Experts
Blogs/Wikipedia

Swarm
Forums/Facebook
(Fanpages)

Network

Trend

Content
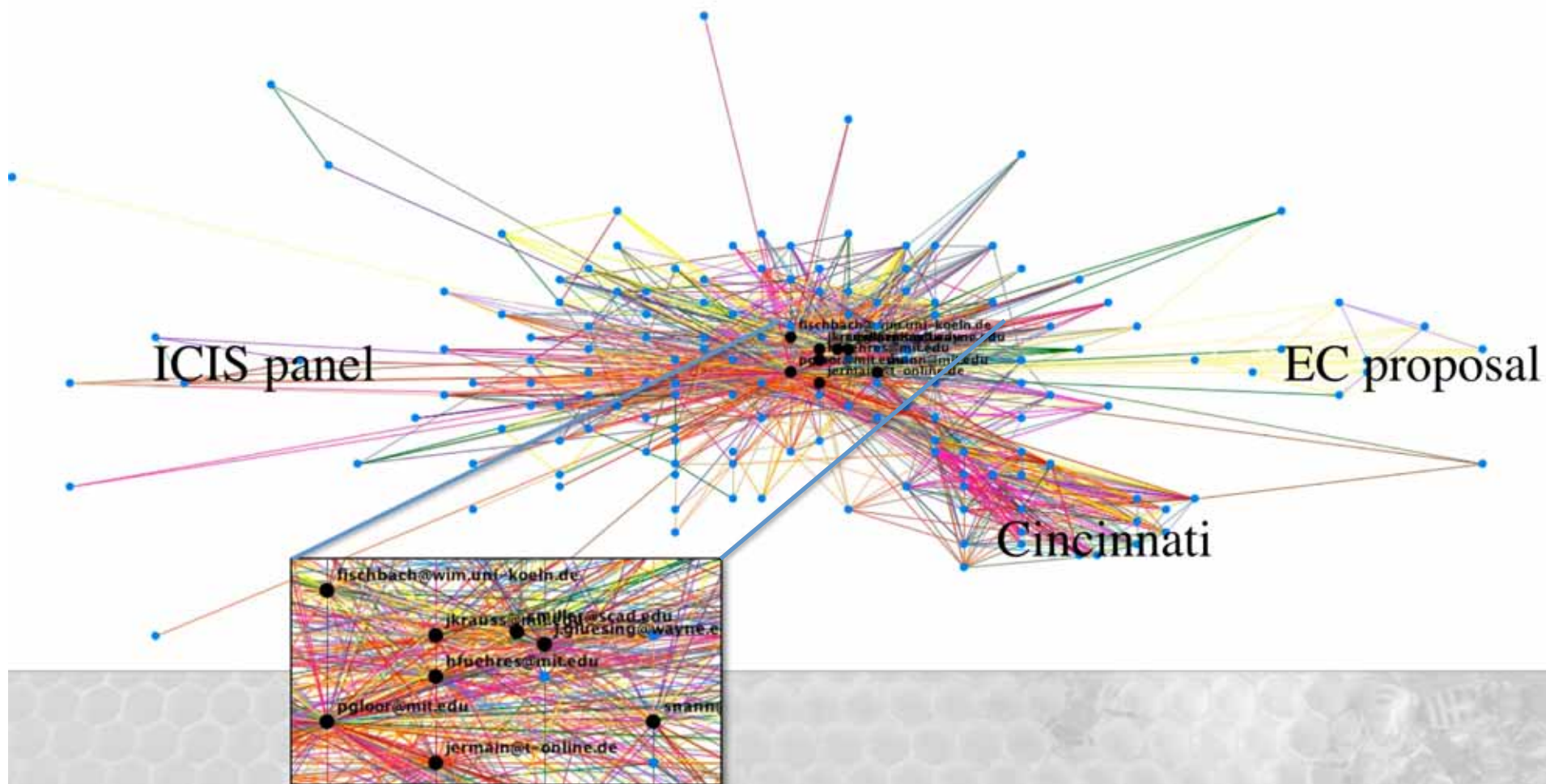
Cool Coolhunts

Unit of Observation	Interaction Archives	Research Goals
World	Web/Blog/ Social Networking sites	Predict movie box office success Predict political elections Predict consumer sentiment Predict stocks
Organization	Intranet/E-Mail/ phone log	Predict project success Predict startup success
Individual	Web/Blog/E-Mail/ phone log/ sociometric badges	Predict personality characteristics Predict team success

100 Software Startups in Israel....

1998

2004   42 out of business

The Digital Divide

	successful founders from **public** universities	successful founders from **private** universities
# online alumni friends	0	+
# online friends	-	0

Predicting Oscars and Box Offices Success

Our Predictions on January 5th 2010		Motion Picture Nominations - 82nd Awards
Best Picture	**Oscar Index**	
Hurt Locker	18%	The Hurt Locker
Precious	18%	Precious
Avatar	17%	Avatar
Inglourious Basterds	15%	Inglourious Basterds
500 Days of Summer	12%	An Education
Up in the Air	11%	Up in the Air
Lovely Bones	9%	The Blind Side
		District 9
		A Serious Man
		Up

Green Portfolio Results

Basic stats on exposure to S&P 500: 0.014 R Square, 0.009 Alpha (t-stat 2.53), and -0.3 Beta (t-stat -0.55)

