The Songbee Song Projection System

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by Simon Cozens

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Chapter 1. Introduction to Songbee

Songbee is an application designed to be used in churches for the projection of worship song lyrics. Instead of using hymn books, churches can use a data projector and a computer running Songbee to display the words to hymns and songs.

Songbee is particularly designed for the Japanese church. It handles Japanese text, and particularly the display of *furigana*, in ways that other similar applications (Easislides, openlp.org, Opensong and Lyricue) do not.

Requirements

In order to use Songbee, you will need to have a dual-monitor set up. That is to say, your computer must be able to send video to two different monitors: one will be your ordinary workstation, and the second will be a projector or closed-circuit television system to display the lyrics to your congregation.

If you have a laptop, you normally have the ability to plug in an external monitor - plug your projector into the monitor output. If you have a desktop PC, you may need to install a second video card. Once you have done this and plugged the projector into the second output, you will need to configure your operating system to display in multi-monitor mode.

Windows   For Windows computers, follow these steps to turn on multiple monitor support:

1. Right-click on the desktop.

2. Click the **Settings** tab.

3. Click the **Display** list and select the second monitor.

4. Select **Extend my Windows desktop onto this monitor** and click **OK**.

Note that on some brands of laptop the above instructions do not work and you will need to use the software that comes with the laptop.

Mac OS X   On a Macintosh:

1. Open System Preferences.

2. Click on the **Displays** icon.

3. Click the **Detect Displays** button

4. Turn off display mirroring.

Features

*   Compilation of custom playlists

*   Easy to set up, and available on many platforms

*   Ability to create and edit songs

*   Ability to import and export databases of songs

- Drag-and-drop interface to adding songs to the playlist

- Ability to insert web sites and Bible passages into the playlist

- Ability to tag songs by language and support for switching language during worship.

Future Features

While Songbee does not intend to compete with some of the more established projects mentioned above, the following features are anticipated in future releases:

- Ability to select alternative song databases

- Ability to add "weekly notices" style rotating messages

It is unlikely that Songbee will support display of Powerpoint or multimedia files, but Powerpoint can be run at the same time as songbee, and if you start a powerpoint show it will open over the top of songbee's output.

Technical details

Songbee is implemented in XUL and Javascript using the Mozilla platform, the same platform used by Firefox and Thunderbird, and so would run on any operating system supported by Mozilla. The database of songs and playlists are stored in an SQLite database using the `storage` extension; once a user runs Songbee for the first time, Songbee creates a profile directory for them and copies in a SQLite database file. Individual songs are stored in a custom XML format.

Chapter 2. Managing Playlists

A *playlist* is a collection of songs to be played in a worship session. Songbee currently assumes that the list of songs is known before the worship begins. (Although it does give you the ability to insert "unexpected" songs during worship time. So at least one song must be known!) Using Songbee has two phases: creating and editing the playlist before worship, and moving between the songs during the worship time.

The playlist interface

When Songbee starts, you will see a window like this:

Figure 2.1. Playlist list

This shows all the playlists in your library, together with the songs in each playlist. At the top of the window are a set of menus:

File   Import Songs   This allows you to import songs from a Songbee song library file; that is to say, if you have a file containing additional songs in Songbee format, this option will add them to your database.

Export Songs   This will export your entire songs database as a Songbee song library file. If you enter a lot of the songs you use from week to week and then export your library and send the resulting file to the Songbee maintainer, perhaps together we can build up a good library of songs used by the Japanese church. Hopefully we'll then include the expanded library file in Songbee distributions in the future, making Songbee more useful for everyone, at least until the copyright police come to stop us worshipping freely.

Preferences   This allows you to determine how you would like the default display to appear: you can change the font sizes, spacing, colours, set a background image and so on.

For the technically inclined

If you want more control over how the display appears, and you speak CSS, then you can create your own display preferences manually. Simply make some changes and save the preferences, then look in your profile directory.

On the Mac, the profile directory is `Library:Application Support:Songbee:Profiles`. Inside that directory you will find a file called `user.projector.css` which contains all your customizations. For the base CSS file, see `Contents:Resources:Chrome:songbee:css:projector.css` in your Songbee application bundle. (Right-click on the Songbee application and select **Show package contents** to find this file.

On Windows, the relevant directories are `%XXX%/Simon Cozens/Songbee` and `\Program Files\Songbee \chrome\songbee\css`.

