Geeks Bearing Gifts: Unwrapping New Technologies

(Part 2)

Michael Miller
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Web Gone Wild!

RSS, Blogs, Wikis and Social Networking Software
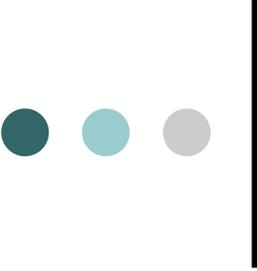
What is RSS?

- **RSS** is a popular XML format for describing items of content on a web site

- Look for orange icons on a webpage:
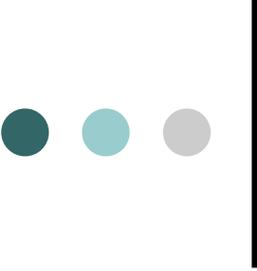
RSS acronyms

RSS is an acronym for
- ***R**eally **S**imple **S**yndication*

Abbreviation is also used to refer to the following standards:
- Rich Site Summary (RSS 0.91)
- RDF Site Summary (RSS 0.9 and 1.0)
- Really Simple Syndication (RSS 2.0)
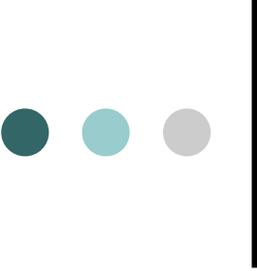
How is RSS used?

- By news sites or web sites to syndicate news or news-like content
- Widely used by bloggers to share their latest entries
- even includes multimedia files like those used in podcasting, vodcasting, etc.
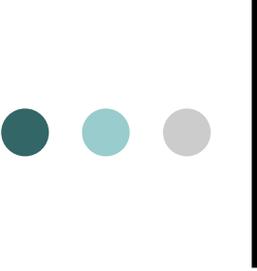
How RSS Works

- Author creates the RSS file - manually or through use of a Content Management System (CMS)
- User subscribes to RSS using a feedreader (aka aggregator)
- When author updates content, the feedreader checks the user's subscribed RSS feeds and displays the latest content
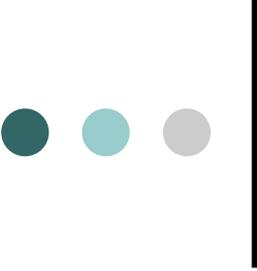
RSS History

○ originated in 1999

○ Many different versions:
  RSS 0.90, 0.91, 0.92, 0.93, 0.94, 1.0, 2.0, 3.0; and **Atom** Feeds

  ● each version has different features

  ● most feedreaders understand all
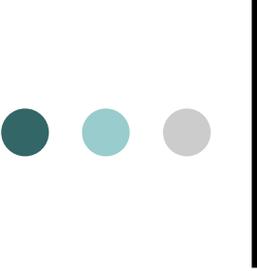
RSS Aggregators

Aggregator (or feedreader)

- Software that periodically checks RSS-enabled web pages for a user and displays any updated content it finds

Types of Aggregators

- Desktop RSS feedreaders
- Integrated RSS feedreaders
- Web based RSS feedreaders
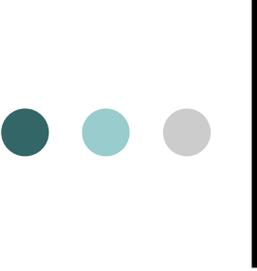
Desktop RSS feedreaders

Standalone clients:

○ **Awasu**
http://www.awasu.com

○ **FeedDemon**
http://www.bradsoft.com/feeddemon/index.asp

○ **RssReader**
http://www.rssreader.com/

Integrated RSS feedreaders

Common **Web browser** and **email clients:**

- **Firefox:**
  - Firefox extensions: **Pluck, Sage, Wizz**
  - Firefox **"Live Bookmark"** feature
- **Outlook:**
  - **Newsgator**

    http://newsgator.com
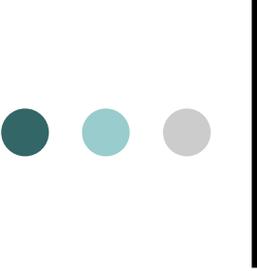
Web-based RSS feedreaders

Web-based, no software installation:

○ **Bloglines**
http://www.bloglines.com/

○ **NewsGator**
http://newsgator.com/ngs/default.aspx

○ **MyYahoo!**
http://my.yahoo.com/s/about/rss/
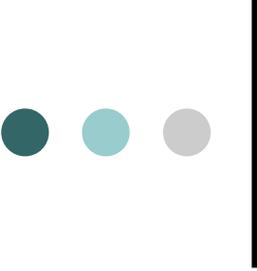
Subscribing to RSS feeds

○ RSS feeds are typically linked to with an orange XML or RSS icon: **XML** **RSS**

To subscribe:

○ Copy and Paste link (right click + copy)

○ Some readers allow you to right-click and select subscribe
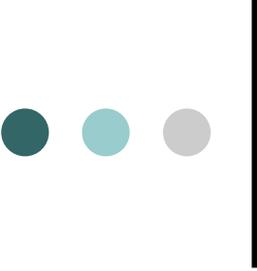
How can you use RSS?

