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# MBA Core Redesign Georgia Tech

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Scheller College of Business  
Georgia Tech

IT Teaching Workshop  
May 17, 2017



# Course Objectives

## Business concepts

- emerging trends and business models
- new opportunities
- transformations
- challenges

due to

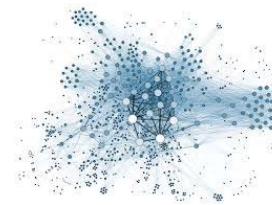
advances  
interconnectedness  
ubiquity

of **IT**

## Data management and analytics tools and techniques



storage and  
extraction



visualization



analytics

Tools: R, MySQL, Gephi  
(all are open source, freely available, and compatible with all major operating systems)



# Format

- 13 lectures (80 mins each) – 12 with material and one with midterm
- 1 midterm + 1 final
- 3 group assignments (around hands-on tools)
- Class participation + short answers to case-based questions



# Lecture 1

Topic:

## Digital Innovation, Transformation, and Ubiquity

Readings:

- HBR Article:

*Digital Ubiquity: How Connections, Sensors, and Data Are Revolutionizing Business*, M. Iansiti and K. Lakhani – Nov 2014



# Lecture 2

Topic:

## Network and Platform Economics

In-class simulation – variant of the platform game

Readings:

- HBR Article:

*Pipelines, Platforms, and the New Rules of Strategy*, M. Van Alstyne, G. Parker, S. P. Choudhary – Apr 2016

- *WeChat's World* – The Economist - Aug 6, 2016



# Lecture 3

Topic:

**Social Networks, Social Media, User Generated Content**  
**Network Analysis and Visualization – Demo with [Gephi](#)**

Readings:

- Case:

*Vineyard Vines and the Brotherhood of the Traveling Pants*, M. Murray, M. Loftus, I. S. Dunklin – Darden UV7177- Aug 2016

Group assignment 1 – (Social) Network Analysis (using Gephi)



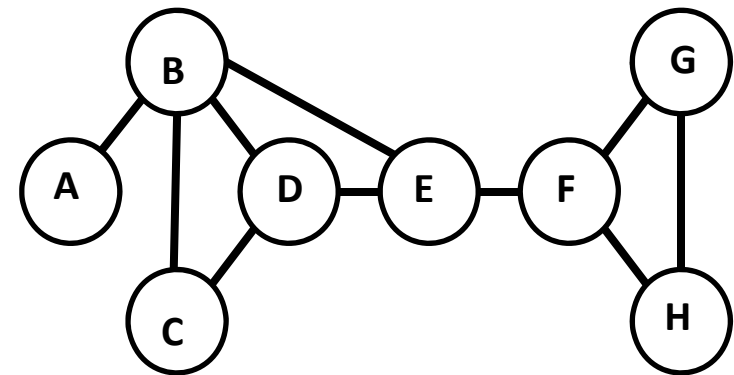
# Closeness centrality

Short example to illustrate the importance of choosing proper starting points for viral campaigns