Cumulative Return: 23% | Mean Return: 0.9% | Annualized Sharpe: 8.4

Tables by John D. Collins
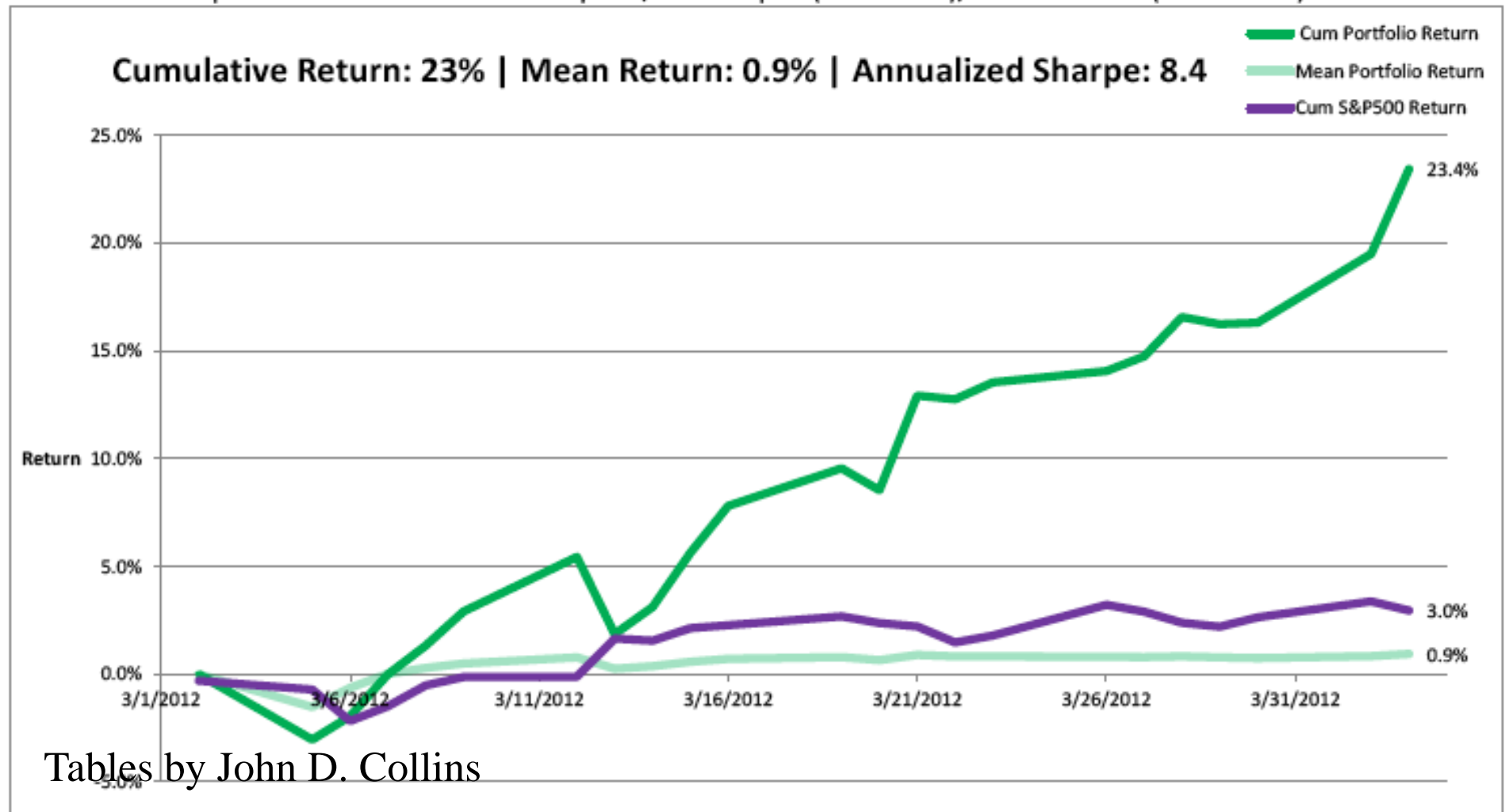
