



Blurring the Boundaries of Music

Leo Franchi

leo@kdab.com

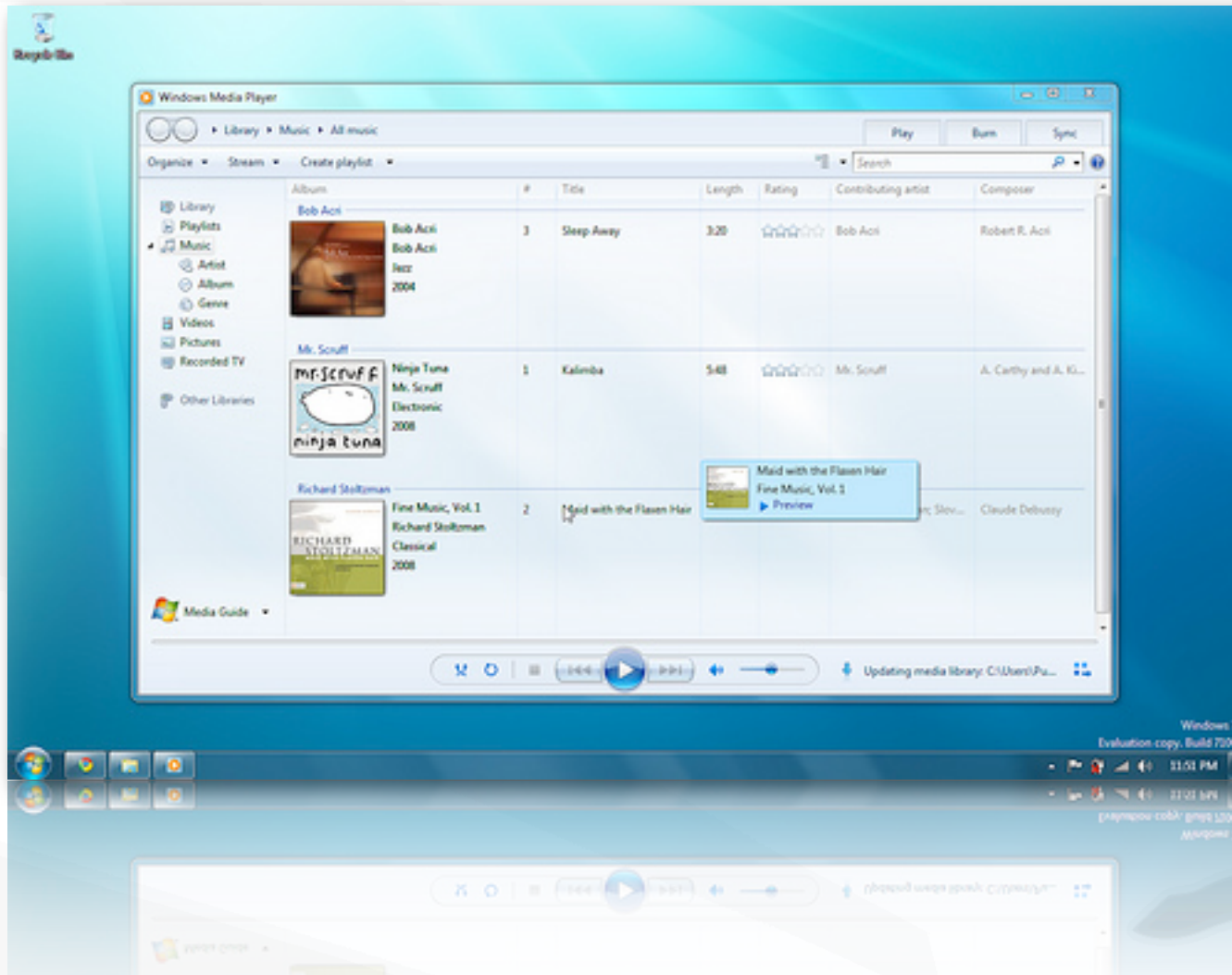
Akademy 2010, Tampere





Media players exist to
organize our music





Windows Media Player

Library > Music > All music

Organize Stream Create playlist

Search

Album	#	Title	Length	Rating	Contributin...
Apocalyptica Amplified: A Decade of Re... Pop 2006	1	Enter Sandman	3:41	☆☆☆☆☆	Apocalyptica
	2	Harmageddon	4:55	☆☆☆☆☆	Apocalyptica
	3	Nothing Else Matters	4:47	☆☆☆☆☆	Apocalyptica
	4	Refuse / Resist	3:13	☆☆☆☆☆	Apocalyptica
	5	Somewhere Around No...	4:10	☆☆☆☆☆	Apocalyptica
	6	Betrayal/ Forgiveness	5:12	☆☆☆☆☆	Apocalyptica
	7	Farewell	5:32	☆☆☆☆☆	Apocalyptica
	8	Master Of Puppets	6:02	☆☆☆☆☆	Apocalyptica
	9	Hall Of The Mountain K...	3:29	☆☆☆☆☆	Apocalyptica
	10	One	5:45	☆☆☆☆☆	Apocalyptica
	11	Heat	3:21	☆☆☆☆☆	Apocalyptica
	12	Cohkka	4:28	☆☆☆☆☆	Apocalyptica
	13	Kaamos	4:43	☆☆☆☆☆	Apocalyptica
	14	Deathzone	4:36	☆☆☆☆☆	Apocalyptica
	15	Angel Of Death	3:52	☆☆☆☆☆	Apocalyptica
	16	Repressed	4:27	☆☆☆☆☆	Apocalyptica
	17	Path Vol.2	3:24	☆☆☆☆☆	Apocalyptica
