**info perspective**: 1. Info is ubiquitous (everywhere) 2. Info attributes and behavior are continually changing. 3. The info spectrum: **Data🡪info🡪knowledge🡪wisdom** 4. Skills in info problem-solving (seeking, processing, and evaluating info) are essential.

**What is info**? Info is any difference that makes a difference to a human mind. By Bateson

**Forms** of info: data, text and documents, objects, events (can be represented and recreated). copies: type and token **Dark side**: misinfo, disinfo, info anxiety, info overload **Info explosion**: exponential growth (info production, storage of info, speed of transmission) three types of info.

**Buckland:** Info is the thing that informs-or the process of informing-or that which is transmitted in the process of informing. Anything could be info given the right context.**1. Info as process**: verb: transfer of info, communication**2.info as knowledge**: intangible- ideas, thoughts, etc.**3.info as thing**: tangible physical objects such as data and documents.

**Bates** Info is the pattern of organization of the matter of rocks, of the earth, of the plants, of animal bodies or of brain matter.

**Info behavior**: sum of activities through which info becomes useful. or The study of how individuals need, seek, manage, give, and use info in different contexts.

3 key distinction: **info demand, info want, info need.**

Characteristics of info needs: stage of development, generated, importance, frequency, predictability, complexity

Info behavior: info seeking (searching, surfing, encountering. 5 info seeking scenarios: Buying products, Finding info in a library, betting on race horses, finding the law, “I want to know more about cancer”), evaluating, use, and giving (the act of disseminating messages. strategies: tailoring, planting a nugget, pushing, presenting)

Dark side: avoiding info (individual factors, social or social network factors and external factors), info overload and info anxiety.

Info behavior theory: A model may be described as a framework for thinking about a problem and may evolve into a statement of the relationships among theoretical propositions. Model to theory: an example

Info behavior variables case: seeker, situation, main motivation, source of info, time pressure, degree of thoroughness

Study of info behavior involves: Situations, people, info

**The history & structure of the Internet** Persistence, replicability, scalability, searchability

1968 first four computers connected to the ARPANET. 1972 first email sent. 1973 TCP/IP invented. 1974 first use of the term internet. 1998 google

How the Internet works: packet-switching, a network of networks, IP (Internet Protocol), TCP(Transmission Control Protocol)

Before: circuit switching. Advantages of packet switching over circuit switching: reliability, resilience, speed, efficiency. IP: responsible for getting packets from one place to another. IP specifies three things: IP packet format, IP addresses, IP packet routing. TCP: picks up where IP leaves off (message fragmentation and reassembly, guarantees delivery, maintains conversational context, specifies process at destination)

The Internet has been around for a long time (started in the 1960’s). The Internet is a public network of networks. Data on the Internet is broken into small pieces called packets. Routers insure packets go only where they need to go. TCP/IP is a suite of protocols that every device on the Internet uses to communicate. There are many applications on the Internet and each application has it’s own application layer protocol on top of TCP/IP. The web is but one Internet application, the web and the Internet are not the same thing. Internet applications can be built using a variety of different architectures including standalone, host-based, web-based, or client-server/hybrid. The future of Internet applications is unclear, although moving services to the cloud is a current “hot” trend and hybrid applications built on top of HTML 5 are the likely future.

**How we search** Why organization is important: 1. makes it easier to find [things] 2. Makes it easier to browse. 3. It’s everywhere! Categorization & organization is a basic human cognitive skill. We all do it. We can’t avoid it.

Search before the engine (a.k.a. info retrieval) Info retrieval: the fulfillment of info needs. 1. Subset of info behavior 2. Might be computerized, might not 3. Search engines are only one way we fulfill our info needs

Precision: The # of documents retrieved that are relevant divided by the total # of documents retrieved

Recall: Percentage of the total universe of relevant documents that the search was able to find

**Search engine** is the popular term for a computerized info retrieval (IR) system.

**How search engine work**? Crawler, indexer (analysis, ranking), query processor (vocabulary issues, simple) The crawler: acts like a really dumb, compulsive user. The indexer: crawler tosses copies of what it finds to the indexer. Indexer counts and sorts all the terms on each page, and then adds them to the index. Some things the indexer does: metadata/tags, stop words, stemming, extracting index entries, computing term weights. One way to weight: 1. TF = term frequency 2. IDF = Inverse Document Frequency. **Search engines**:1. **Crawl** the web to find what’s out there 2. **Index** what they find, and **analyze** and **rank** it so it’s easier to sift through 3. **Process user queries** using the index and some complex algorithms to decipher intent

The search Biz: why google became a verb

Digital Identities: **Social network sites** (SNS): web-based services that allow individuals to 1. construct a public or semi-public profile within a bounded system, 2. Articulate a list of other users with whom they share a connection, and 3. View and traverse their list of connections and those made by others within the system.

What does an online community need to have: Baxter’s 5 key elements: purpose, membership, terms of use/ community rules, member-generated content, people

**Granovetter’s strength of weak ties**: social nets comprise strong ties and weak ties. STs have same info: know same people, see all regularly. WTs likely have new info: out mixing with other people. STs play important listening or validating role: people confer with STs before acting on info received from WTs

**Social media**: a group of internet based applications that build on the ideological and technological foundations of web2.0, and that allow the creation and exchange of user-generate content.

**History of social media**: 1890 telephone, 1891 radio, 1969 ARPANET, 1978 BBS, 1999 Blogger, 2001 Wikipedia, 20003 Facebook, 2005 YouTube, 2006 twitter

3 focus of **informatics**: community informatics, crisis informatics, health & biomedical informatics

Community informatics: application of info and communications technology(ICT) to enable and empower the community processes.

**Crisis informatics**: the interconnectedness of people, organizations, info and technology during crises.

Findings: access to info, value of community space, beneficial emotional/sociological aspects, changing boundaries and shifting roles