From your Web site, Blog or CMS push:

- A calendar of events
- Latest news items or newsletter articles
- Current job openings
- Staff recommendations
- New book acquisitions and book reviews
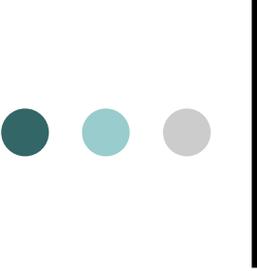
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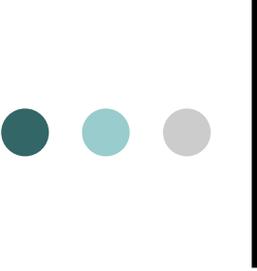
Blogs (aka weblogs)

- a Web-based publication consisting primarily of periodic articles

    - Normally – but not always in reverse chronological order
    - Format varies - can include simple lists of links, article summaries or full articles
    - Range in scope from personal diaries to journals discussing music, sports, politics, etc.
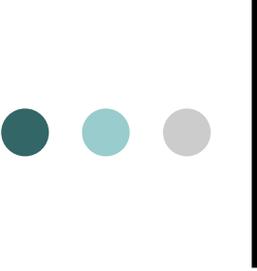
History of Blogs

- Precursors: Usenet, email lists and bulletin boards

- 1999 - Pyra Labs launchs Blogger, the first "hosted" Blog tool

- From 2000 on Blog usage spreads like wildfire

- By 2004 blogs have become increasingly mainstream
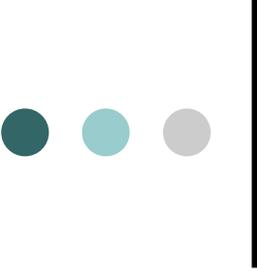
Why should you or your library blog?

- Quick way to provide news and event updates to your users

- It's easy! All you need is internet access and the ability to type an email

- Since Blogs typically use RSS feeds, it's easy for your users to receive information
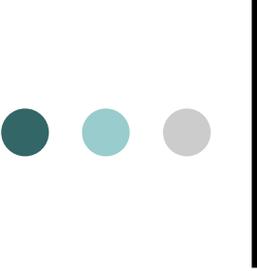
How to create and publish a Blog

Use a Blog hosting service:

- **Blogger**
  http://www.blogger.com/start
- **MovableType**
  http://www.sixapart.com/movabletype/
- **WordPress**
  http://wordpress.com
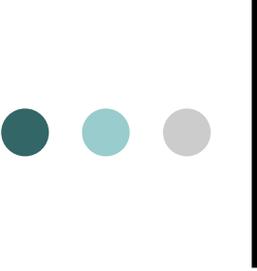
How to create and publish a Blog

Use a server-side web application:

○ **MovableType**

   http://www.sixapart.com/movabletype/

○ **Nucleus CMS**

   http://nucleuscms.org/

○ **WordPress**

   http://wordpress.org/
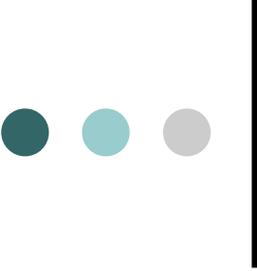
Some Blog features

Blogroll

- Enables you to link to blogs you read frequently
- Used for "reciprocal linking"

Commenting

- Allows users to provide "feedback" to posts
- Problems with SPAM
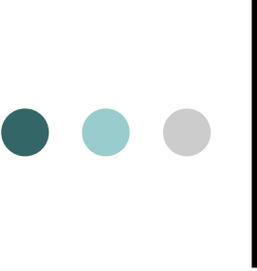
Types of Blogs

AudioBlog

- Consist mainly of voice recordings sent by mobile phone
- Used for podcasting

Moblog

- Features posts sent by mobile phone
- Are often photoblogs

Vlog or Videoblog

- Video is included in blog posts
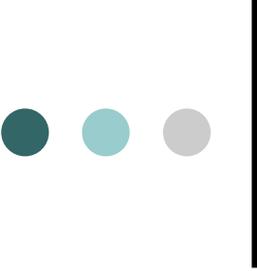
Library Technology related Blogs

- **Shifted Librarian**

  http://www.theshiftedlibrarian.com

- **Tame the Web: Libraries and Technology**

  http://tametheweb.com

- **The Krafty Librarian**

  http://kraftylibrarian.blogspot.com/

- **Free Range Librarian**

  http://freerangelibrarian.com/

Let's setup a blog!