	18	Bittersweet	4:26	☆☆☆☆☆	Apocalyptica
	19	Hope Vol.2	4:02	☆☆☆☆☆	Apocalyptica
	20	En Vie	3:28	☆☆☆☆☆	Apocalyptica
	21	Faraway Vol. 2	5:12	☆☆☆☆☆	Apocalyptica
	22	Life Burns!	3:07	☆☆☆☆☆	Apocalyptica
	23	Seemann	5:20	☆☆☆☆☆	Apocalyptica
Apocalyptica Apocalyptica Rock 2005	1	Life Burns!	3:06	☆☆☆☆☆	Apocalyptica
	2	Quutamo	3:27	☆☆☆☆☆	Apocalyptica
	3	Distraction	3:56	☆☆☆☆☆	Apocalyptica

Media Guide

Enter Sandman
Amplified: A Decade of Re...
Apocalyptica

Unsaved list

- Enter Sandman 3:41
- Harmageddon 4:55
- Nothing Else Matters 4:47
- Refuse / Resist 3:13
- Somewhere Around Nothing 4:10
- Betrayal/ Forgiveness 5:12
- Farewell 5:32
- Master Of Puppets 6:02
- Hall Of The Mountain King 3:29
- One 5:45
- Heat 3:21
- Cohkka 4:28
- Kaamos 4:43
- Deathzone 4:36
- Angel Of Death 3:52
- Repressed 4:27
- Path Vol.2 3:24
- Bittersweet 4:26
- Hope Vol.2 4:02
- En Vie 3:28
- Faraway Vol. 2 5:12
- Life Burns! 3:07
- Seemann 5:20
- Life Burns! 3:06

113 items, 8.1 hours

Amplified: A Decade of Reinventing the Cello 00:34

Updating media library: D:\Music

Windows Media Player (Arabic interface)

