Songbird
Integrating Media & The Web

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Songbird in One Slide

- **Cross platform media player**
- **Built on Mozilla**
- **Customizable**
  - **Extensions**
  - **~~Skins~~ Feathers**
- **Open APIs**
  - **Client side via extensions**
  - **Web side via Webpage API**
- **Desktop client, NOT a service**

Mozilla FTW!

Songbird

Search Library

Library
Downloads
Concerts (973)

▼ **Radio**
  🔴 Last.fm
  SHOUTcast
  Favorite Stations

▼ **Stores**
  7digital Music Store

▼ **Playlists**
  Highest Rated
  Most Played
  Recently Added
  Recently Played
  Artists on Tour

▼ **Bookmarks**
  Songbird Add-ons
  Songbird Help
  ❤ The Hype Machine

Genre (7 items)	Artist (12 items)	Album (12 items)
All	All	All
Alternative	3 Doors Down	3 Doors Down
Alternative Rock	ABBA	Abba Gold
Classic Rock	Ace of Base	Away from the Sun
New Age	Black Eyed Peas	The Better Life
Pop	The Cure	The E.N.D. (The Energy Never Dies)

Title	Time	Artist	Album	Genre	Rating	On
Live for Today	3:47	3 Doors Down	Seventeen Days	Rock		
My World	3:00	3 Doors Down	Seventeen Days	Rock		
Here by Me	3:47	3 Doors Down	Seventeen Days	Rock		
Dancing Queen	3:52	ABBA	Abba Gold	Pop		
Knowing Me, Knowing You	4:02	ABBA	Abba Gold	Pop		
Take A Chance On Me	4:04	ABBA	Abba Gold	Pop		
Mamma Mia	3:33	ABBA	Abba Gold	Pop		
Lay All Your Love On Me	4:34	ABBA	Abba Gold	Pop		
Super Trouper	4:14	ABBA	Abba Gold	Pop		
I Have A Dream	4:44	ABBA	Abba Gold	Pop		
The Winner Takes It All	4:55	ABBA	Abba Gold	Pop		
Money, Money, Money	3:08	ABBA	Abba Gold	Pop		
SOS	3:21	ABBA	Abba Gold	Pop		
◀ Chiquitita	5:26	ABBA	Abba Gold	Pop		
Fernando	4:13	ABBA	Abba Gold	Pop		

Now Selected

mashTape

Artist Info | Reviews | News | Photos | Videos

ABBA
GOLD

GREATEST HITS

🎵 **Artist Bio**
The ABBA story began in June 1966 when Björn Ulvaeus (born 1945) met Benny Andersson (born 1946) for the first time. Björn was a member of the Hootenanny Singers, a very popular folk music group, while Benny played keyboards in Sweden's biggest pop group of the 1960s, the Hep Stars.

The pair wrote their first song together later that year, and by the end of the decade they had established a regular partnership as composers. By that time, Benny had left The Hep Stars, while the Hootenanny Singers
Read More

🎵 **Discography**

188 items 🔴

Chiquitita • ABBA • Abba Gold
1:32   5:26

Chiquitita • ABBA • Abba Gold
1:35   2:50

Remember these?

AOL

(The Internet)

"mashup"

Mashup (digital)
- a digital media file containing any or all of text, graphics, audio, video, and animation, which recombines and modifies existing digital works to create a derivative work.

Mashup (web application hybrid)
- a web application that combines data and/or functionality from more than one source

Songbird is ~~neither~~ both

™

2 styles for 2 types

Client side development: Extensions
Web development: Webpage API

Extensions

- Just like Firefox
- Can be easily ported (in most cases)
- Many Firefox extensions already support Songbird

- Easily integrate with the web:
  - Pull in web content
  - Push content up to the web

Mozilla Technologies & APIs

(aka the buzzword & acronym slide)

**AJAX, Canvas, CSS, DOM, E4X, HTML, JS, RDF
RSS, SVG, XBL, XML, XPath, XSLT, XUL**

SpiderMonkey, Gecko, XULRunner

What can I do with it?