Predicting "Black Swans" (Goldman Sachs)
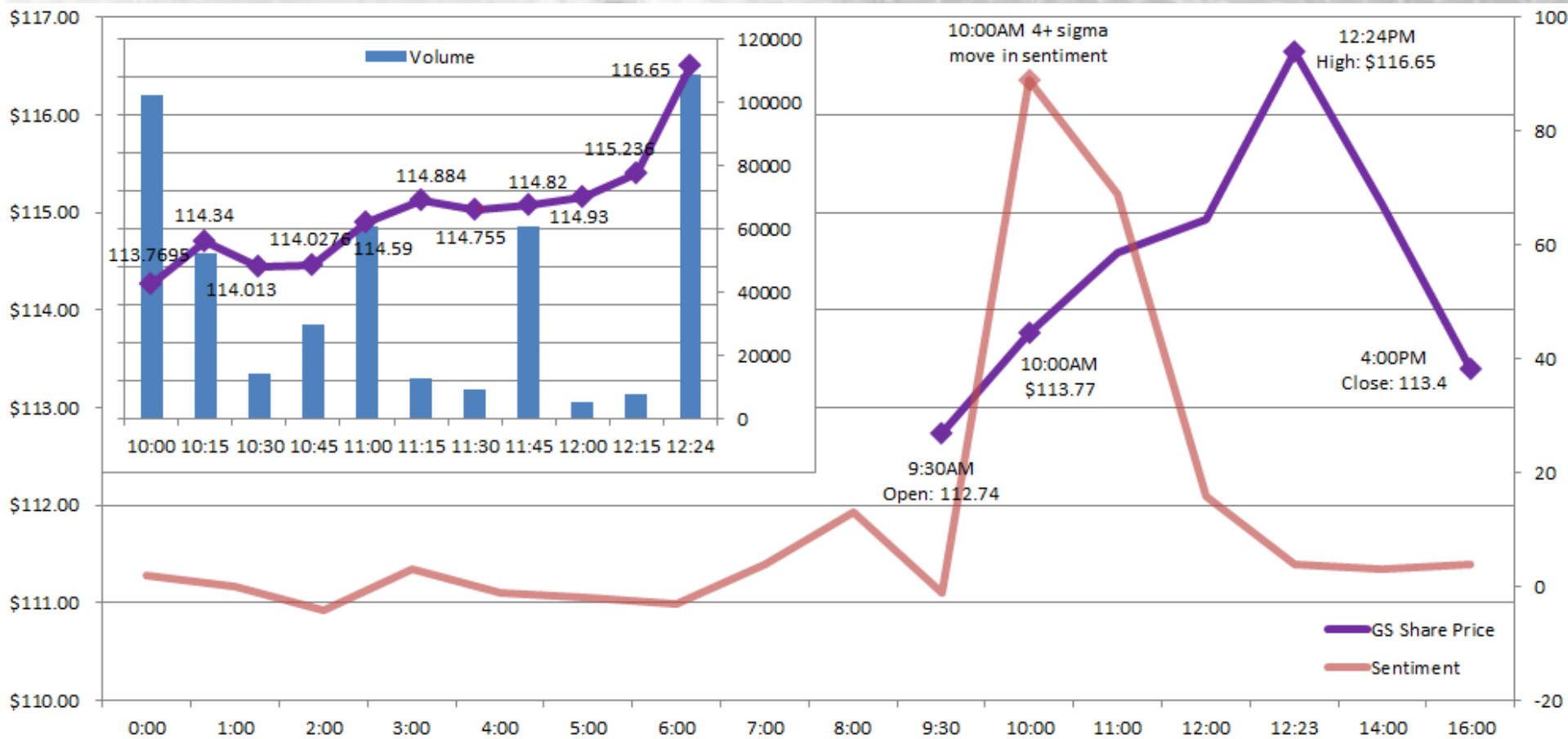
Tables by John D. Collins