Library > Music > All music

Organize Stream Create playlist

Search

Album	#	Title	Length	Rating	Contributin...
Apocalyptica Amplified: A Decade of Re... Pop 2006	1	Enter Sandman	3:41	☆☆☆☆☆	Apocalyptica
	2	Harmageddon	4:55	☆☆☆☆☆	Apocalyptica
	3	Nothing Else Matters	4:47	☆☆☆☆☆	Apocalyptica
	4	Refuse / Resist	3:13	☆☆☆☆☆	Apocalyptica
	5	Somewhere Around No...	4:10	☆☆☆☆☆	Apocalyptica
	6	Betrayal/ Forgiveness	5:12	☆☆☆☆☆	Apocalyptica
	7	Farewell	5:32	☆☆☆☆☆	Apocalyptica
	8	Master Of Puppets	6:02	☆☆☆☆☆	Apocalyptica
	9	Hall Of The Mountain K...	3:29	☆☆☆☆☆	Apocalyptica
	10	One	5:45	☆☆☆☆☆	Apocalyptica
	11	Heat	3:21	☆☆☆☆☆	Apocalyptica
	12	Cohkka	4:28	☆☆☆☆☆	Apocalyptica
	13	Kaamos	4:43	☆☆☆☆☆	Apocalyptica
	14	Deathzone	4:36	☆☆☆☆☆	Apocalyptica
	15	Angel Of Death	3:52	☆☆☆☆☆	Apocalyptica
	16	Repressed	4:27	☆☆☆☆☆	Apocalyptica
	17	Path Vol.2	3:24	☆☆☆☆☆	Apocalyptica
	18	Bittersweet	4:26	☆☆☆☆☆	Apocalyptica
	19	Hope Vol.2	4:02	☆☆☆☆☆	Apocalyptica
	20	En Vie	3:28	☆☆☆☆☆	Apocalyptica
	21	Faraway Vol. 2	5:12	☆☆☆☆☆	Apocalyptica
	22	Life Burns!	3:07	☆☆☆☆☆	Apocalyptica
	23	Seemann	5:20	☆☆☆☆☆	Apocalyptica
Apocalyptica Apocalyptica Rock 2005	1	Life Burns!	3:06	☆☆☆☆☆	Apocalyptica
	2	Quutamo	3:27	☆☆☆☆☆	Apocalyptica
	3	Distraction	3:56	☆☆☆☆☆	Apocalyptica

Media Guide

Enter Sandman
Amplified: A Decade of Re...
Apocalyptica

Unsaved list

- Enter Sandman 3:41
- Harmageddon 4:55
- Nothing Else Matters 4:47
- Refuse / Resist 3:13
- Somewhere Around Nothing 4:10
- Betrayal/ Forgiveness 5:12
- Farewell 5:32
- Master Of Puppets 6:02
- Hall Of The Mountain King 3:29
- One 5:45
- Heat 3:21
- Cohkka 4:28
- Kaamos 4:43
- Deathzone 4:36
- Angel Of Death 3:52
- Repressed 4:27
- Path Vol.2 3:24
- Bittersweet 4:26
- Hope Vol.2 4:02
- En Vie 3:28
- Faraway Vol. 2 5:12
- Life Burns! 3:07
- Seemann 5:20
- Life Burns! 3:06

113 items, 8.1 hours

Amplified: A Decade of Reinventing the Cello 00:34

Updating media library: D:\Music



The screenshot shows a music player window with a dark theme. At the top, the title bar reads "File Play Options View Help". The main area is divided into several sections:

- Now Playing:** Shows "The Beatles - Come Together (4:20)" with playback controls and a volume slider.
- Album List:** A grid of album covers for various Beatles releases, including "With The Beatles", "The Complete Holywood", "A Hard Day's Night", "Beatles For Sale", "Sheal / Candlestick Park", "Anthology 2", "Help", "Rubber Soul", "Unsurpassed Masters", "Revolver", "The Complete Christmas", "The Lost Pepperfan...", "Magical Myst...", "Sgt. Pepper's Lonely...", "Revolution 1 (Take 2)", and "The Beatles - Unsurpassed Masters Vol. 4".
- Search in Playlist:** A list of 17 songs with their durations:

Search	Search
1. The Beatles - Come Together	4:20
2. The Beatles - Something	3:03
3. The Beatles - Maxwell's Silver Hammer	3:27
4. The Beatles - Oh! Darling	3:26
5. The Beatles - Octopus's Garden	2:51
6. The Beatles - I Want You (She's So Heavy)	7:47
7. The Beatles - Here Comes The Sun	3:05
8. The Beatles - Because	2:45
9. The Beatles - You Never Give Me Your Money	4:02
10. The Beatles - Sun King	2:26
11. The Beatles - Mean Mr. Mustard	1:06
12. The Beatles - Polythene Pam	1:12
13. The Beatles - She Came in Through the Bathroom Window	1:57
14. The Beatles - Golden Slumbers	1:31
15. The Beatles - Carry That Weight	1:36
16. The Beatles - The End	2:19
17. The Beatles - Her Majesty	0:23

At the bottom, there are playback controls including "Play", "Queue", and "702 items [47:16/595:54:18]".



