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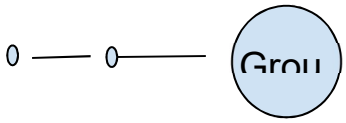
Always include [INFO101]
Office hours: By appointment

Social Systems:
Social Networks - networks of nodes (an individual) that are connected to each other
Hub - the center of a network, has many connections and could potentially even branch into separate groups
Spokes - the nodes that are connected to the hub of a network. Like how the spokes of a bicycle connect to the centerpiece of the wheel



Isolate - a node connected to a group by only one other node.
Groups - collections of nodes that consist within a social network
Symmetrical relationship - both individuals are connected to each other in the same way. I.e. Matt and I are cousins to each other.
Asymmetrical relationship - both individuals are connected to each other, but in different ways. I.e. Dad is my father and I'm his son.

POINT - Social networks are better for finding personalized information that pertains more to an individual. Whereas search engines are better for finding more general results (can also produce spammy, ad-ridden results). Searching for John Smith on Facebook is likely to find you a John Smith you personally know, whereas Google will find the most famous John Smith.

Information Systems - a system where two nodes/individuals can have a back and forth

POINT - Social systems support conversations, the back and forth between individuals

Speak - Produce information (Bob in his videos)
Listen - Consume information (Me listening to Bob in his videos)

Types of Communication -
Dyadic - Two people speaking, listening, and responding synchronously
Synchronous - Two speak, listen, and respond
Many people speak, listen, and respond (synchronously = party concept)
Broadcast - one speaks, many listen, few respond
Narrowcast - a customized broadcast that has the same major points as a broadcast, but more personalized information
Asynchronous - Many speak, listen, and repeat (Like a youtube comment thread. Lots of time between comments perhaps. Not all speaking the same time.
Many listen, add and repeat (Like the game of telephone. Not always repeated at high fidelity, stories can get messed up)

POINT - Keeping modes of conversation in mind allows you to critique a social app and potentially design a better one.
What does Facebook favor? Asynchronous conversations. That's how it thrives. Skype is very different. It thrives on dyadic, synchronous conversations
Facebook likes are essentially their method of repeating. Unlike the game of telephone, the internet allows information to be replicated perfectly accurately.
Twitter facilitates more broadcast type conversations than anything else. Retweeting is repeating.
Of the four types of conversation, the one I said was most fundamental is the dyadic conversation. Interestingly, that is the kind of conversation that is least well supported by our most popular systems. If it's so important, why is it so ignored? Think about it.
In Summary: Social systems work by facilitating electronic conversations; understanding conversational roles and types will help you better understand and dissect these applications. Later it can help you design your own system?

POINT - Classic mistake in network theory is to overemphasize access to electronic resources and underemphasize access to human resources. Once people figure out how much human resource is available, things can happen like terror groups recruiting using social media

Dictator's dilemma - states that countries need their people to have phones and other electronics to make economic vitality possible; but by so doing they also hand people the ability to plot more effectively against them
Embedded apps - run inside cars, TV's, toys, washing machines, and other things that aren't supposed to be manipulated
Client server apps - older form of web before web apps took over
Desktop apps - apps meant to be used by one single user at one time on one machine (Microsoft Word, Excel, PowerPoint, etc.)

POINT - A website is a place where it holds information more closely related to itself than any of the rest of the web. Looser idea than a book

Channels - the forms of communication that humans use. Face to face, written, voice to voice (instantaneous like telegraph, telephone, etc.), broadcast channels (think radio), and now online channels exist.

POINT - Communication is so cheap and efficient now that it's globalized, ubiquitous, and all is done through 1's and 0's

Monetizing the Internet:

Version 3 phenomenon - Trying over and over to launch a product until it works **well**. It's a tactic of trial and error

POINT - How do you make money on the Web? Eyeballs and buzz. AKA, lots of people looking at your product, and those people talking about your product. Throw in some ads after you've locked down some investors, and boom, profit.

Ways of making money on the Web:

Ads!
Some forms of media make money through distributing information, like movies and books, but ads on the Web is the king.

Selling stuff!
Think Amazon, music before Spotify, etc.

Infomediation!
I stand in between you and the information. Zillow for example. All of the real estate listings you could want, but you have to go through Zillow to get there. Zillow is an infomediator.

Selling data!
Again think about Facebook, Google, etc. It's useful because advertisers want to know about you, who you are, and how to target ads for you.

Subscriptions!
Think Netflix, Spotify, Xbox Live, etc.
Subscription providers know how much money they're going to make each month ahead of time, and can plan around that.

Selling to businesses!
Users don't want to pay for software, but businesses do. For example, Google charges companies who want to use their products on their internal web site, Google will charge for that.

Getting underneath!
Microsoft developed Windows. They got a good program to go onto every PC in the world, and Microsoft gets some guaranteed money every time they sell a PC with Windows on it. Great way to make money. Google got underneath Android, etc.

Gaming models for money:
Buying a game, installing it, and playing it. Done.
Retention - Keeping the customer happy with a subscription service like WoW does (Spotify too)
Upselling - Think Apex. Giving away a base game for free or very cheap, and then sell virtual currency, lootboxes or items within the game, etc.
Freemium - Similar to upselling. Give away a base game, then go on to sell virtual goods

An Intro to Information:
Information overlaps with data
Information comes in "types". It's Facebook's main type of information if you will. Facebook also has groups, events, etc.

Information types have attributes for example, a person's name, address, age, sex, etc.

Attributes have values, e.g. my Facebook name has a value of "Sam Cureton"

Finally, information items. These are the complete sets of values.

The lifecycle of information **items**:

1. Creation
    a. Items can either be authored or acquired from somewhere
2. Storage
    a. Generally, information is stored in databases. These are tables. The name of the table stores the information type. The column names are the attributes. The rows as a whole are the sets of values, so they're the information items
3. Organization
    a. Indexing (Alphabetical)
    b. Links (Alex and Sam are brothers)
    c. Sequences (Google's top result is the one you probably want to look at first, whilst it's last result is the least related to your search)
    d. Hierarchies, or outlines (family trees or tables of contents)
4. Display
    a. We keep items in the database because people will want to see them. In Facebook's database, they have all the same information that you see on your profile summary, but they give it a nice look and feel when it's outside of the database.
5. Retirement
    a. Deletion: Bye bye data! I'll never see you again!
    b. Archiving: Push this off to the side for me, it's inactive. But, I can get it back if I want to.
    c. Just because you click on that delete button doesn't necessarily mean it's gone. You don't ever know what the companies are doing with that data. They might archive it without telling you.

Identifier - Something specific to YOU on the Web (profile pic and name, etc.)

Lots of levels of uniqueness for identifiers, for example:
Postal codes
Addresses
Email addresses (.edu means it's an educational institution)
Washington narrows it down to UW

The more levels in a hierarchy of identifiers, the more specificity you can have.

Tactics to establish uniqueness:
Sequential numbers, never going backwards or reusing numbers
Random numbers (only with a high enough maximum)

GUID’s (global unique identifiers)
Directories (domain names can’t be duplicated, no second google.com’s)