Twitter/Wikipedia predict performance (N=50)

Table 5 Correlation coefficient of betweenness centrality and financial performance of U.S. firms (Date collected during May-July, 2012)

Industry	Market Cap.		Ann. Revenue		Ann. Net Income	
	Twitter	Wikipedia	Twitter	Wikipedia	Twitter	Wikipedia
Technology (P-Value)	.480** (0.001)	.611** (0)	.392** (0.007)	.509** (0)	.521** (0)	.536** (0)
Transportation (P-Value)	.537** (0)	.673** (0)	.516** (0)	.534** (0)	.525** (0)	.473** (0)
Financial (P-Value)	.362* (0.011)	.732** (0)	0.162 (0.265)	.487** (0)	.300* (0.037)	.498** (0)
Utilities (P-Value)	.475** (0.001)	.536** (0)	0.067 (0.645)	.561** (0)	0.227 (0.117)	.325* (0.008)
Chemical Manufacturing (P-Value)	.457** (0.001)	.498** (0.001)	.509** (0)	.671** (0)	.366** (0.009)	.439** (0.008)

** Significantly associated in .01 level (two-side); * Significant associated in 0.05 level (two-side)
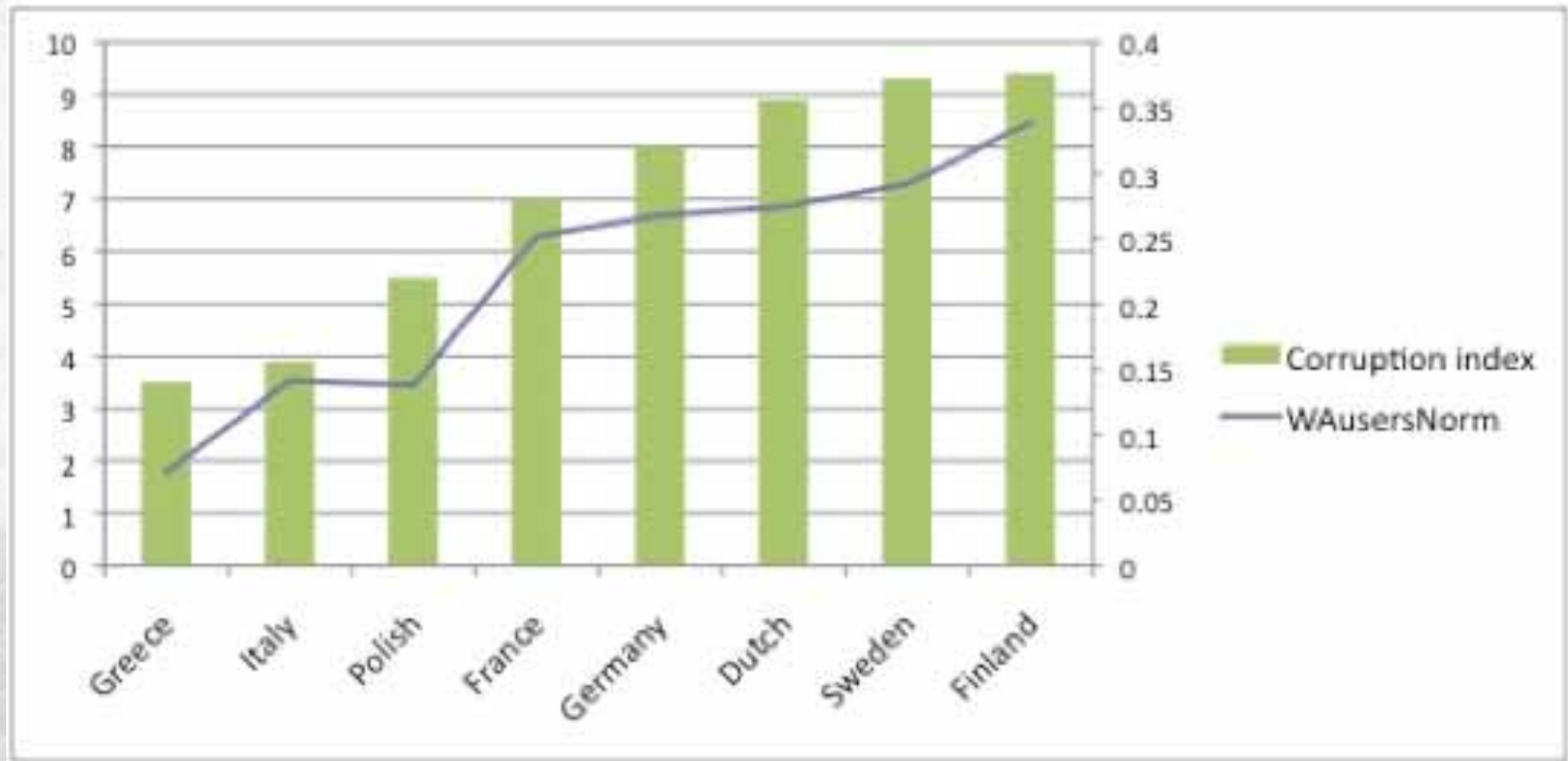
Tables by Qiaoyun Yun

Blogs/Web predict performance (N=50)

Correlation coefficient of betweenness centrality and financial performance variables

	United States Stock Market						China Stock Market						
	Market Cap.		Ann. Revenue		Ann. Net Income			Market Cap.		Ann. Revenue		Ann. Net Income	
Industry	Google Blog	Bing	Google Blog	Bing	Google Blog	Bing	Industry	Google Blog	Bing	Google Blog	Bing	Google Blog	Bing
Technology	0.111	-0.189	-0.108	-0.204	0.035	-0.188	Information Technology	.599**	0.08	.562**	0.094	.412**	0.057
(P-Value)	(0.445)	(0.249)	(0.457)	(0.214)	(0.812)	(0.251)	(P-Value)	(0)	(0.58)	(0)	(0.518)	(0.003)	(0.694)
Transportation	.524**	-0.06	.562**	0.041	.569**	-0.059	Transportation & Storage	.291*	0.222	.356*	.492**	0.233	0.157
(P-Value)	(0)	(0.677)	(0)	(0.779)	(0)	(0.686)	(P-Value)	(0.04)	(0.121)	(0.011)	(0)	(0.103)	(0.277)
Financial	.407**	-0.09	.488**	-0.092	.360*	-0.107	Finance & Insurance	.369*	.414**	.385*	.408*	.368*	.351*
(P-Value)	(0.004)	(0.534)	(0)	(0.525)	(0.011)	(0.46)	(P-Value)	(0.021)	(0.009)	(0.015)	(0.01)	(0.021)	(0.028)
Utilities	0.044	0.149	0.015	0.07	0.197	0.271	Electricity, gas and water production and supply	.448**	0.173	.280*	.287*	.313*	0.035
(P-Value)	(0.764)	(0.313)	(0.919)	(0.639)	(0.176)	(0.063)	(P-Value)	(0.001)	(0.23)	(0.049)	(0.043)	(0.027)	(0.808)
Chemical Manufacturing	-0.004	0.249	-0.107	.284*	-0.129	0.071	Chemical Manufacturing	.338*	-0.121	0.131	-0.132	0.169	-0.129
(P-Value)	(0.98)	(0.081)	(0.46)	(0.046)	(0.373)	(0.624)	(P-Value)	(0.017)	(0.403)	(0.364)	(0.361)	(0.24)	(0.372)

