

Music & the Internet

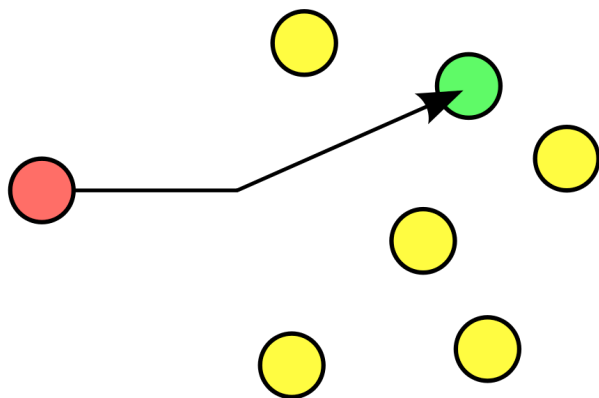
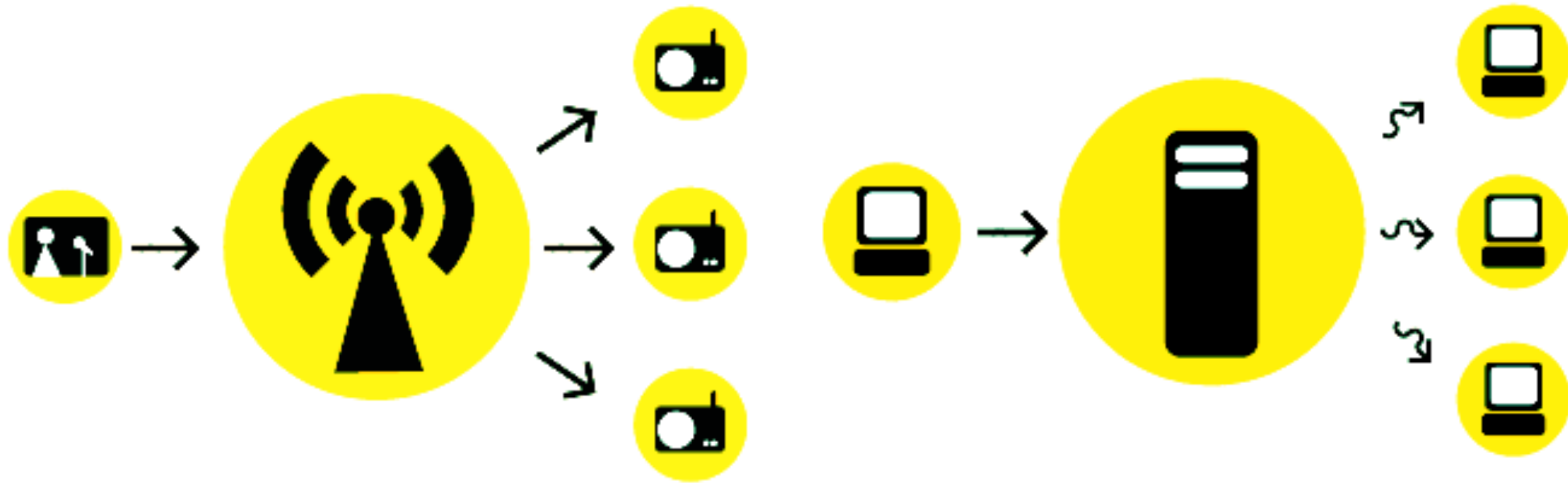
MUMT301

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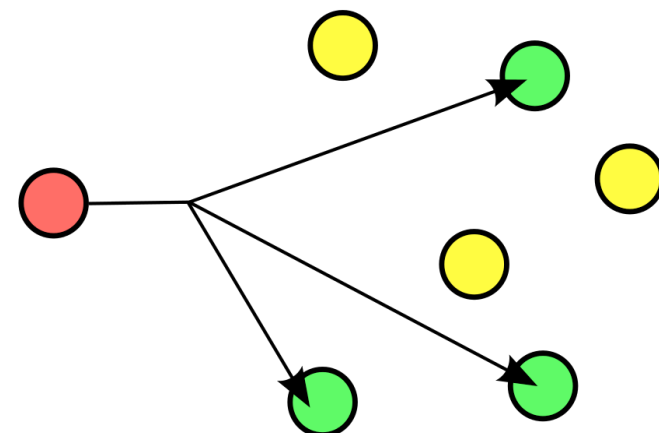
Plan

- Review of the last class
 - Music distribution
- Internet Radio
- On-demand music services presentation
- HTML DOM
- Writing and changing DOM elements with JavaScript