Let's check out WordPress!

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Wonderful World of Wikis!
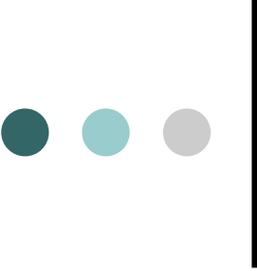
What's a Wiki?

- A web application that allows users to add content, but also allows others to edit the content (often completely unrestricted)

- *Wiki* is a Hawaiian term meaning:

    "To hurry, hasten; quick, fast, swift."
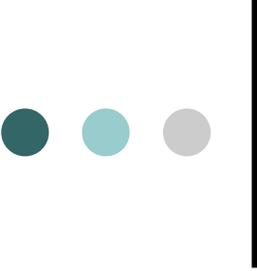
Wiki Features

- **Wikis** simplify the process of creating HTML Web pages
- Some features include:
  - Changes are **INSTANTLY published**
  - File uploading and sharing built into some versions
  - Page index and full text search
  - List and restore previous page versions
  - Control user access and privileges
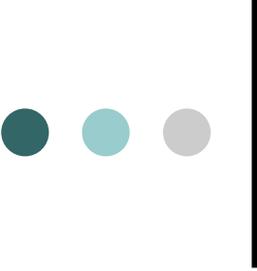
Wiki History

- 1995 - Ward Cunningham establishes WikiWikiWeb as a complement to the Portland Pattern Repository
- 2000 - recognized as a promising way to develop public/private knowledge bases
- January 2001 - *Wikipedia is* launched
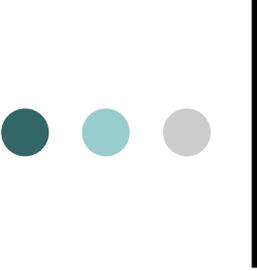
Wiki Communities

One popular wiki directory is:

○ **SwitchWiki**

http://www.worldwidewiki.net/wiki/SwitchWiki

Some of the largest wikis are listed at:

○ **Meta's List of Largest Wikis**

http://meta.wikimedia.org/wiki/List_of_largest_wikis

○ **Meatball Wiki: BiggestWiki**

http://www.usemod.com/cgi-bin/mb.pl?BiggestWiki
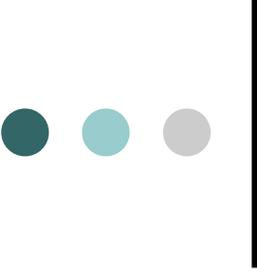
I want my Wiki!

WikiFarms: Wiki Hosting Services

- **Pbwiki** - http://pbwiki.com/
- **JotSpot** (free & $$$) - http://www.jot.com/
- **SeedWiki** - http://www.seedwiki.com/
- **Socialtext** ($$$) - http://www.socialtext.com/

Wikisoftware: open source solutions

- **MediaWiki** - http://MediaWiki.org
- **Tikiwiki** - http://tikiwiki.org
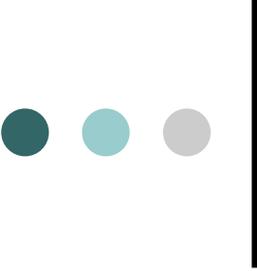
Uses for a Wiki

o Intranet

o Project Collaboration

o Solicit input from community for specific projects

o Use Courseware and training tools
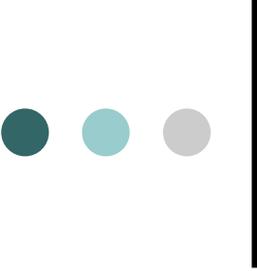
Wiki demo

- **Library Success: A Best Practices Wiki**

  http://www.libsuccess.org/

Folksonomies and Social Networking
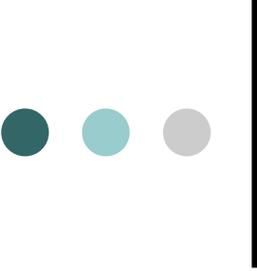
Folksonomy

"a portmanteau word combining "folk" and "taxonomy," refers to the collaborative but unsophisticated way in which information is being categorized on the web. Instead of using a centralized form of classification, users are encouraged to assign freely chosen keywords (called tags) to pieces of information or data, a process known as tagging."