Tables by Qiaoyun Yun

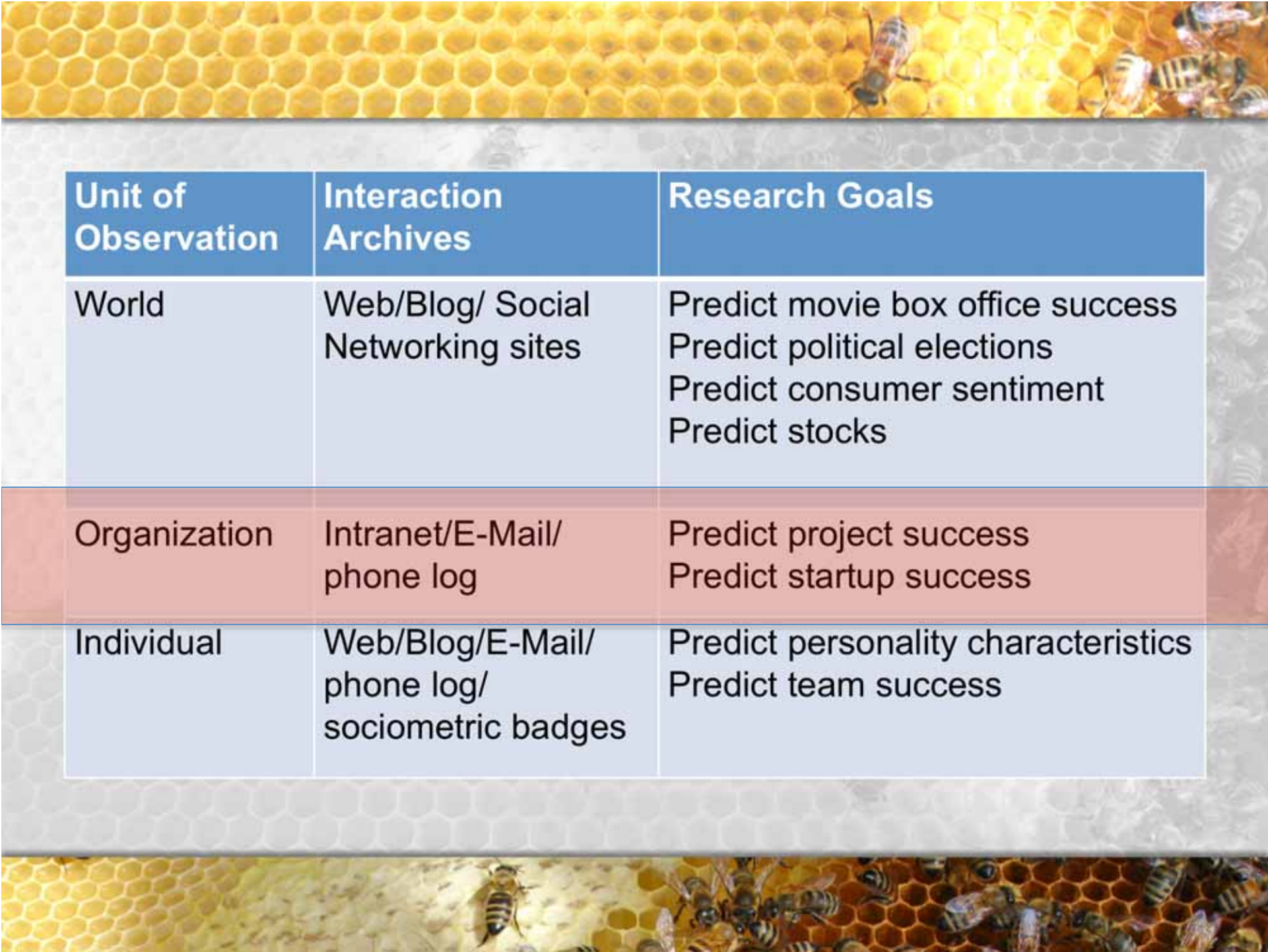# Wikipedia predict's a country's performance

Wikipedia predict's a country's performance

	Corruption index	CDS July 5, 2012	Population	Num Wikipedia Articles	Wikipedia edits	Wikipedia users	Active Wikip users
Greece	3.5	15039	11305000	75144	3500856	106093	808
Italy	3.9	498	60800000	936718	55296652	766219	8580
Germany	8	97	81799000	1429236	110035421	1456716	21886
France	7	184	65350000	1268485	85689403	1319316	16464
Sweden	9.3	57	9415000	479187	17738089	280297	2747
Finland	9.4	72	5410000	300676	12425618	207673	1832
Netherland	8.9	110	16847000	1052264	32144337	465510	4615
Poland	5.5		38186000	906664	31993958	497834	5265

		wikinorm	wausernorm	weditnorm	wusernorm
corruption	Pearson Correlation	.830*	.961**	.941**	.898**
	Sig. (2-tailed)	.011	.000	.000	.002
	N	8	8	8	8
CDS_rate	Pearson Correlation	-.514	-.782*	-.742	-.571
	Sig. (2-tailed)	.238	.038	.056	.181
	N	7	7	7	7

*. Correlation is significant at the 0.05 level (2-tailed). **. Correlation is significant at the 0.01 level (2-tailed).