Pros: Pretty much anything
Cons: Pretty much anything

Media Interaction

- APIs for querying metadata
- Controlling playback
- Creating local and remote media items
- Creating playlists
- Observers/listeners

Songbird Points of Integration

Display Panes
Media Views
Faceplate
Browser Areas

Demo Time!

(sorry for anyone viewing the PDF)
just imagine a really compelling and cool demo
(and then imagine me delivering it)

Webpage API

- Javascript'able interactions with Songbird
- Integrate into user's media player
- Build your site, not a media player
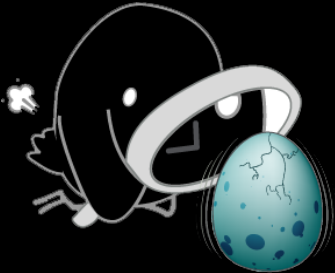- Observe and interact with Songbird's media functionality

What can I do with it?

- Query what's currently playing
- Attach asynchronous listeners/observers to media player actions
- Enumerate and observe user library
- Build site-local libraries and playlists

Find out what your users like
Find out what your users hate

```javascript
var propArtist = "http://songbirdnest.com/data/1.0#artistName";
var listener = {
    onEnumerationBegin: function() {
        this.artists = new Object();
    },
    onEnumeratedItem: function(list, item) {
        var artistName = item.getProperty(propArtist);
        if ((artistName != null) && (artistName != '')
                       && (artistName != '\"\"')) {
            if (this.artists[artistName])
                this.artists[artistName]++;
            else
                this.artists[artistName] = 1;
        }
    },
    onEnumerationEnd: function() { }
};

var mainlib = songbird.mainLibrary;
songbird.mainLibrary.enumerateAllItems(listener, 0);
for (artist in listener.artists) {
    alert("You have " + this.artists[artist] + " tracks by " + artist);
}
```

Serendipitous discovery

(a.k.a. it's all about me, it's all about now)

What's happening right this minute

Metadata on the currently playing track:
- songbird.currentArtist
- songbird.currentTrack
- songbird.currentAlbum

Current activity and state:
- songbird.playing
- songbird.paused
- songbird.repeat
- songbird.shuffle
- songbird.position
- songbird.volume
- songbird.mute

Synchronous and asynchronous observers

™

```javascript
var obs = {
    observe: function ( aSubject, aTopic, aData) {
        if (aTopic == "metadata.artist") {
            alert("Current artist:" + aData);
        } else if (aTopic == "metadata.album") {
            alert("Current album:" + aData);
        } else if (aTopic == "metadata.title") {
            alert("Current track:" + aData);
        }
    }
}

songbird.addListener("metadata.title", obs);
songbird.addListener("metadata.artist", obs);
songbird.addListener("metadata.album", obs);
```

List & Library Integration

- Use lists to represent playlists, or conceptual lists:
  - Shopping cart
  - Favourite songs/tracks
  - Recommended tracks ("You might also like...")
  - Relevant songs ("Other people who bought also bought...")

- Playback main library (e.g. the user's) lists
- Playback site library (e.g. local to the website) lists
  - Remote playlists, e.g. .m3u, .pls
  - Playlists built programmatically using the Webpage API

List & Library Integration

```javascript
// Create a default site-specific library
var library = songbird.siteLibrary;

// Set the scope of the site library
songbird.setSiteScope("whacked.net", "/music");

// Create a media item and put it in the library
var mediaItem = library.createMediaItem("http://whacked.net/music/wired-01.mp3");

// Make a playlist
var mediaList = library.createSimpleMediaList("TheWiredCD");
mediaList.add(mediaItem);

// Let's be obnoxious and play it, whether the user requested it or not
songbird.playMediaList(mediaList);

// I'm sure the user loved it so much - let's integrate it into their library for them
songbird.downloadItem(mediaItem);
```

Thanks!

IRC:
• irc://irc.mozilla.org/#songbird

IRL:
• irl://USA/California/San%20Francisco

Lists/forums:
• http://groups.google.com/group/songbird-dev

kthxbai
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Cloud photo by saital: http://flickr.com/photos/saital/17949827/ (cc-by-2.0)