Internet Radio broadcasting

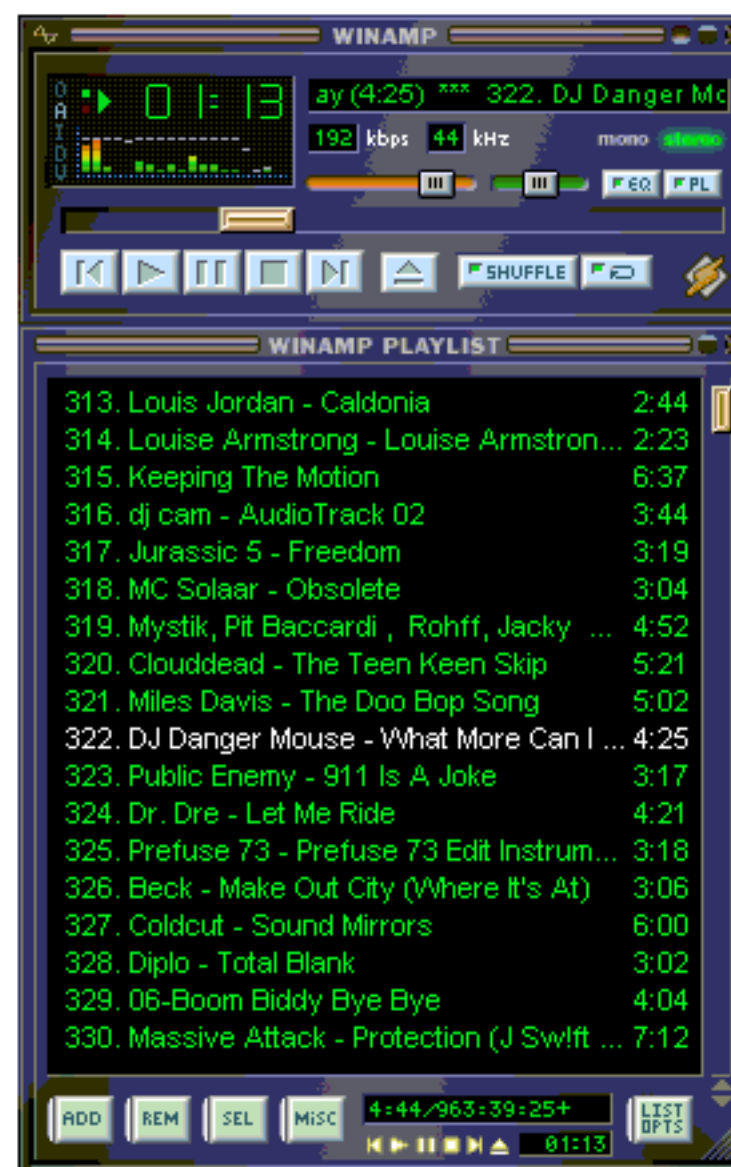
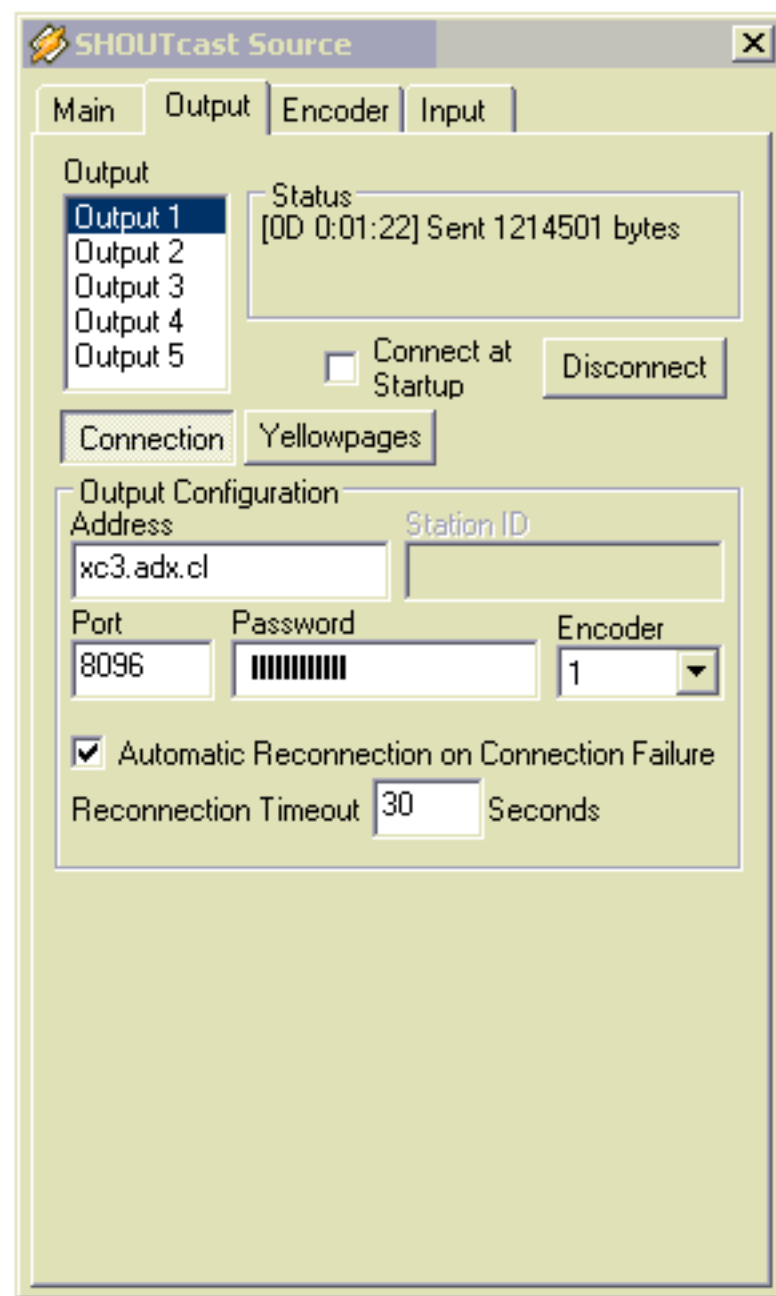