Unit of Observation	Interaction Archives	Research Goals
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KFO - How it works

1.
Collect social network data

2.
Compute social interaction networks
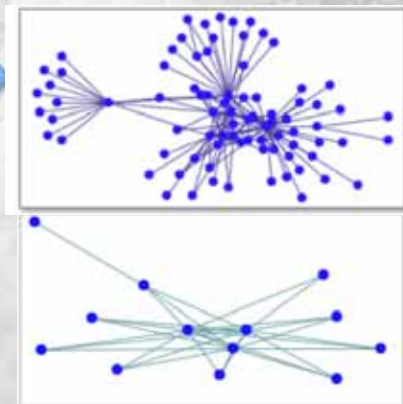
3.
Compare with success indicators

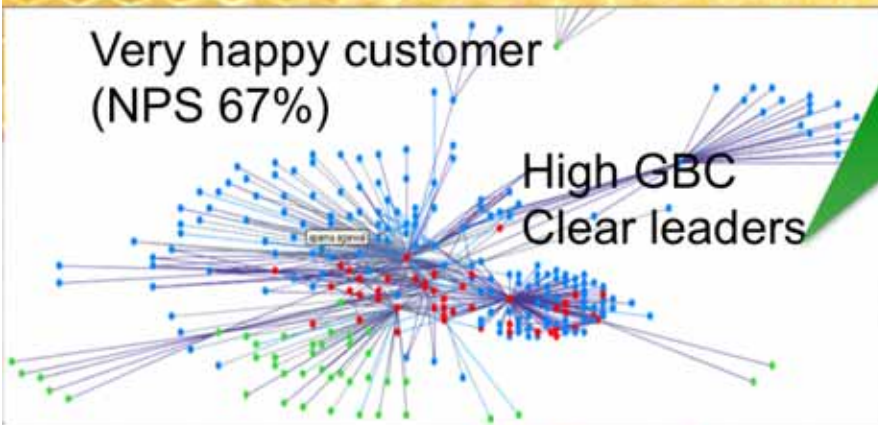# Knowledge Flow Optimization

1. "Centralized Leaders"

2. "Rotating Leaders"

June 2010

Measure

August 2010

COIN
Collaborative
Innovation Network

CLN
Collaborative Learning Network

CIN
Collaborative Interest Network

Discover

Optimize

December 2010

Mirror

October 2010

4. "Attraction Pheromone"

3. "Waggle Dance"
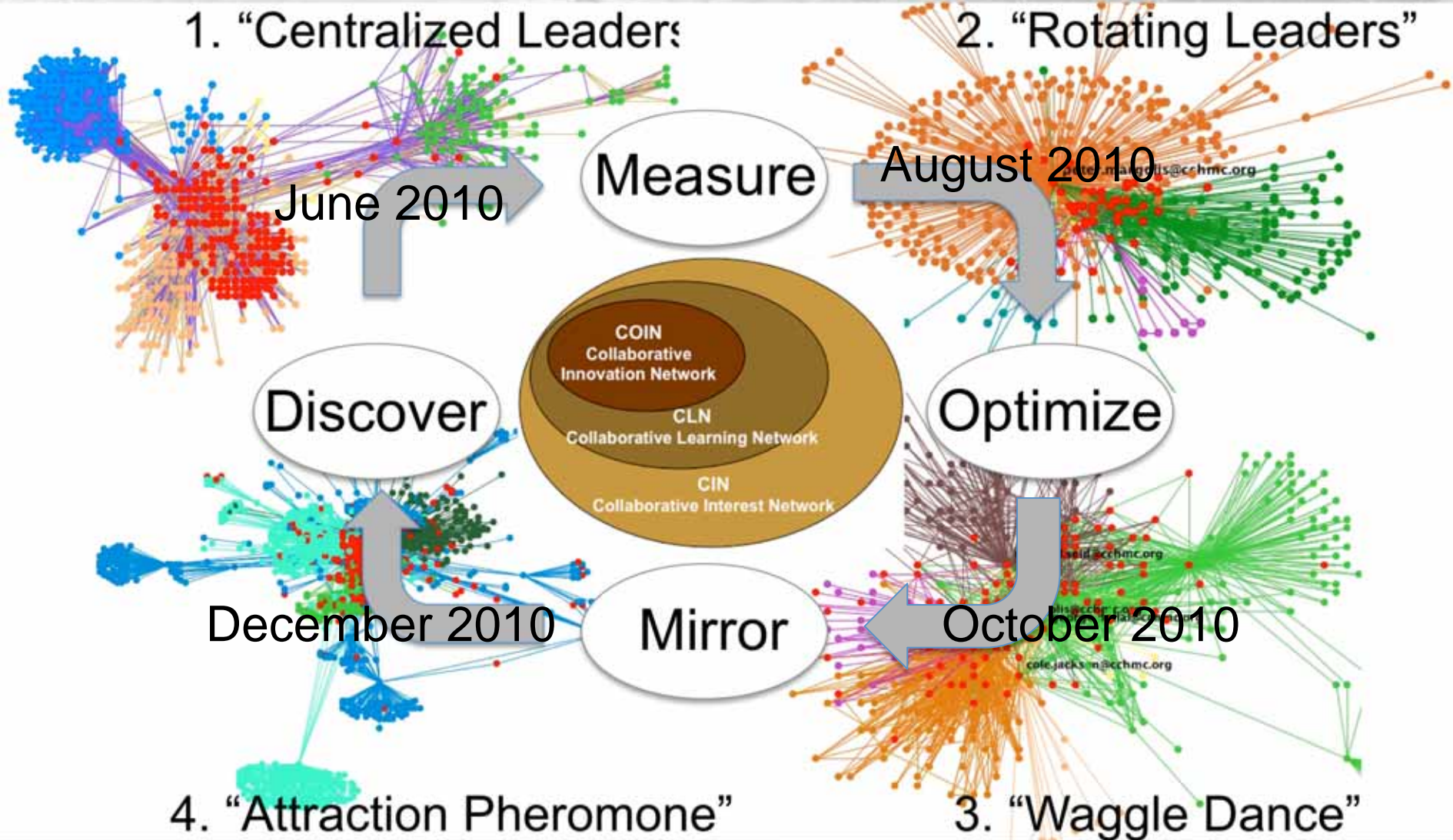
Structure and sentiment predict success