Kashmir - Just A Phase (
kHz: 44 3 : 03 kbps: 192

Playlist Editor

1. Zoé - Dead 4:57
2. Zoé - Dead 4:45
3. The Last Shadow Puppets - Separ... 2:38
4. Zoé - Dead (Live Version) 4:39
5. Kashmir - Undisturbed 2:42
6. Kashmir - Home Dead 5:06
7. Kashmir - The Ghost Of No One (f... 5:53
8. Kashmir - Miss You (Slight Return) 5:22
9. Kashmir - Just A Phase 3:27
10. Kashmir - Mom In Love, Daddy In ... 5:06
11. Kashmir - Gorgeous (Opiate Versi... 6:39
12. The Dead Weather - 3 Birds 3:44
13. The Dead Weather - 60 Feet Tall 5:33
14. The Dead Weather - Hang You fro... 3:37
15. The Dead Weather - I Cut Like A B... 3:27
16. The Dead Weather - So Far from ... 3:40
17. The Dead Weather - Treat Me Like... 4:10
18. The Dead Weather - Rocking Horse 2:59
19. The Dead Weather - New Pony 3:58
20. The Dead Weather - Bone House 3:26
21. The Dead Weather - No Hassle Ni... 2:55
22. The Dead Weather - Will There Be... 6:20
23. Muse - Dead Star (Hullabaloo Live) 3:59
24. Muse - Dead Star 4:10
25. Zoé - Dead 4:40

Media Library
Search: dead

Artist	Albums	Album	Year	Trac
All (9 artists)	19	All (19 albums)		43
Zoé	10	With Love And Squalor	2005	1
We Are Scientists	1	VL 2009	2009	1
The Von Bondies	1	VL 07	2007	1
Radiohead	1	Session Reactor 105		1
Neon Indian	1	Sesion En Reactor 4º Aniversario	2008	1
Muse	2	The Room EP	2005	6
The Last Shadow Puppets	1	Recopilacion		4
Kashmir	1	Psychic Chasms EP	2009	1

Artist	Album	Track #	Title	Length	Ge
Zoé	281107	22	Dead	4:57	Re
Zoé	Acustico 22		Dead	4:45	Bl
The Last Shadow Puppets	The Age Of The Underst...	4	Separate And Ever Deadly	2:38	Inc
Zoé	AOL Dejando Huellas	3	Dead (Live Version)	4:39	
Kashmir	Home Dead	1	Undisturbed	2:42	Ge
Kashmir	Home Dead	2	Home Dead	5:06	Ge
Kashmir	Home Dead	3	The Ghost Of No One (feat.Randi Laubek)	5:53	Ge
Kashmir	Home Dead	4	Miss You (Slight Return)	5:22	Ge
Kashmir	Home Dead	5	Just A Phase	3:27	Ge
Kashmir	Home Dead	6	Mom In Love, Daddy In Space (Opiate Version)	5:06	Ge
Kashmir	Home Dead	7	Gorgeous (Opiate Version)	6:39	Ge

Play | Enqueue | Create Playlist | 43 items [3:06:01] [233.12 MB] in 0.267 sec. | Show Info