Unicast: Sends IP packets to identified recipients on a network, with added bandwidth



Multicast: sends IP packets to a group of hosts on a network, with no added bandwidth, and not requiring prior knowledge of who or how many receivers there are.

Playlist creation applications



Playlist creation applications

The screenshot displays the Nicecast Broadcast application interface. The top window, titled "Broadcast", shows the "On Air" status and a level indicator. Below it, there are buttons for "Source", "Info", "Titles", "Quality", "Share", and "Effects". The "Share" section provides the broadcast address: `http://192.168.1.118:8001/listen.m3u`. A "Server Checker" button is also present.

The main window shows a playlist titled "pherinfonprozession" by "Mouse on Mars - Abschaffung der Arten". The playlist is a table with columns: Name, Time, Artist, Album, Genre, Rating, and Plays. The current track is "pherinfonprozession" (4:29).

	Name	Time	Artist	Album	Genre	Rating	Plays
1	Faith	5:53	Ada	Meine zarten Pfoten	Rock		1
2	On The Mend	4:33	Ada	Meine zarten Pfoten	Rock		1
3	Likely	3:36	Ada	Meine zarten Pfoten	Rock		1
4	The Jazz Singer (re-imagined by Ada)	4:40	Ada	Meine zarten Pfoten	Rock		1
5	Intro	4:06	Ada	Meine zarten Pfoten	Rock		1
6	At The Gate	7:29	Ada	Meine zarten Pfoten	Rock		1
7	Interlude	3:15	Ada	Meine zarten Pfoten	Rock		1
8	Happy Birthday	6:14	Ada	Meine zarten Pfoten	Rock		1
9	2 Likely	10:08	Ada	Meine zarten Pfoten	Rock		1
10	Ritual Union	3:30	Little Dragon	Ritual Union	Electronica		3
11	Little Man	2:42	Little Dragon	Ritual Union	Electronica		3
12	Brush The Heat	4:13	Little Dragon	Ritual Union	Electronica		3
13	Shuffle A Dream	2:55	Little Dragon	Ritual Union	Electronica		3
14	Please Turn	3:33	Little Dragon	Ritual Union	Electronica		3
15	Crystalfilm	4:49	Little Dragon	Ritual Union	Electronica		2
16	Precious	3:51	Little Dragon	Ritual Union	Electronica		2
17	Nightlight	3:25	Little Dragon	Ritual Union	Electronica		2
18	Summertearz	3:54	Little Dragon	Ritual Union	Electronica		2
19	When I Go Out	6:02	Little Dragon	Ritual Union	Electronica		2
20	Seconds	4:31	Little Dragon	Ritual Union	Electronica		2
21	aggro moderato	1:50	Mouse on Mars	Abschaffung der Ar...	Soundtrack		1
22	veränderungen	6:28	Mouse on Mars	Abschaffung der Ar...	Soundtrack		1
23	femtotöne	1:08	Mouse on Mars	Abschaffung der Ar...	Soundtrack		1
24	hawai	2:17	Mouse on Mars	Abschaffung der Ar...	Soundtrack		1
25	pherinfonprozession	4:29	Mouse on Mars	Abschaffung der Ar...	Soundtrack	★★★	1
26	ferngefühl	2:13	Mouse on Mars	Abschaffung der Ar...	Soundtrack		1
27	cyrus hill	0:43	Mouse on Mars	Abschaffung der Ar...	Soundtrack		1
28	news of gente	1:53	Mouse on Mars	Abschaffung der Ar...	Soundtrack		1
29	durch die wüste	1:57	Mouse on Mars	Abschaffung der Ar...	Soundtrack		1
30	dramus	4:16	Mouse on Mars	Abschaffung der Ar...	Soundtrack		1
31	ortlos	0:56	Mouse on Mars	Abschaffung der Ar...	Soundtrack		1
32	holos	0:22	Mouse on Mars	Abschaffung der Ar...	Soundtrack		1
33	opium	2:44	Mouse on Mars	Abschaffung der Ar...	Soundtrack		1
34	windhunde	0:31	Mouse on Mars	Abschaffung der Ar...	Soundtrack		1
35	arten braten	0:47	Mouse on Mars	Abschaffung der Ar...	Soundtrack		1
36	viele fragen	1:45	Mouse on Mars	Abschaffung der Ar...	Soundtrack		1
37	thema der gente	1:28	Mouse on Mars	Abschaffung der Ar...	Soundtrack		1
38	tutti genti estinti	1:01	Mouse on Mars	Abschaffung der Ar...	Soundtrack		1
39	Black Scars	3:14	The Residents	Dolor Generar	avantgarde, experimental...	★★	1
40	Burning Madrone	2:15	The Residents	Dolor Generar	avantgarde, experimental...		1
41	Mary Achi	2:42	The Residents	Dolor Generar	avantgarde, experimental...		1
42	Memorv of Transaression	2:41	The Residents	Dolor Generar	avantaarde. experimental...		1