From Wikipedia
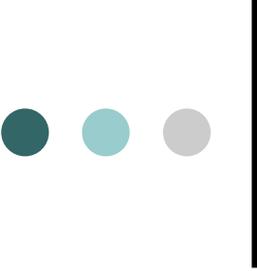
Tagging: Informal, emergent

- Practice of collaborative categorization using freely chosen keywords
- Tagging is becoming increasingly popular on the web and is somewhat controversial:
  - **Advocates**: more accurately reflects population's conceptual model of information
  - **Critics**: risk of presenting biased perspectives and false information
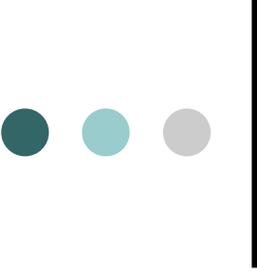
mmmm… Del.icio.us

Del.icio.us - social bookmarking service
http://del.icio.us/

- Created by Joshua Schachter 2003 as a hobby and an informal way to tag and share Web pages
- December 2005 – was acquired by Yahoo!
- Let's take a look shall we?

Flickr & Technorati

flickr BETA **-** http://www.flickr.com/
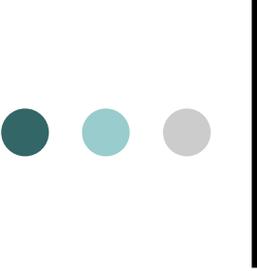
- a photo management and sharing web application modelled after del.icio.us, has a similar system of free-form tagging for photos

Technorati **-** http://www.technorati.com/about

- a real-time Blog search engine that searches blogs and news sites that update with extreme frequency
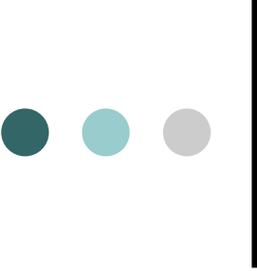
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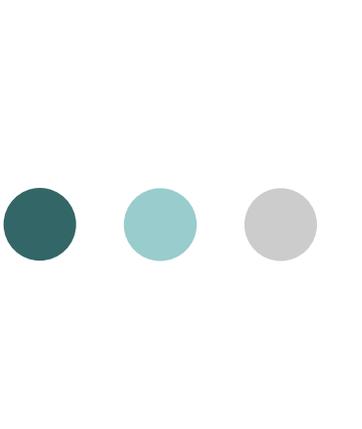
New waves in audio and video
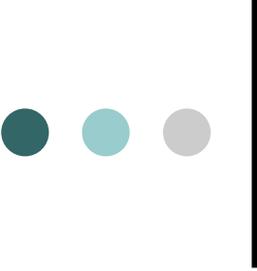
Podcasting

- A method of publishing audio programs via the Internet, allowing users to subscribe to a feed and receive new audio files automatically

- Became popular in late 2004 due to the popularity of downloading audio content to portable players or personal computers
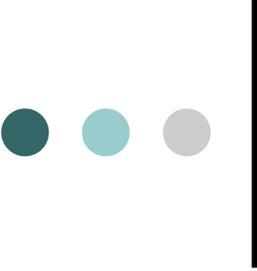
Podcasting

- Distinct from other types of online media delivery due to it's subscription model:

  - Uses an RSS or Atom Feed to deliver an enclosed file
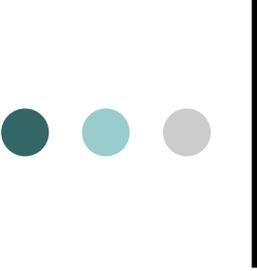
The Podcasting Revolution

Why is podcasting revolutionary?