Based On: All Eyes On Me by Girl Talk

	Name	Artist	Album	Time	Rating
1	All Eyes On Me	Girl Talk	Unstoppable	5:09	
2	Say Whoa	A-Trak	SXSW 2009 Showcasing Artists	5:57	
3	Frontier Psychiatrist	The Avalanches	Frontier Psychiatrist	4:50	
4	L.A. Song	Fischerspooner	#1	4:10	
5	Radio Retaliation	Thievery Corporation	Radio Retaliation	3:27	
6	Dawn Chorus	Boards of Canada	Geogaddi	3:56	
7	A Moment of Clarity	Boards of Canada	The Campfire Headphase	0:52	
8	It's Good To Be In Love	Frou Frou	Details	4:39	
9	Sexy Boy	Air	Moon Safari	4:58	
10	The Feeling	Girl Talk	Unstoppable	0:48	
11	Discotraxx	Ladytron	604	3:51	
12	Planet Rock	Afrika Bambaataa & The Soul...	The Rolling Stone Magazines 500 ...	5:21	
13	Left Side Drive	Boards of Canada	Trans Canada Highway	5:21	
14	Roygbiv	Boards of Canada	Music Has The Right To Children	2:31	
15	Sweetness	Fischerspooner	#1	5:23	
16	Shadows Of Ourselves	Thievery Corporation	Shadows Of Ourselves	3:39	
17	Squeeze Me	Kraak & Smaak	SXSW 2009 Showcasing Artists	3:26	
18	Maddening Shroud	Frou Frou	Details	3:38	
19	Cleveland Shake	Girl Talk	Stop Cleveland Hate	4:24	
20	Lebanese Blonde	Thievery Corporation	Garden State	4:47	
21	A Is To B As B Is To C	Boards of Canada	Geogaddi	1:41	
22	33 Degree	Thievery Corporation	Radio Retaliation	3:48	

22 songs, 1.4 hours, 114.1 MB



Media players enforce the separation
between the desktop and the web





Music in the cloud is not accessible
from your desktop media player





All we have are integrated music
stores





Web 2.0, saviour or next victim?





Easy solution!

Just bring the web to the desktop





Then we are presented with a new problem:



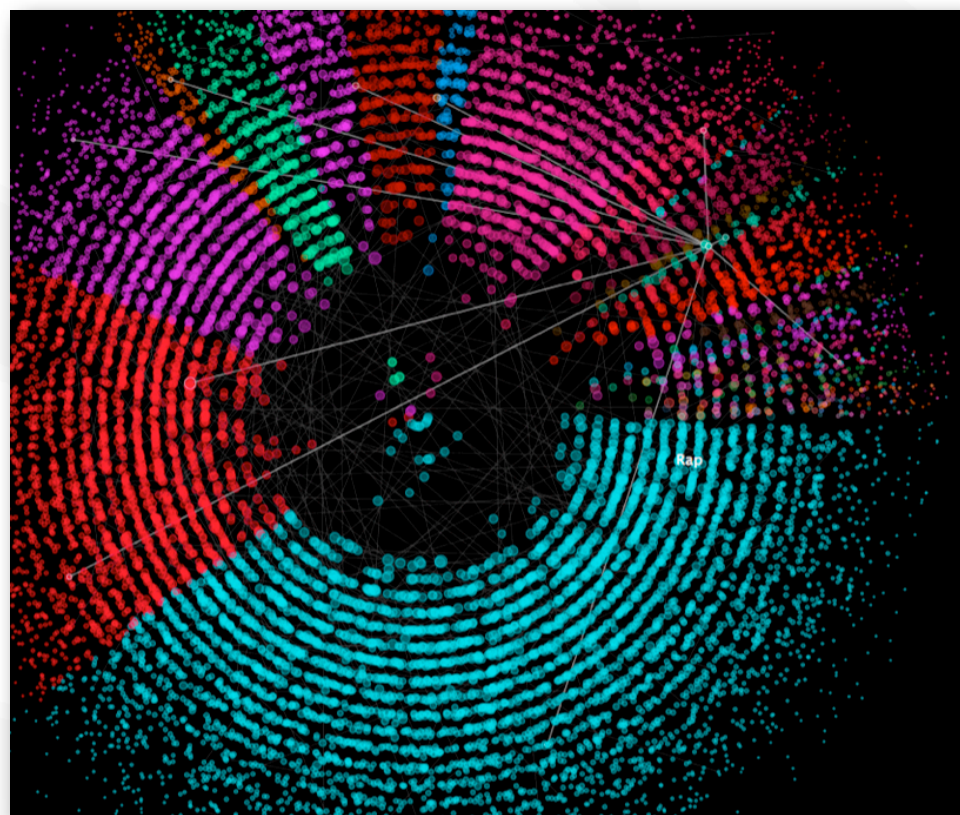






What do I want to hear?







We all want our personal DJ





Dynamic Playlists

On

Repopulate

Playlist: 100% echonest

Proportion: 100%

Match Type: EchoNest Similar Artists

Match: Playlist

Recommendations by EchoNest.

Proportional Bias

Match a certain portion of the playlist to a value.