The bottom window shows a "Now Playing" section with a visualizer and the track "Die Abschaffung der Arten" by Mouse on Mars.

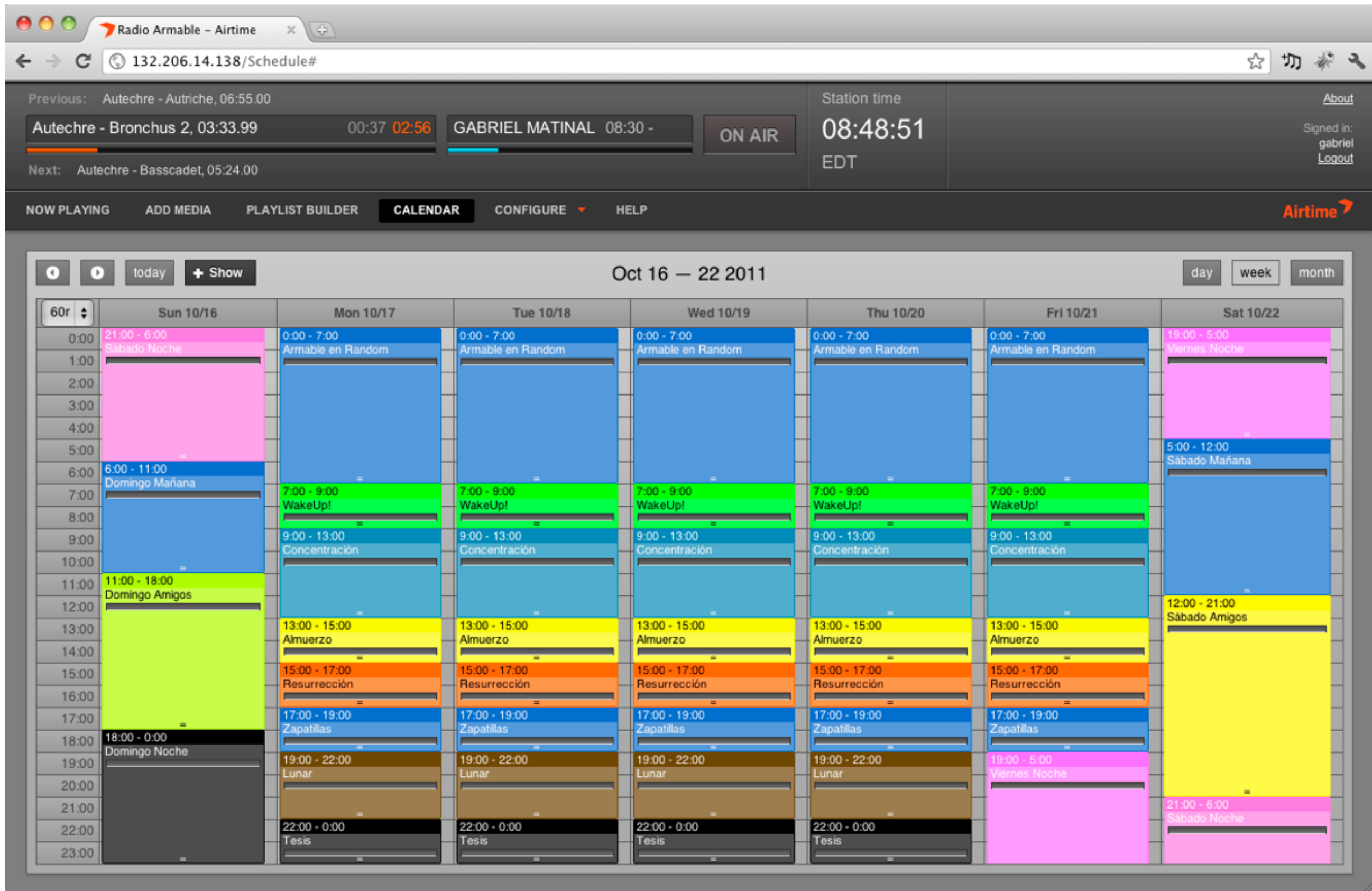
Automated radio broadcasting

The screenshot displays the SAM Broadcaster - Radio Armable software interface. The top menu bar includes File, Player, General, Window, Layout, Tools, and Help. The status bar at the top right shows the time 23:27:50 and 45 viewers, peak of 45.