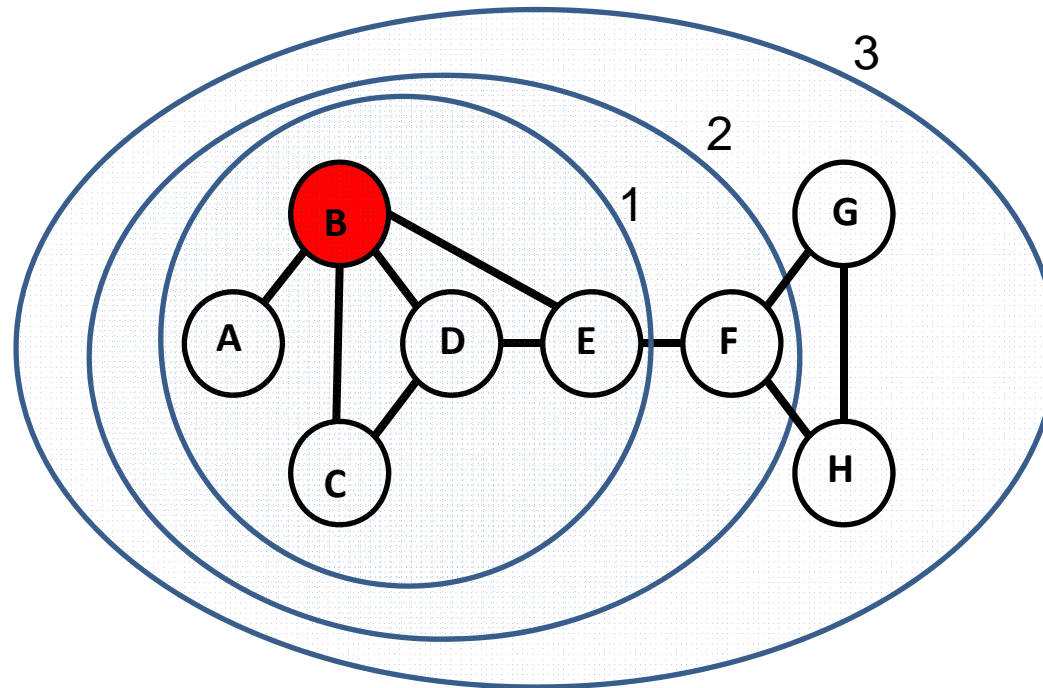
$$CC(x) = \frac{N - 1}{\sum_{y \neq x} d(y, x)}$$

$$CC(B) = \frac{7}{1 + 1 + 1 + 1 + 2 + 3 + 3} = \frac{7}{12} = 0.58$$

$$CC(E) = \frac{7}{1 + 1 + 1 + 2 + 2 + 2 + 2} = \frac{7}{11} = 0.64$$



# Closeness centrality

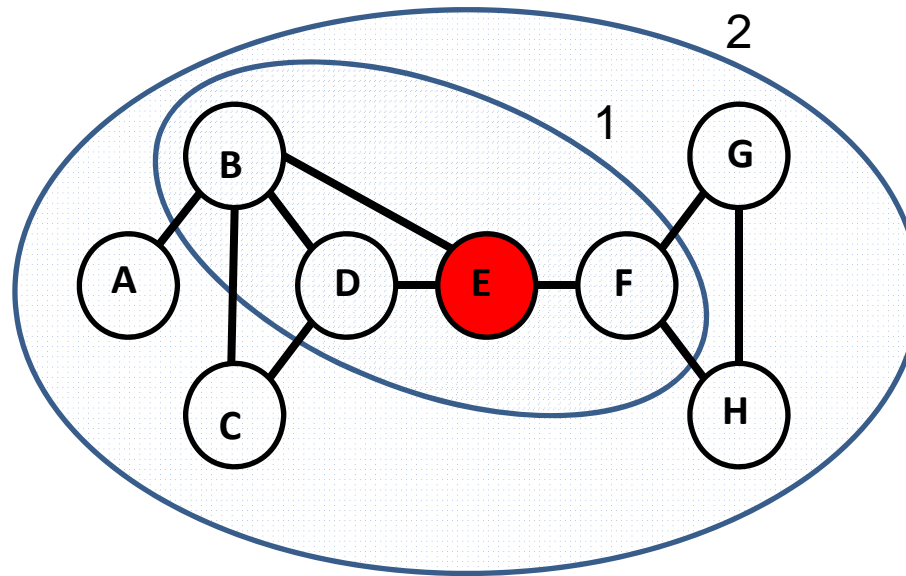


If communication starts at B - It takes 3 iterations of passing info along before it reaches the entire network (assuming all connections continue to share)