Custom Bias

Match a certain portion of the playlist to a custom field.

Fuzzy Bias

Loosely match the playlist to an approximate value.

SoundBite

Search Library

Playlists:

Create Playlist

100 Number Of Tracks

Exclude Tracks From Seed Album

Exclude Tracks From Seed Artist

Limit To One Song Per Artist

Track Processing:

Processed Tracks: 5716/5753

Resume Feature Extraction

SoundBite Media View:

View Entire Playlist/Library

View Audio Similarity Network

Color By Genre

Color By Artist

Color By Album

Color By Rating

15 Number of Neighbors

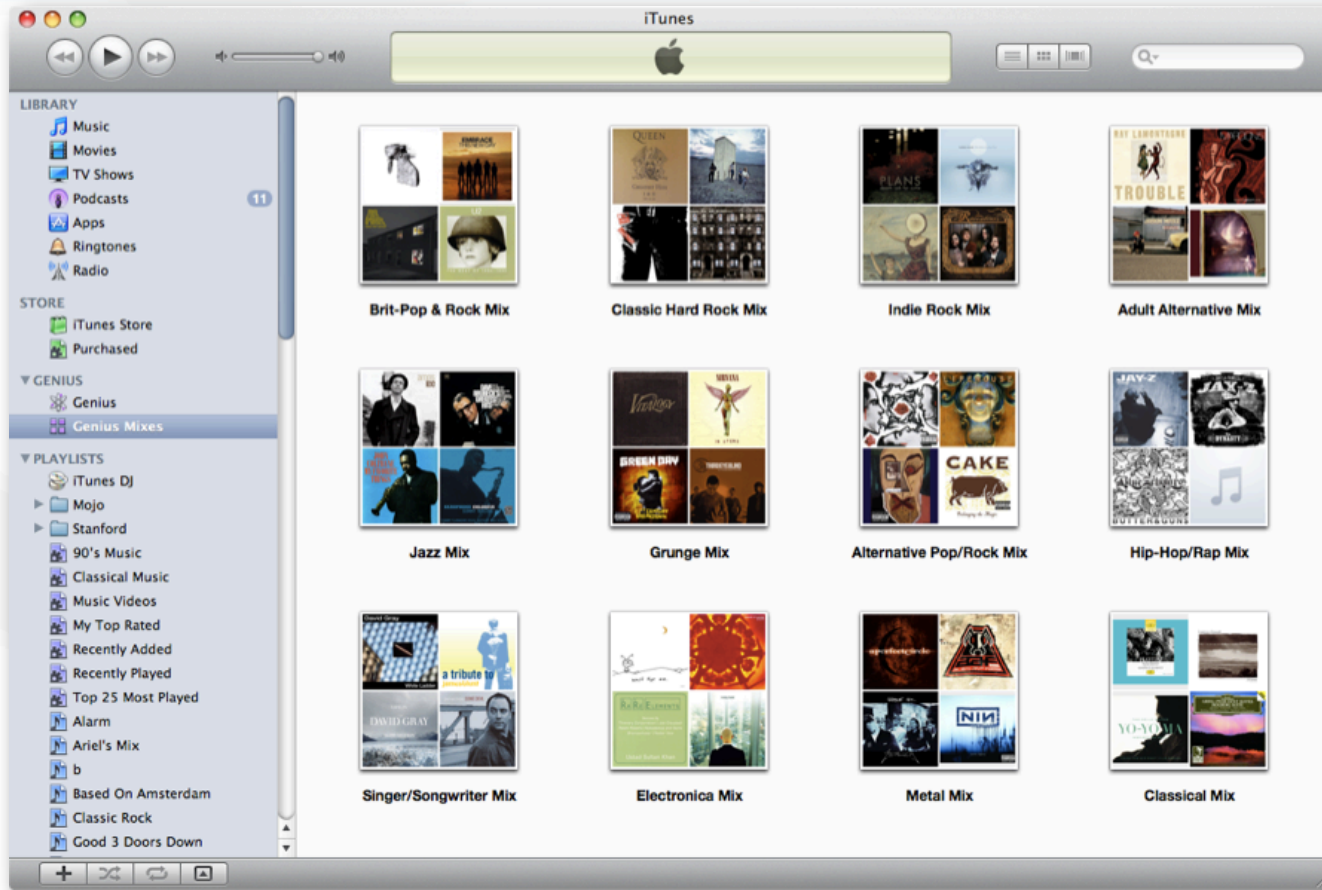
Show Context Help

Target Playlist:

Choose a playlist...