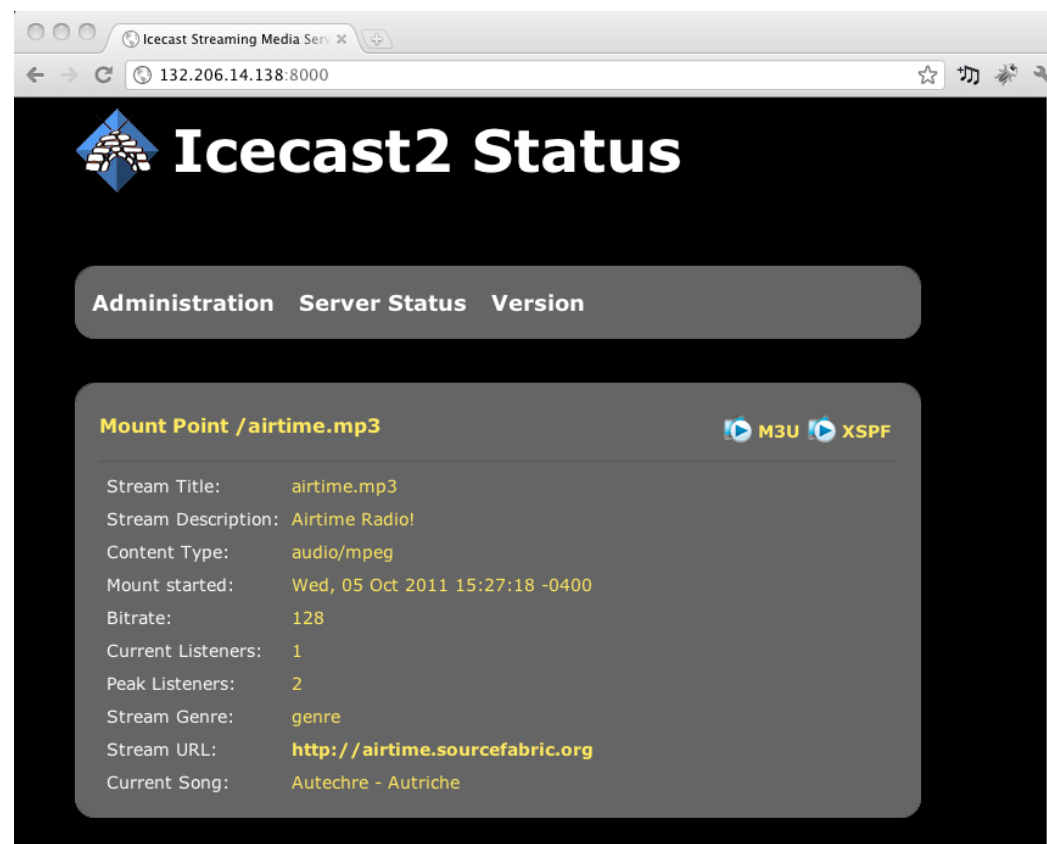
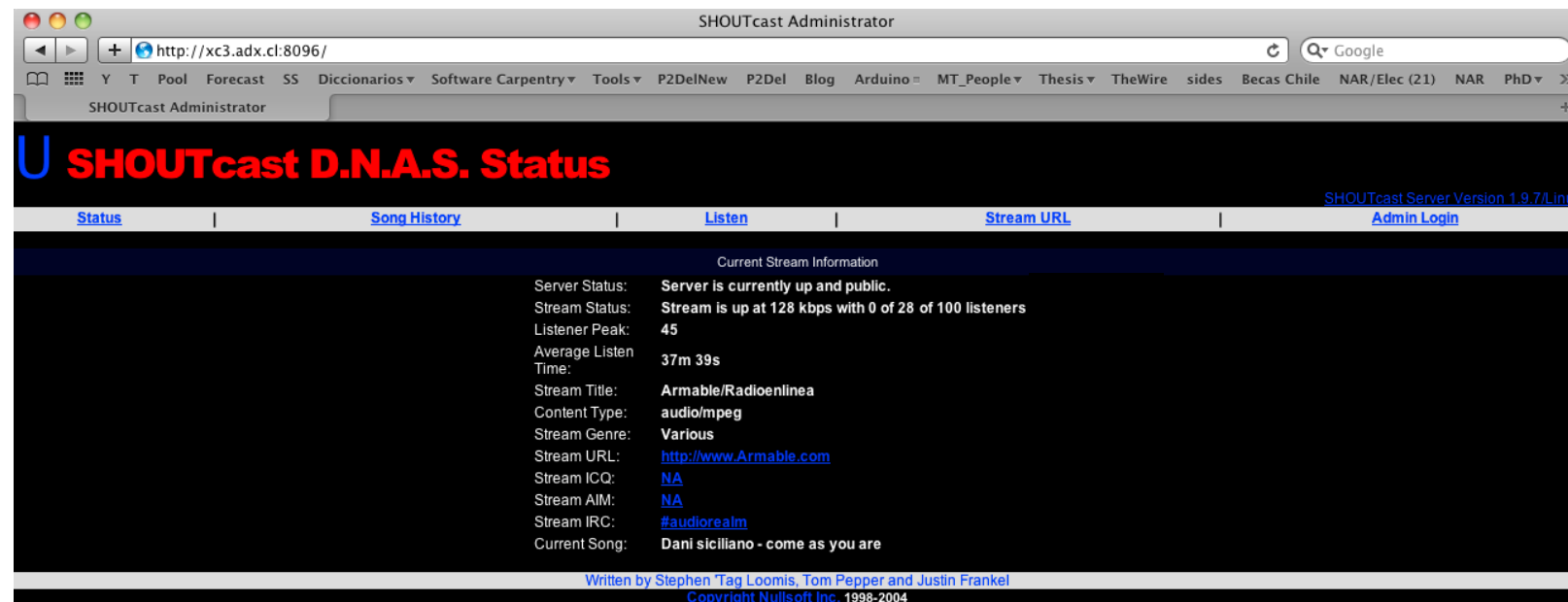
The main interface is divided into several sections:

- Deck A:** Shows the current track "The Knife - We Share Our Mother's Health" with a volume slider and playback controls. The current time is 0:24.3, total time is 4:11.4, and the bitrate is 192 kbps.
- Deck B:** Shows the current track "Sleeparchive - Sleep Cycle 6" with a volume slider and playback controls. The current time is 0:00.0, total time is 0:40.0, and the bitrate is 192 kbps.
- History:** A list of recently played tracks, including "The Knife - We Share Our Mother's Health" and "ARMABLE - mx_2".
- Queue:** A list of tracks to be played next, including "Boards of Canada - opening the mouth" and "Chet Baker - I've Never Been In Love Before".
- Playlist:** A list of tracks in the current playlist, including "Zomby - A Devil Lay Here" and "Zomby - Alothea".
- Playlist Categories:** A list of categories for organizing the playlist, including "WakeUp", "Tesis", "Concentracion", "Almuerzo", "Resurreccion", "Zapatillas", and "Lunar".
- FTP log:** A log of file transfers, showing a successful transfer of a file named "226-File" and a log of file transfers.