○ Allows anyone to create their own "radio show" and distribute it

○ Allows existing broadcast radio programs to make use of a new distribution method

○ **YOU** control what you listen to and when! (i.e. timeshifting ala TIVO)
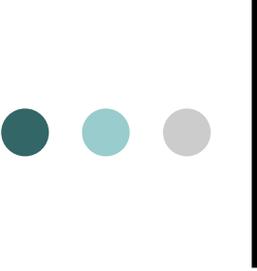
How to subscribe to podcasts

"podcatching" software
- A type of aggregator that periodically checks for and downloads new content automatically

"pod" is a misleading term
- Podcasts are not limited to just those who own ipods or other portable players
- The Minimum you need to listen to and subscribe to podcasts is any media player
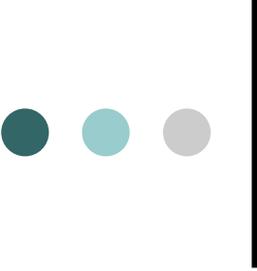
Podcast software

- **iTunes** - http://www.apple.com/itunes/
- **Juice** (formerly iPodder) http://juicereceiver.sourceforge.net/index.php
- **Doppler** - http://www.dopplerradio.net
- **Nimiq** - http://www.nimiq.nl
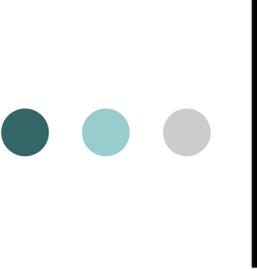
Uses for Podcasts

- Distribution of ad hoc or informal "radio shows" such as Greg Schwartz's library-oriented show "Open Stacks."
- Education: course lectures, and hands-on language exercises
- Libraries circulate ipods loaded with:
  - course reserves for classes
  - audiobooks
  - audio instructions to enhance and improve access to library services, etc
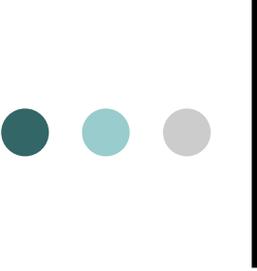
How to Podcast

- **How-To: Podcasting (get Podcasts and make your own) from Engadget** http://tinyurl.com/3tran

- **How to Make an RSS/XML Audio Feed from audiofeeds.org** http://audiofeeds.org/tutorial.php

- **How to Explain Podcasting to a Flashing 12** http://www.podcast411.com/f12.html
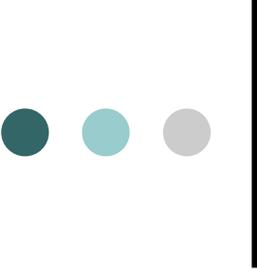
Podcast Directories

- **Ipodder**
  http://www.ipodder.org/
- **iTunes** ("Podcatcher" and directory)
  http://www.apple.com/itunes/
- **Podcast Alley**
  http://www.podcastalley.com/
- **Odeo** (Web-based)
  http://odeo.com/
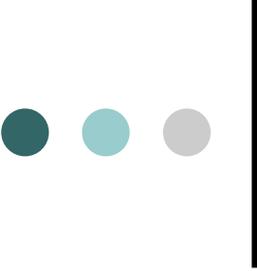
Library-Related Podcasts

- **Open Stacks**

  http://openstacks.net/os/

- **OPAL Podcast Blog**

  (Online Programming for All Libraries-and All Library Users)

  http://opalpodcast.blogspot.com/
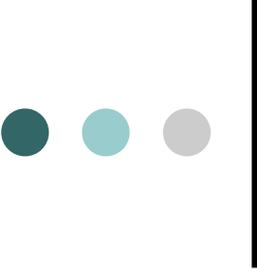
Health-Related Podcasts

- **Family Health**

  http://fhradio.org/

- **NPR: Health and Science**

  http://tinyurl.com/b7xza

- **Mayo Clinic: Medical Edge Radio**

  http://www.medicaledge.org/radio.html
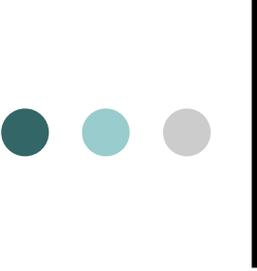
Vodcasting

- Emerging term used for the online delivery of video on demand content via RSS or Atom enclosures

- The Vodcast format is used by video weblogs (aka vlogs, vodding, vlogcasting, or vidcasting)
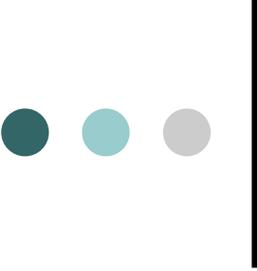
Vodcasting

- Similar to podcasting
- Today content is more likely to be played on a laptop than a PMA (personal media assistant), however…
- As of 2006, videoblogging is rising in popularity thanks to the Apple Video iPod
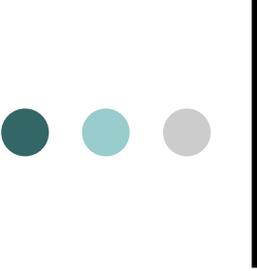
Vodcast Directories