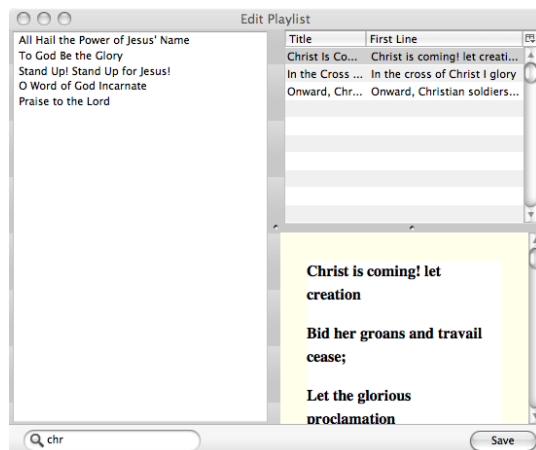|	Exit	Ends the Songbee program.
Create	Add Playlist	This creates a new playlist, prompts you for a name, and takes you to the playlist editor.

Alongside each playlist's title are three buttons: **Go** will take you to the main "live" screen; **Edit** will take you to the playlist editor for this playlist; **Delete** will delete the playlist from the system. It does not delete the songs from the database, just the running order for an occasion.

Playlist Editor

The playlist editor is where you put together the list of songs and other items that are going to be used in the worship time. It is also where you can add new songs to the library.

The playlist editor shows the current songs in the playlist, and the available songs, like this:

Figure 2.2. Playlist editor

The playlist editor consists of the following features: the current playlist, on the left; the list of available songs (the "library") on the right; the preview pane, displaying the currently chosen song, below the library; at the bottom, the search bar.

Creating a playlist

To construct the playlist, find the song you want in the library When you select a song you'll see a preview of it below the library. To add the song to your playlist, double-click on the currently selected song, or drag it into position in the playlist.

You can re-order your playlist by dragging songs up and down the list. To remove a song from the playlist, click on it to select it, and press the **Delete** key or drag it outside of the playlist pane.

Searching for a song

To find a song in the song list, you may either scroll through, or use the search interface at the bottom of the window. To use this, type in part of the song you are looking for, and Songbee will narrow down the song list to only include songs that match your search. Songbee uses the following strategies to find your song:

- First, it looks for songs with your search text in the title.

- If no songs match, then it looks for songs with your search text in the first line.

- Finally, it searches for songs which contain the search text anywhere in their lyrics

Songbee's search function generally does what you want, so if you cannot find the song you are looking for, keep typing in words until it appears in the song list.

Adding other kinds of content to your playlist

Songbee does not just support songs: you may add web site display, Bible passage display and hopefully (in the future) other types of information, to your playlist.

To do this, use the **Create** menu.

Selecting **Song** will take you to the song editor, allowing you to add a song which is not currently in your library.

If you select **Bible passage** you will be prompted for a Bible reference. This can be a verse of range of verses, and unambiguous abbreviations of book names are supported. The passage will be looked up and displayed at the appropriate point in the worship time.

Warning

Bible passage display currently requires an active Internet connection; passages are looked up in the online version of the ESV. We know this is not ideal, but it is a start and making it work well will be a lot of work.

If you select the **Web page** option, you will be prompted for a web site URL. This web page will be displayed during worship time. If you move the mouse pointer over to the projector window, you can navigate the page, following links and so on, as if in a web browser. The URL may also be a `file:///` address to a file on your local system. This can be a useful, if not ideal, way to display videos and so on.

Per-playlist display preferences

By default, all playlists look the same when they are displayed at worship time. However, you may change the display of individual playlists by selecting **Preferences** from the **File** menu in this playlist editor window.

Note

We have been asked if Songbee could support per-slide customization, for example allowing different songs to have different backgrounds. Much though we dislike putting artificial restrictions on what the user can do with Songbee, this one we won't support, because we think

it makes it too easy for the result to look tacky and horrible. Songbee handles your worship with *class*.

Save as Word

For those who wish to print out their song lyrics as a handout, you can select the **Save as Word** option from the **File** menu. You will then be prompted for a file name, and Songbee will produce a Microsoft Word document containing all the song names and their lyrics.