Social radio applications



Streaming Media Servers

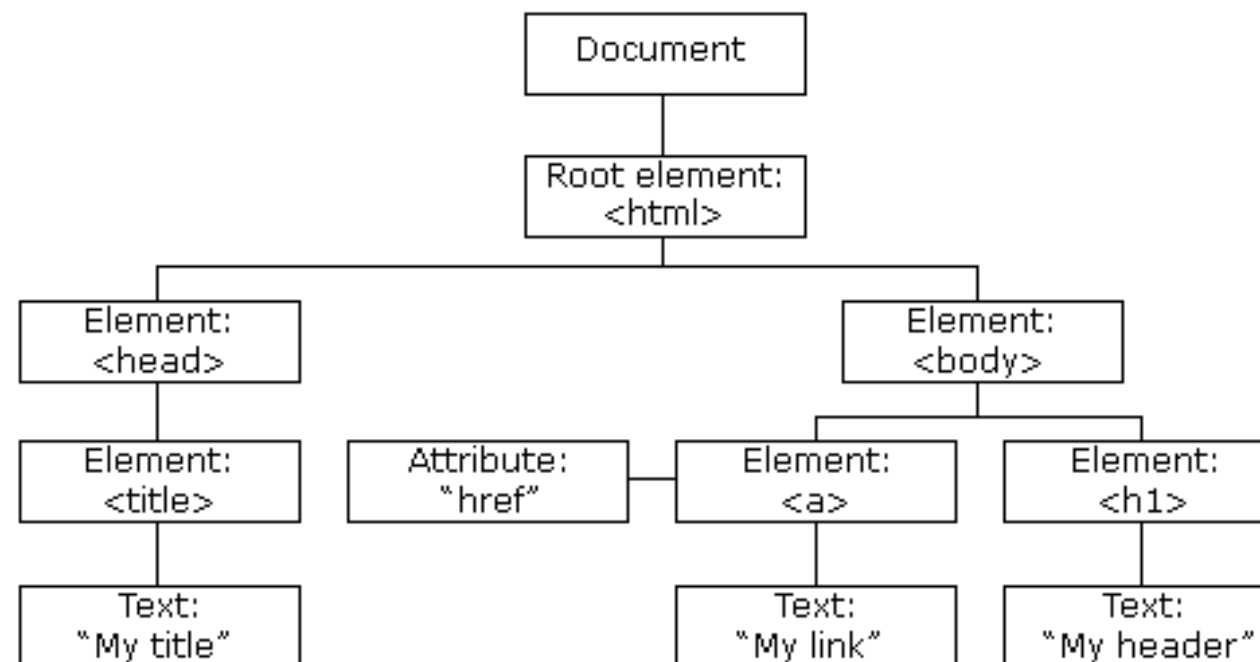


On-demand music services presentation

BREAK

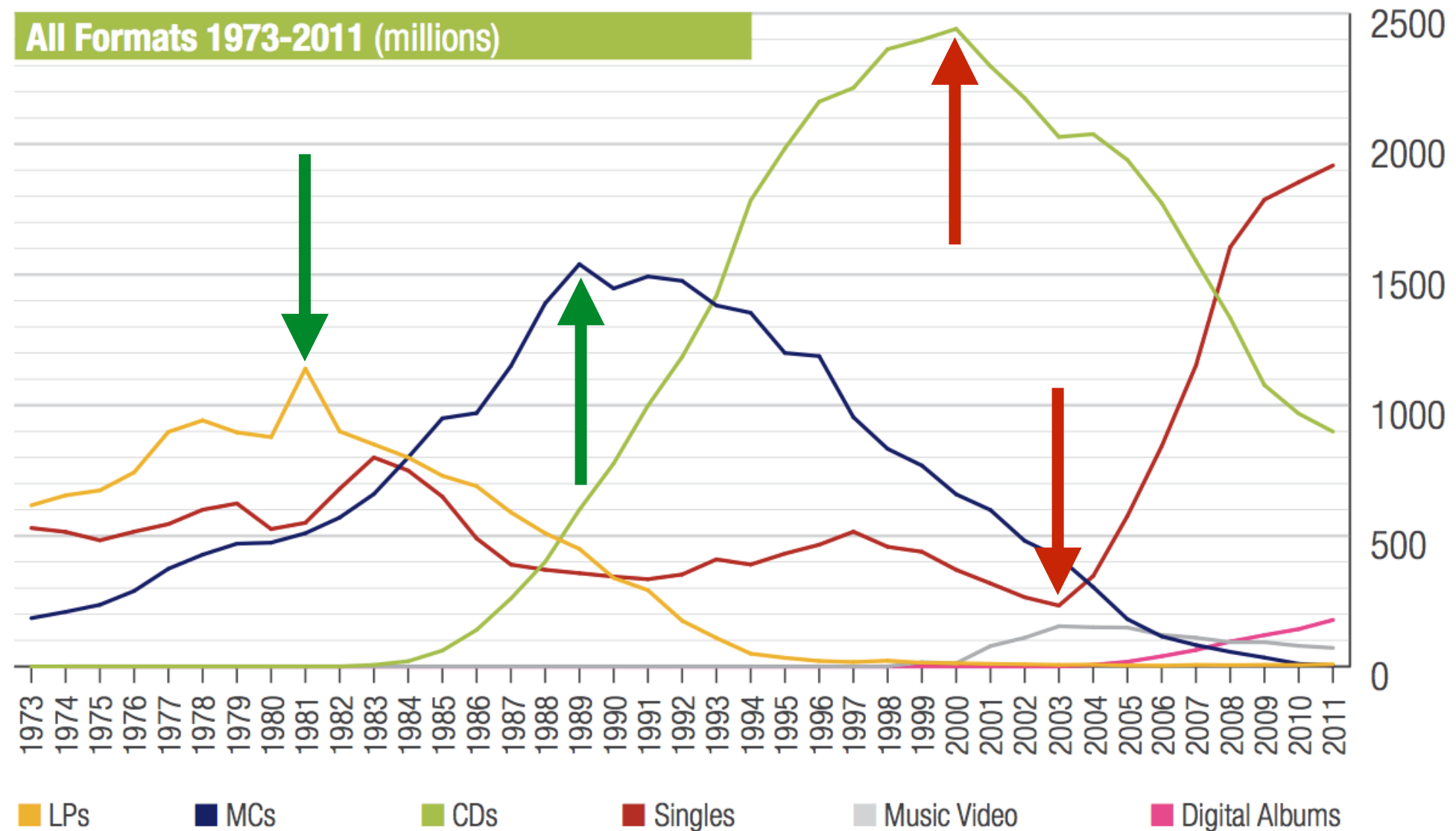
HTML DOM

- "The W3C Document Object Model (DOM) is a platform and language-neutral interface that allows programs and scripts to dynamically access and update the content, structure, and style of a document."
- When a web page is loaded, the browser creates a Document Object Model of the page