- **Vodcasts.tv**

  http://www.vodcasts.tv

- **Tech Shows**
  http://www.filefarmer.com/techshows/
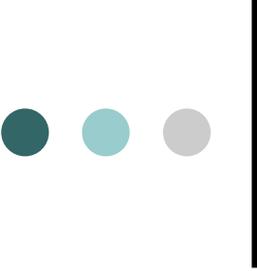
- **Itunes**

  http://www.apple.com/itunes/

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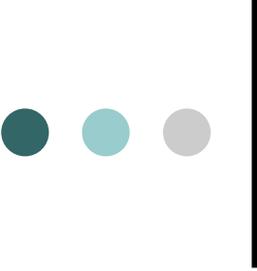
Voice over IP (VoIP)

- Routing of voice conversations over the Internet or any other IP-based network
- Voice data flows over a general-purpose packet-switched network
- The Plain Old Telephone Service (POTS) uses dedicated, circuit-switched voice transmission lines
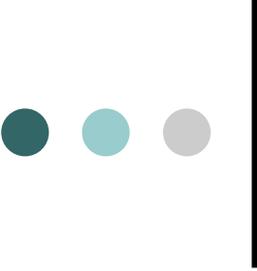
Network terminology

Packet switched network

- Transmitted data is broken into small, discrete groups of information and is then individually routed between nodes over conduits that may be shared by other nodes

Circuit switching network

- Establishes a direct and exclusive connection between two nodes for the duration of the exchange

# Circuit Switching vs. Packet Switching

Circuit Switched Data (CSD)

Packet Switched Data (PSD)
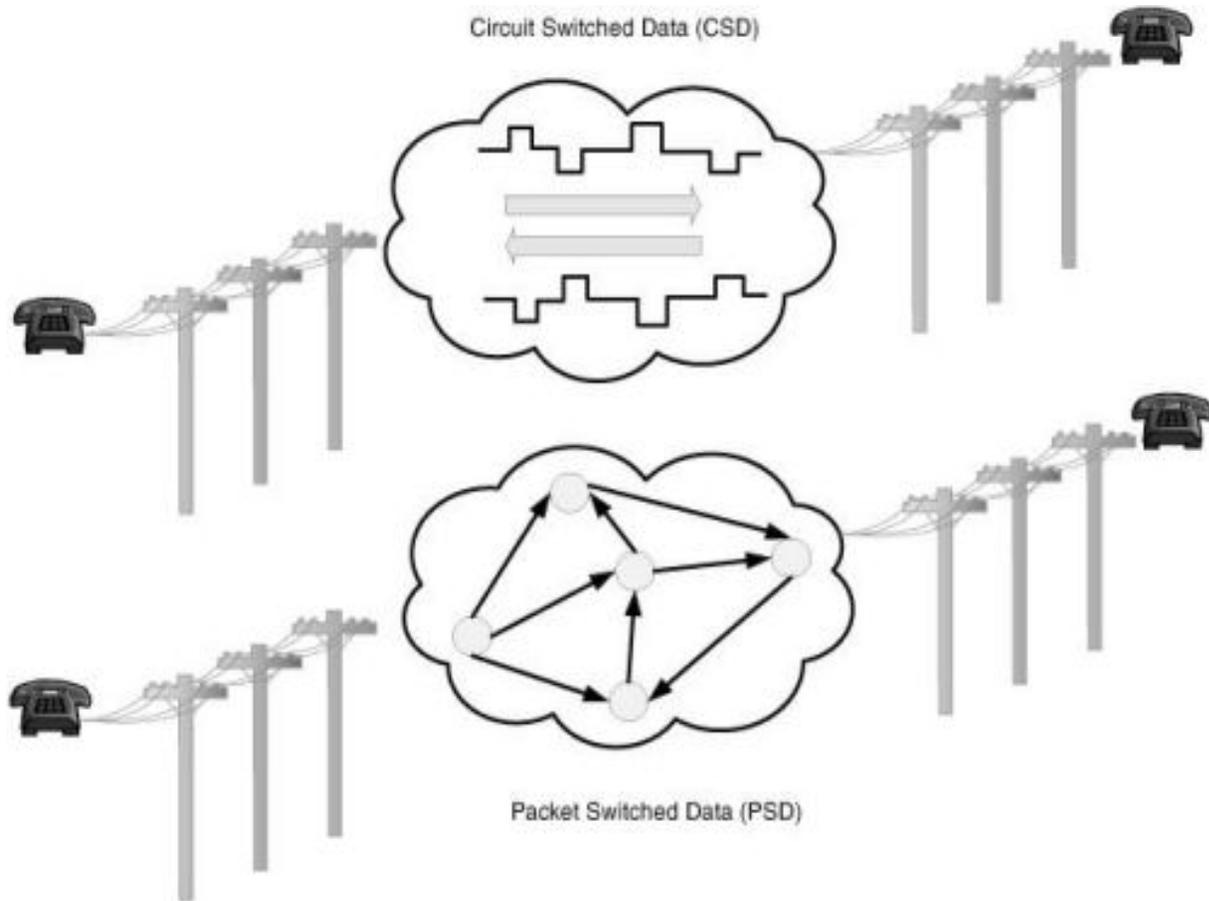
Figure 1. Circuit Switched Data Network vs. Packet Switched VOIP Network
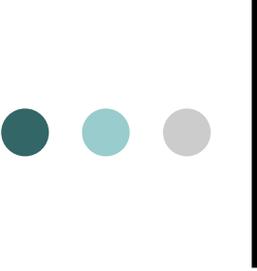
Advantages of VoIP