high success

low success

low centrality/
density

high centrality/
density

positivity

honesty

negativity

Social
Workers
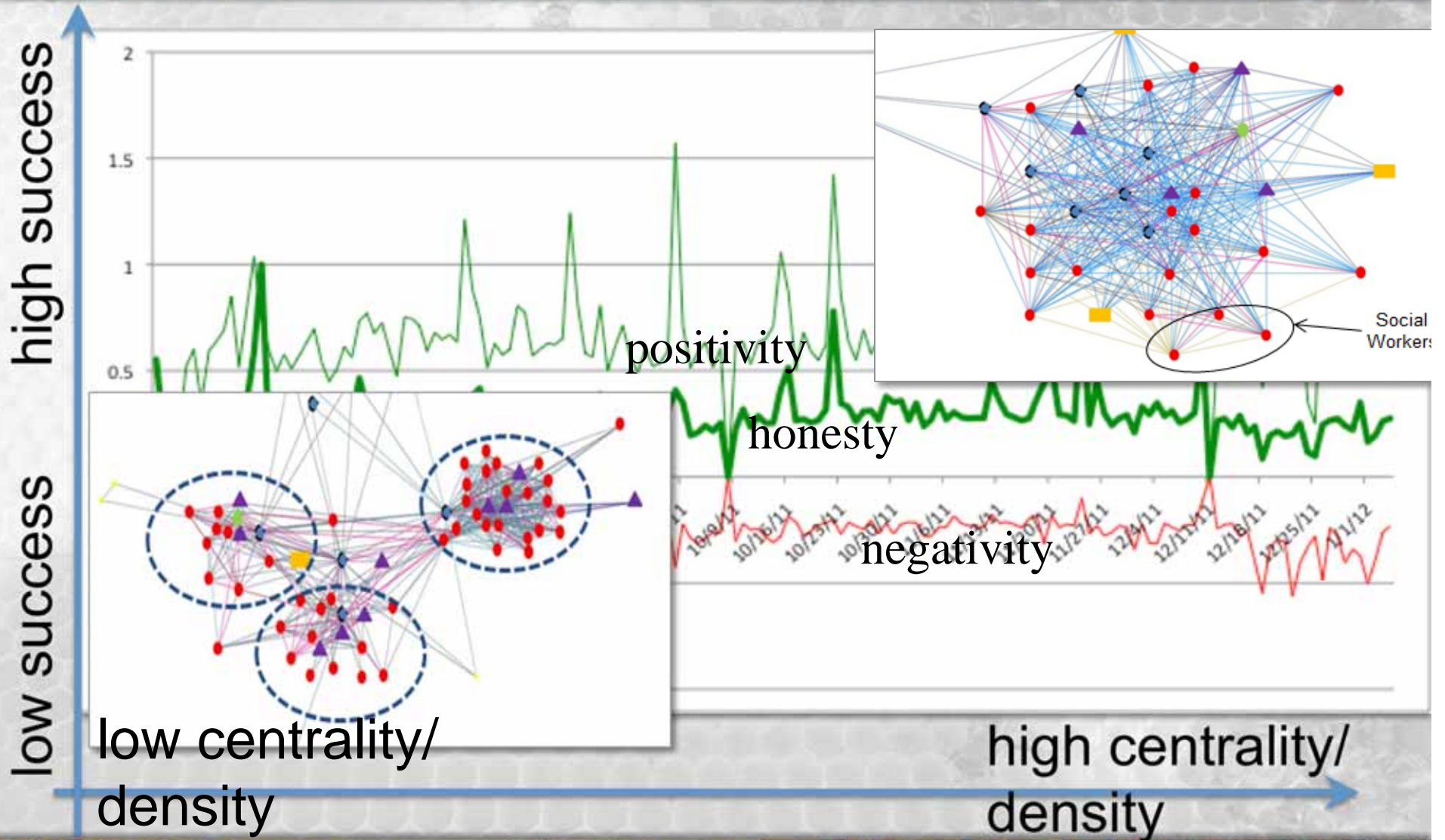
Very happy customer (NPS 67%)