- The DOM is constructed as a tree of objects



- With the object model, JavaScript gets all the power it needs to create dynamic HTML

Global music sales by format



Taken from [Record Industry in Numbers 2011 \(IFPI\)](#)

Peer to peer (P2P)

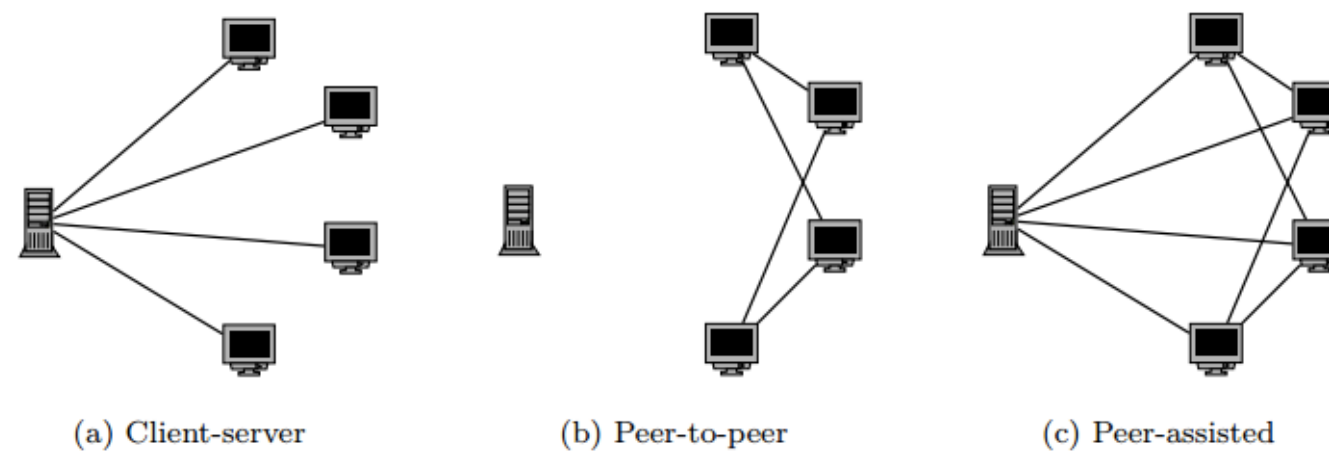


Figure 1.1: Three types of protocols.

Taken from [Kreitz, G. 2011. Aspects of Secure and Efficient Streaming and Collaboration. PhD Thesis. KTH Computer Science and Communication.](#)

Music industry