For the technically inclined

This isn't actually a Word document, since writing Word documents by hand is hard; it's just a HTML file, which Word imports unquestioningly. You can therefore use this document for other purposes too.
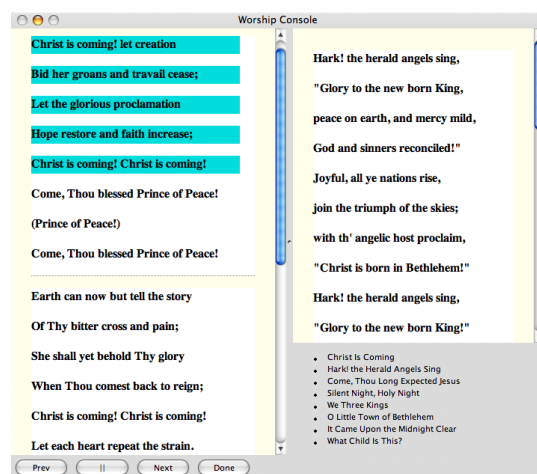
Chapter 3. The Live Interface

When you click **Go** on a playlist, you are taken to Songbee's "live" interface. This consists of two windows. The first window should appear on your projector.

Note

It *should* appear on your projector. At the moment, it won't, and you have to drag it there manually. We're working on this.

The second window is the *live console*. It looks like this:

Figure 3.1. The live console

On the left you see the current song. The portion in blue is currently visible on the projector. Usually this covers an entire verse, but when the verse is longer than one screenful, as in the example above, only the visible lines are highlighted.

The next song in the playlist is displayed on the right, and under that, the current playlist. At the bottom of the window are the buttons for controlling Songbee with the mouse.

Navigating with keystrokes

However, the recommended way of controlling Songbee is with the keyboard. Even if you are used to using your mouse to control your computer, you will find that using the keyboard allows you to move to the right portion of the right song much more quickly in reaction to things that your worship leader may unexpectedly do!

Here are the keys used to control Songbee:

#	Go to the previous song in the playlist.
#	Go to the next song in the playlist.
#	This will return to the previous verse, chorus or bridge within the current song.
#	If, as in the example above, only a portion of the lines of a verse can fit on the projector display, this key (cursor down) will scroll down the verse. Once the last

	line is displayed, or if the entire verse can fit on the display at once, then this key will jump to the next portion of the song shown in the left-hand pane.
PgDn	Page down will jump, rather than scroll, to the next portion of the verse to be displayed.
1, **2**, **3**, etc.	Jump to the corresponding verse of the current song.
v, **c**, **b**	Jump to the next verse, chorus or bridge. A *chorus* is displayed in the console in a slightly narrower margins than a verse; a *bridge* is displayed in italics.
n	Goes to the "next" bit of the song - if your song has a chorus, it will alternate between verses and choruses; if it has just verses, it will go from one verse to the next; otherwise, it won't do anything.
Esc	The escape key "pauses" the display, removing the text from the projector. The highlight in the current song pane turns from blue to yellow to remind you that the display is paused. Pressing escape again will unpause the display; you may change to a difference verse or a different song while the display is paused.

Navigating with the mouse

If you must navigate with the mouse, you can use the left and right buttons at the bottom of the screen to change songs; you may also click on a song in the song list to jump to that song directly. Clicking on a portion of a song in the left-hand window will cause Songbee to display that portion.

Multilingual worship

Songbee supports environments where worship happens in more than one language. If the current song is translated into other languages, the names of the translations appear in a bar at the bottom of your console. Clicking on a name brings up the song of the appropriate language.
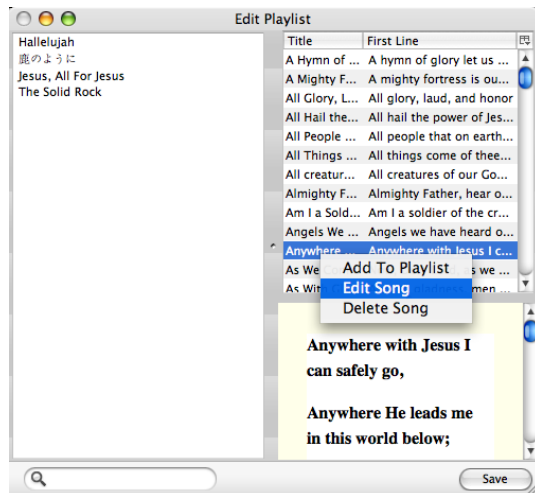
To learn how to mark songs as translations, see the chapter on editing.