High GBC
Clear leaders
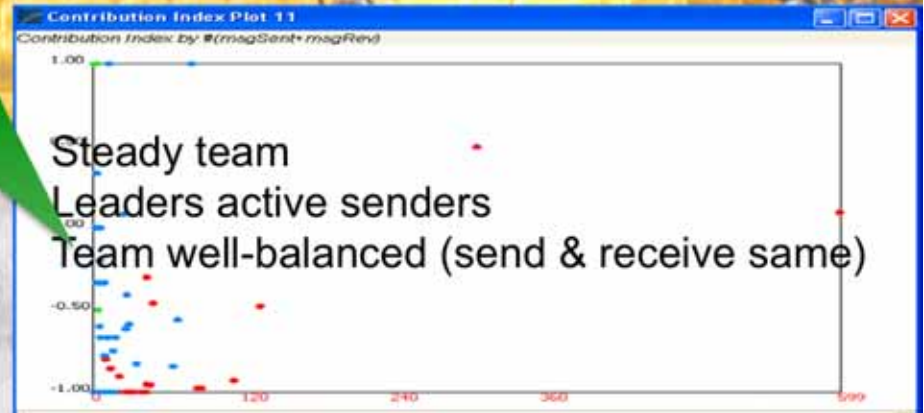
Steady team
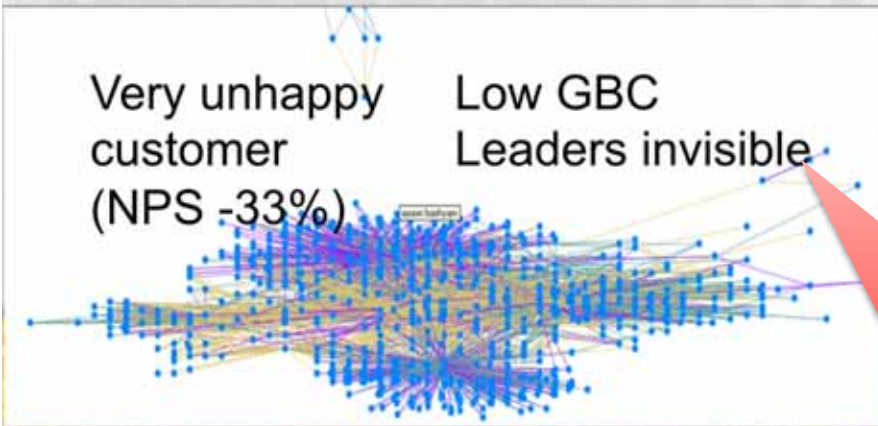Leaders active senders
Team well-balanced (send & receive same)

Contribution Index Plot 11
Contribution Index by #(msgSent+msgRev)

Moderately happy customer (NPS 29%)
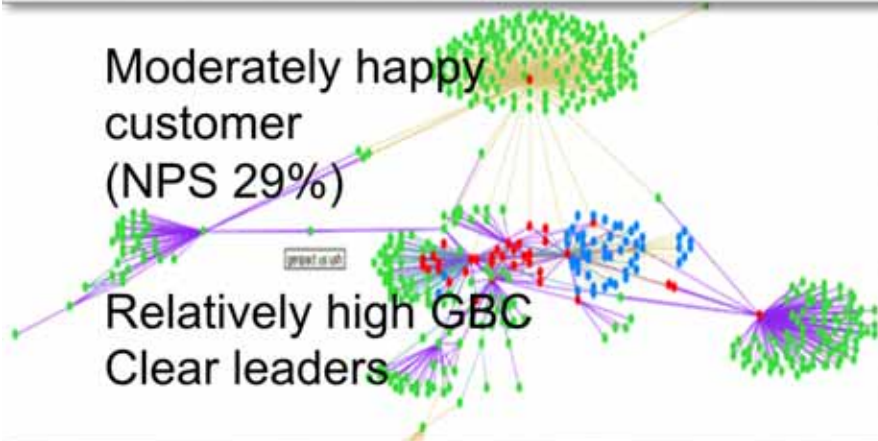
Relatively high GBC
Clear leaders

Steady team
Leaders active senders

Contribution Index Plot 1
Contribution Index by #(msgSent+msgRev)

Very unhappy customer (NPS -33%)

Low GBC
Leaders invisible
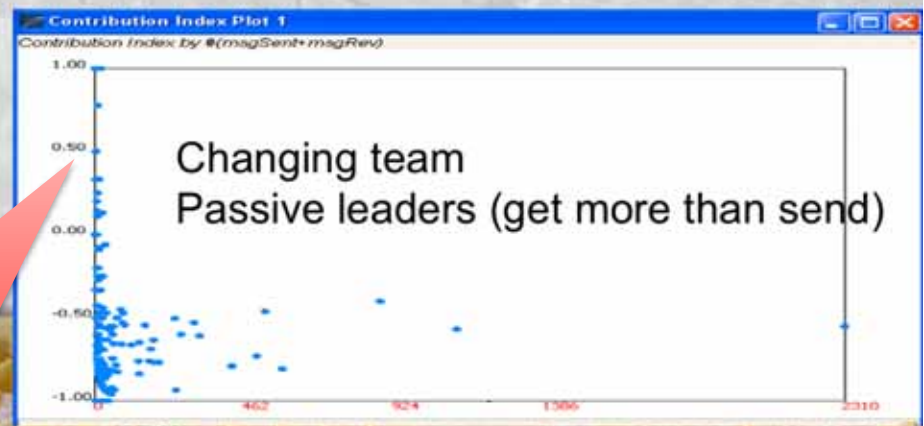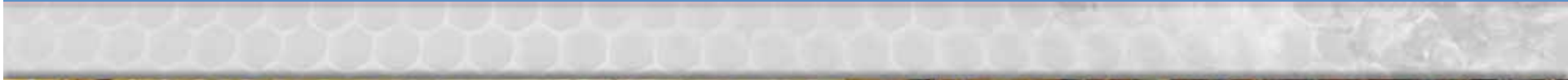
Changing team
Passive leaders (get more than send)

Contribution Index Plot 1
Contribution Index by #(msgSent+msgRev)

Close to the Galaxy Everybody is a Star

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Individual Signals

Blue – drummer
Red – singer/leader
Green - audience