Innovation

- VoIP developers respond to market pressures quicker than (ITU) – results in speedy adoption of new features

Lower cost

- Supporters claim is cheaper than POTS
- International calls can sometimes be free!

Increased Functionality

- Incoming phone calls are automatically routed to your VoIP phone, irrespective of where you are connected to the network!
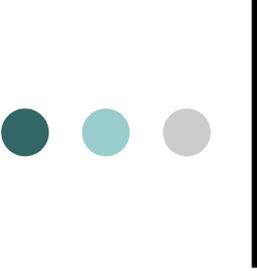
Disadvantages of VOIP

Power dependence

- Standard telephone service works during power outages - VoIP broadband modems rely on power

Latency

- Since VoIP is packet based, sometimes packets drop resulting in audio and video dropouts and stuttering
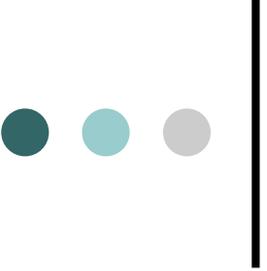
Disadvantages of VoIP

911

○ Problems with calling 911 - Difficult to trace callers location

○ Government mandating that VoIP carriers implement Enhanced 911 - Providers Appeal

Lack of Integration into global telephone number system

○ POTS and mobile phone networks share a global standard (E.164) that allocates and identifies a specific telephone line

○ No widely adopted standard for VoIP exists

VoIP Applications

Most popular:
- **Skype**

  http://skype.com
- **Gizmoproject**

  http://gizmoproject.com

Other VoIP Applications
- Googletalk, MSN Messenger, Yahoo Messenger
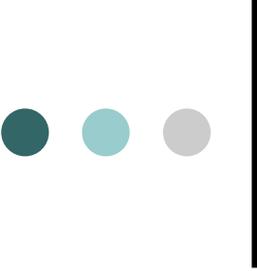
Questions?

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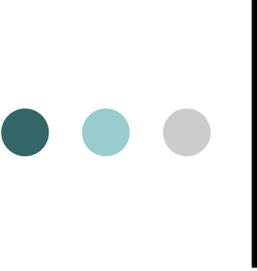
Internet 2

- A consortium led by 207 universities working in partnership with industry and government to develop and deploy advanced network applications and technologies
  http://www.internet2.edu

- **Internet2 (UCAID)** members created:
  - **Abilene** Network
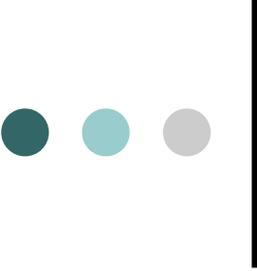
Abilene & National LambdaRail

The Abilene Network

A high-performance backbone network that enables the development of advanced Internet applications and services

National LambdaRail

Similar to Abilene, runs over fiber-optic lines, allowing more experimentation in academic research
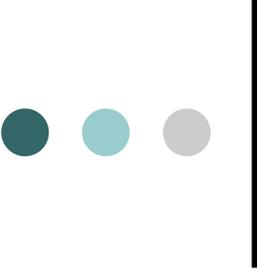
Internet2 Misconceptions

- Current trend in media to report on a network called Internet2

- Misleading since Internet2 is in fact a **consortium** and not a computer network

- Most articles that reference Internet2 as a network are really referring to Abilene

- Internet2 and LambdaRail will merge in the near future

Geek Gadgets Galore!