Chapter 4. Managing Song Databases
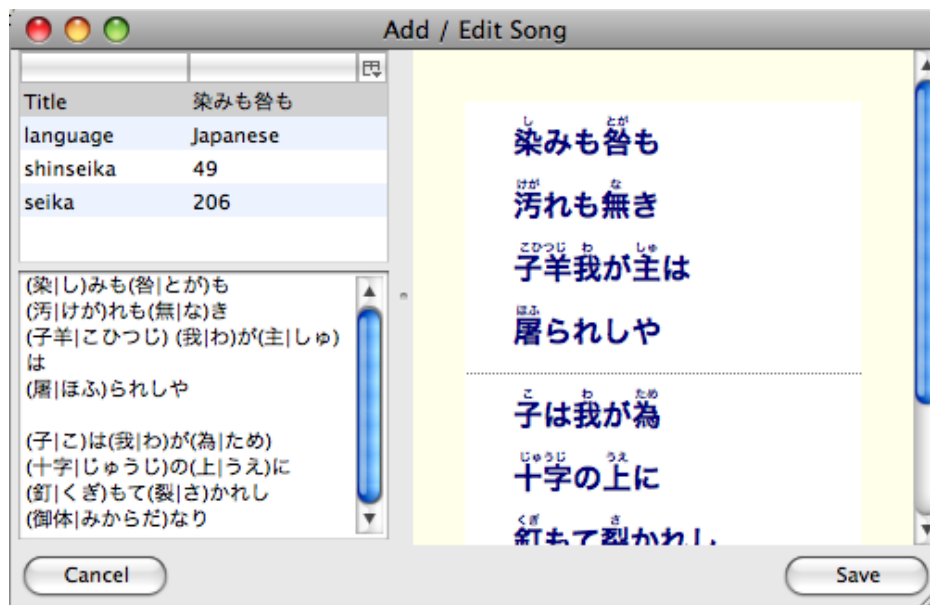
Adding and editing songs

To add a new song, click on the "add song" toolbutton at the top of the main playlist window. You can edit an existing song by right-clicking[1] on the song name while editing a playlist:

Figure 4.1. Editing an existing song

Once you have selected a song to edit, or chosen "Add Song", you will be taken to the song editor window. The song editor window looks like this:

Figure 4.2. Editing an existing song

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[1] (Mac: **Ctrl**-clicking.

This consists of two parts; the right hand part is an automatically-generated preview. The left part is where you enter all the details of the current song: its title, key, year, and so on. The box at the bottom is where you enter the lyrics. The lyrics are entered using a couple of conventions:

- Verses, choruses and bridges are entered as paragraphs, with a blank line separating them. Lines breaks are preserved inside a verse. To begin a chorus or bridge, the first line should be "**Chorus:**" or "**Bridge:**" respectively, with the text of the chorus/bridge immediately following and with no blank line in between.

- When entering Japanese furigana, do so like this: **(#|##)**. That is to say, place the expression in brackets; put the main text first, then a pipe sign (|), and then the furigana. The brackets and pipe sign must be entered in romaji. The furigana will be displayed above the main text. You should be able to see this on the preview.

Metadata

"Metadata" means "data about data" or "information about information". It's the name for additional data you can add to your songs to help categorise them. Each song is guaranteed to have some lyrics and a title, but anything else you want to add is up to you.

Metadata in Songbee has a *key* and a *value*. `title` is a very common key, and the song's title is the value. `language` is another common key, and common values include "Japanese", "English" and so on. But you can make up whatever keys you like.

For instance, when you're inputting old Japanese hymns, you might want to tell Songbee what number they are in each of the common hymnbooks. So `sanbika`, `seika` and `shinseika` are likely keys to use, and the number of the song in the songbook would make good values.

To add a piece of metadata to a song, right click on the table in the top-left of the song edit page and choose "Add Metadata". You are then presented with the following pop-up panel:

Figure 4.3. Adding metadata

The drop-down menu will allow you to choose key names that Songbee already knows. If you want to add something different, simply type in your own key.

Currently Songbee doesn't do very much with the metadata you add, apart from the "language" and "translation". However, in the near future, you will be able to search and add songs to playlists based on metadata, so it's in your interests to add whatever metadata you want when creating songs.

Translated songs

Songbee supports multilingual worship if it has a database where songs are tagged with translation metadata. If you have a song (let's call it "X") which is a translation of another song "Y", you can tell Songbee about this by editing "X", right-clicking on the metadata section and choosing `Mark as translation`. Songbee will then ask you to select the song that "X" is a translation of; you should choose "Y" from the list.

For translations to work, you need to tag both songs with their language. If this is not done before you choose `Mark as translation`, then Songbee will prompt you for the languages.

Songbee also supports songs being translated several times. It has no concept of which song is the "original" - if you tell it that "Y" is a translation of "X" and that "Z" is a translation of "Y", then it will connect X, Y and Z all together.

Importing and exporting songs

Currently you may import and export song libraries to a special Songbee library format. (For interested developers, it's not that special, it's just ordinary XML and you'll be able to work out how it goes by looking at it.) See the playlist window menu.