Similarity Weights

126 items



The screenshot shows the iTunes application window. At the top, a music player is playing "Don't Explain (feat. Damien Rice & Lisa Hannigan)" by Possibilities. The main area is titled "Genius Just For You" and features several recommendation cards:

- You bought Blood Bank - EP. We recommend:** Dark Was the Night (Various Artists, Released 2009, 4.5 stars, 244 Ratings, \$15.99).
- You have music by Coldplay. We recommend:** Vampire Weekend (Released 2008, 4.5 stars, 1632 Ratings, \$9.99).
- You have music by Led Zeppelin. We recommend:** Ted Nugent: Super Hits (Released 1998, 4.5 stars, 26 Ratings, \$9.99).
- You have music by Pink Floyd. We recommend:** M.U. - The Best of Jethro Tull (Released 1976, 4.5 stars, 12 Ratings, \$8.99).
- You have music by The Rolling Stones. We recommend:** The Best of Canned Heat (Released 1972, 4.5 stars, 13 Ratings, \$8.99).
- You have music by The Six Parts Seven. We recommend:** The Six Parts Seven (Released 2004, 4.5 stars, 5 Ratings, \$7.92).

Below the recommendations is a list of 15 songs:

Name	Time	Artist	Album	Genre	Price
1 Don't Explain (feat. Damien Rice & Lisa Hannigan)	4:51	HERBIE HANCOCK	Possibilities	Pop	\$0.99
2 Lovely to See You	2:39	The Moody Blues	Anthology: the ...	Rock	\$0.99
3 The Great Salt Lake	4:45	Band of Horses	Everything All th...	Alternat...	\$0.99
4 Goodnight Bad Morning	3:51	The Kills	Midnight Boom ...	Alternat...	\$0.99
5 Living Well Is the Best Revenge	3:11	R.E.M.	Accelerate (Delu...	Alternat...	\$0.99
6 La Mar (The Ocean)	3:57	The Beautiful Girls	Learn Yourself	Rock	\$1.29
7 1979 (iTunes Originals Version)	4:15	Rob Thomas	iTunes Originals...	Rock	\$0.99
8 Black Swan	4:49	Thom Yorke	The Eraser	Alternat...	\$0.99
9 Blinking Pigs	3:36	Little Dragon	Fortune / Blinki...	Pop	\$0.99
10 O Valencia!	3:47	The Decembrists	The Crane Wife	Alternat...	\$1.29
11 Zak and Sara	3:11	Ben Folds	Rockin' the Sub...	Rock	\$0.99
12 Nightswimming (iTunes Exclusive)	4:05	Dashboard Conf...	MTV2 Album Co...	Alternat...	\$0.99
13 Lover, You Should've Come Over	6:41	Jeff Buckley	Grace	Alternat...	\$0.99





How can I play what I
want?







Play me what I want, I don't care how or where.



PLAYDAR
Music Content Resolver





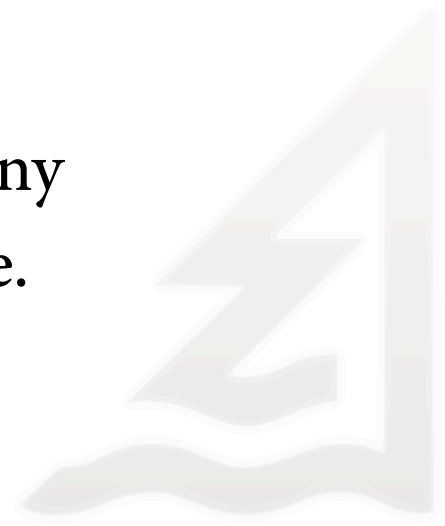
Make finding and playing music a
seamless experience





Playdar support in Amarok coming
soon

Imagine a playdar-aware KDE: any
track, any app, instantly playable.





Social media players are the future