Can you hear me now?

Tablet PC

A notebook- or slate-shaped mobile computer. Its touch screen or digitizing tablet technology allows the user to operate the computer with a stylus or digital pen instead of a keyboard or mouse

Two Forms of Tablet PCs

- **Slate**
  - includes only a screen and pen.
- **Convertible (or Hybrid)**
  - include a built-in keyboard. Closely resemble laptops
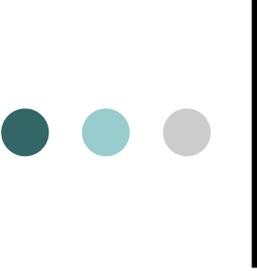
Tablet PCs (cont'd)

Operating systems:

- Windows XP Tablet PC Edition
- Linux

User inputs text using:

- Built-in handwriting recognition
- On-screen (virtual) keyboard
- Speech recognition
- Physical keyboard (if available)
- Shorthand-like entry methods (AlphaTap & Shark)
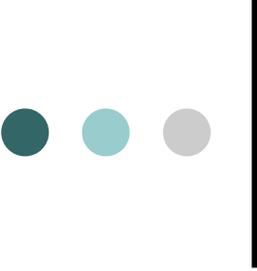
Tablet PCs (cont'd)

Advantages:

- Lighweight (note: Hybrids are heavier)
- Doesn't require keyboard entry
- Extremely mobile

Disadvantages:

- Expensive & can get very warm
- Handwriting-to-text conversion not perfect (Wacom jitter)
- Screen size peaks at about 14"
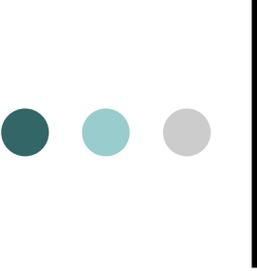
Blackberry

- A handheld wireless device that provides access to:
  - Wireless email
  - Wireless web browsing
  - Wireless phone
  - Text messaging
  - Other wireless data access
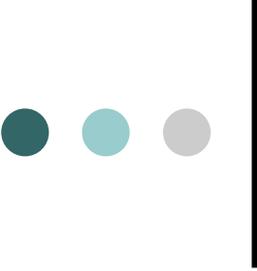
Hardware Overview

- System navigation via scrolling trackwheel and buttons
- QWERTY keyboard optimized for "thumbing"
- Operating system is proprietary
- Full integration into a company requires a BlackBerry Enterprise Server (BES)
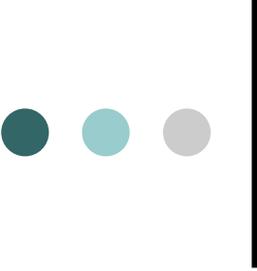
Blackberry Usage

- Popular w/ corp business, especially e-mail access for roaming employees
- SMS capabilities are also popular
- Use **push procedure**: all new e-mails, contacts and calendar entries are pushed to the BlackBerry device automatically
- Also Known as the **"Crackberry!"**
- **Controversy?**
  - RIM patent infringement Settled: BlackBerry pays $612.5 million to NTP Inc.

Palm Treo

Palm Treo Smartphones

- Similar to blackberry: except for scroll wheel

- Palm 700w Smartphone - now with Windows Mobile operating system!

VOIP Accessories

Plantronics USB Headsets

DSP400 - $40.00

DSP-500 - $50.00

VOIP Accessories

USB Speakerphones

- **VoSKY Chatterbox - $29.99**

- **miniVox MV100 - $39.99**

- **MVOX MV900 - $159.99**
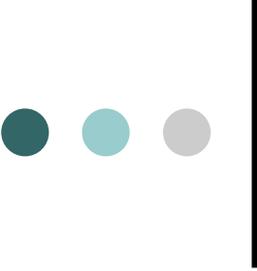
Course Materials

- **Geeks Bearing Gifts:**
  unwrapping new technology trends
  - http://nnlm.gov/train/geekgifts/
- **Course Materials**
  - http://nnlm.gov/train/geekgifts/geeks_A.doc
  - http://nnlm.gov/train/geekgifts/geeks_B.doc
  - http://nnlm.gov/train/geekgifts/geeks_C.doc
- **PPT Presentation**
  - http://nnlm.gov/psr/training/

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