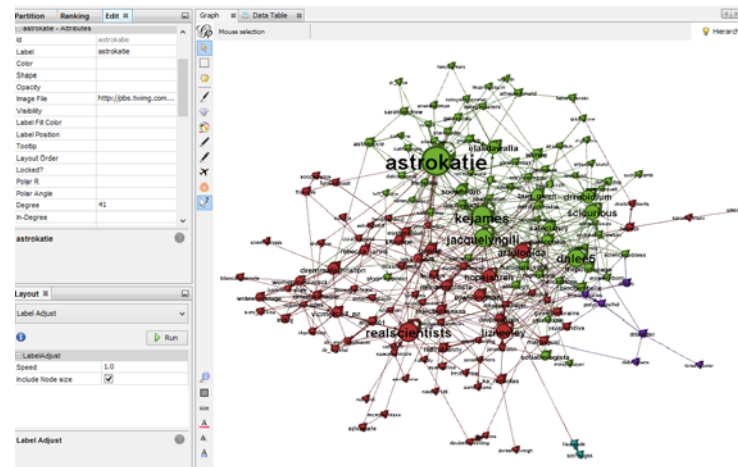
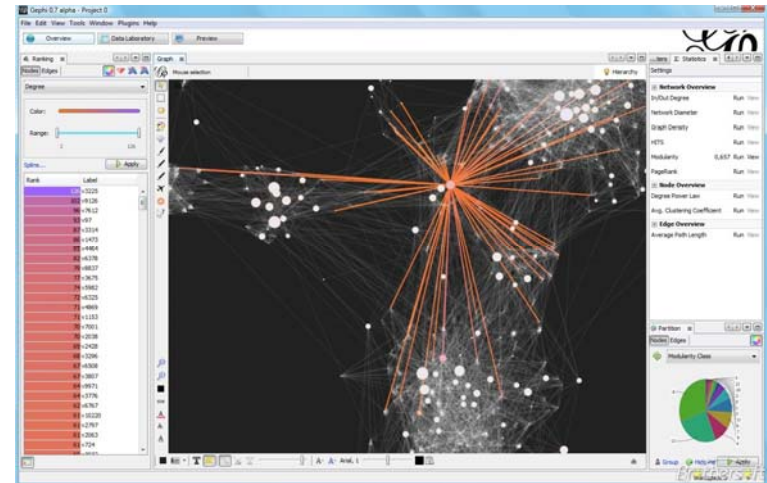
# Closeness centrality



If communication starts at E - It takes only 2 iterations of passing info along before it reaches the entire network (assuming all connections continue to share)



# Gephi





# Gephi



## Twitter Streaming Importer

Words to follow    Users to follow

Add

Delete

- #note7
- #apple
- #samsung

3 - Choose Network Logic to apply :



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# Lecture 4

Topic:

**Online Search**

**Online and Mobile Advertising**



# Lectures 5, 6

Topic:

## Data Analytics

- Association Rule Mining / Decision Trees / Logistic Regression - Demo with R

Readings:

- CASE:

*Star Digital – Assessing the Effectiveness of Display Advertising*, S. Narayanan and T. Yildiz - Stanford GSB Case M-347 – Mar. 2013

Group assignment 2 – Data analytics (with R)



# Lectures 8, 9

Topic:

**Relational Databases - Normalization and Basics of Querying  
using MySQL - demo with XAMPP**

Group assignment 3 – Normalization + Querying (MySQL via XAMPP)



# Lecture 10

Topic:

## Crowdsourcing and the Sharing Economy

Readings:

- *CASE:*

*Fasten: Challenging Uber and Lyft with a New Business Model*, F. Zhu and A. Acocella - HBS Case – 9-616-062 – May 2016





# Lecture 11

Topic:

## Open Source Approach Cloud Computing

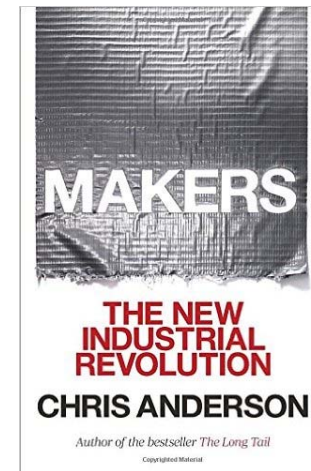
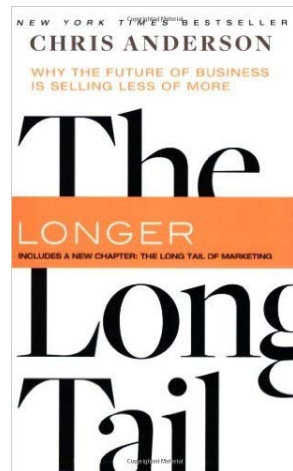
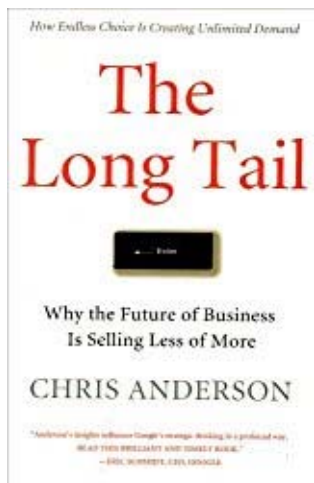
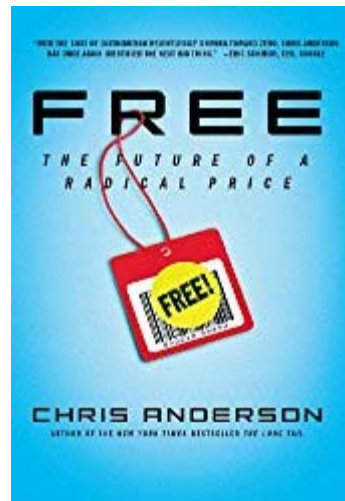
Readings:

- *CASE:*

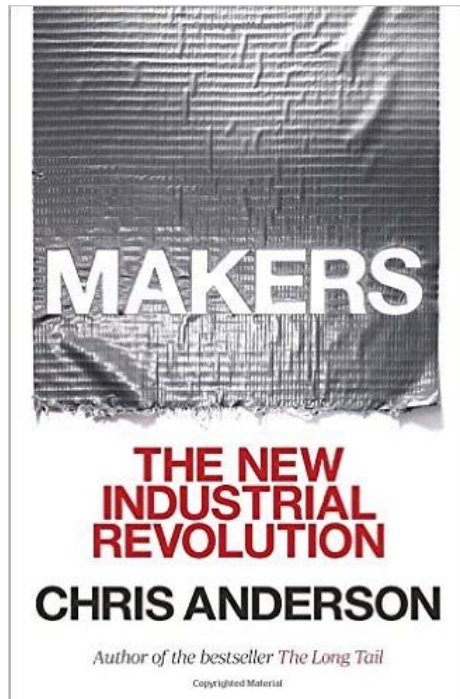
*3D Robotics: Disrupting the Drone Market*, T. Start and C. Anderson – UC Berkeley – Haas Case B5826 – Feb 2015



# Chris Anderson



# The *Maker Movement*



DIY

Open Source + Open Innovation

“Democratization” of manufacturing

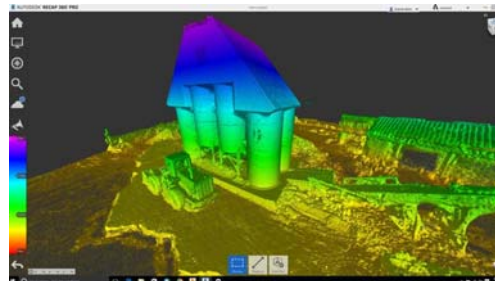


# Ideation



# Open Source Innovation

# 3DR



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Open Source Software  
Open Source Hardware

Revenue strategy  
around open source

Crowdsourcing  
Ideation

**SDR**

Tech startup  
strategy

Platform approach

DIY  
Maker Movement



# 3DR - Pixhawk

Open Source Hardware – autopilot

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# Lectures 12, 13

Topic:

## Security and Privacy

Readings:

- *CASE:*

*The Vulnerability Economy: Zero-Days, Cybersecurity, and Public Policy* -  
Harvard Kennedy School Case 2029 – Feb 2015

- *CASE:*

*Apple: Privacy vs. Safety*, H. McGee, N. Hsieh, and S. McAra – HBS Case – 9-316-069 – Mar 2016





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Thank you!

