



IT and the Contemporary Church

Bringing IT to the contemporary church, with software to aid tasks such as leading music

CS310 Project by James Williams

1. Problems
2. Research & Software
3. Results
4. Demonstration
5. Further work
6. Conclusions

Research

- What is the extent & quality of IT use in churches?
- What are the overall attitudes to IT use in churches?

Software

- Leading music:
 - Song organisation: Songbooks & sheets
 - Song selection: Before & during service

- Books, journals, internet
- Questionnaires
- Conversations with church contacts, users of IT in churches



PSALM (*Personal Software Aid for Leading Music*)

- Incremental approach
- Classes (see handout)
- Demonstration later in presentation

- Some issues encountered:
 - Database: Traditional RDBMS or parsed XML?
 - Theme detection: LSA?
- Development tools - Java, NetBeans, XML (SAX)

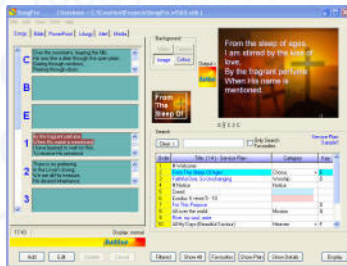


TortoiseSVN

<?xml?>

Research findings:

- Masses of niche IT resources (e.g. advice, software, multimedia) aimed at churches



- Debate shifted from *should* IT be used to *how*.
- Danger of being relied upon and becoming the focus

Key findings from questionnaire:

- IT in church seen as useful, attractive, up to date, only occasionally distracting
- 65% of surveyed positive towards IT in church
- Attitudes reflect wider society?
- Best use of IT is in displaying liturgy, sermons, songs
- Improvements needed in outreach, community involvement.

PSALM

- Store and search songs
- Easily display songs & chords in any key
- Detect themes automatically
- Setlist building aid

The screenshot shows the PSALM software interface. On the left, there is a search bar and a list of search results. The results list includes the following songs:

- Holy is the Lord
- How good it is
- How Marvellous
- I'm alive
- Indescribable
- Jesus Christ, I think upon your sacrifice
- King of Kings Majesty
- Let us adore
- Lord let your glory fall
- Mighty to save
- My Jesus, my Saviour
- Name above all names
- O Lord my God
- Oh, our Lord and King
- Oh Come Let Us Adore Him
- Praise awaits you
- Servant king
- There's a place where the streets shine

Below the search results is a 'Setlist' section with a list of songs: Happy day, Holy is the Lord, Give thanks to the Lord, Amazing grace (highlighted), and How Marvellous. There are buttons for 'Show Previous Song', 'Show Next Song', 'Move up', 'Move down', 'Remove', and 'Recommend!'. A note at the bottom of the setlist says '(5 songs)'.

On the right side of the interface, there is a 'Transpose first chord:' dropdown menu set to 'G (default)'. Below this is a large text area displaying the lyrics and guitar chords for the song 'Amazing grace' by John Newton (1772). The lyrics and chords are as follows:

```

G      G/B      C      G
Amazing grace, how sweet the sound
G      Em      D7
That saved a wretch like me
G      G/B      C      G
I once was lost, but now am found
Em C G/D D7 C/G G
Was blind but now I see

G      G/B      C      G
T'was grace that taught my heart to fear
G      Em      D7
And grace my fears relieved
G      G/B      C      G
How precious did that grace appear
Em C G/D D7 C/G G
The hour I first believed

G      G/B      C      G
Through many dangers toils and snares
G      Em      D7
I have already come
G      G/B      C      G
'Twas grace that brought me safe thus far
Em C G/D D7 C/G G
And grace will lead me home

G      G/B      C      G
When we've been there ten thousand years
G      Em      D7
Bright shining as the sun
G      G/B      C      G
We've no less days to sing God's praise
Em C G/D D7 C/G G
Than when we first begun
    
```

PSALM - Themes Editor

Available Themes

Select theme: **Majesty**

Add new theme... **Remove selected theme**

Theme components

Double-click a word or weighting in the table below to edit it. The words are used to identify whether any song is of this theme, by matching the start of words and weighting the importance of those words matched.

Theme words are matched at the start of song words to allow 'word stemming' - i.e. if 'danc' is the theme word, then 'dances', 'dancing' and 'dance' could all be matched in a song. Weightings must be between 1.0 and 0.0 inclusive.

Word	Weighting
crown	0.8
king	1.0
majest	1.0
reign	0.6
throne	0.8
worthy	0.8

Add word **Remove word**

OK **Cancel**

PSALM - Song Editor

Song Information

Title (mandatory field): **He's my life**

Writer: James Williams

Year: 2006

Song Content

Instructions & example song **Song editor**

Add alternative title... **Add song theme...** **Test for errors**

```

1 <intro>
2 [C#m7] [G#m] [Bm7] [F#m]
3 [C#m7] [G#m] [Bm7] [D2]
4 </intro><verse no="1">
5 He's my [C#m7]life
6 My every[G#m]thing
7 He's my [Bm7]guide
8 To [F#m]Him I'll sing
9 </verse><verse no="2">
10 He's my [C#m7]King
11 He's my F[G#m]ather
12 He's my f[Bm7]riend
13 Now [D2]as H
14 </verse><chorus>
15 I will g[A]o
16 I will st[F#
17 I will b[Bm7
18 </chorus><chorus
19 A witness in
20 True in w[D2
21 Live by[D2] peace, learn you[A]r word
22 I wa[D2]nt to [E]be
23 A disciple in [A]Him [F#m] [Bm7] [E/G#]
24 </chorus>
    
```

Input

Please enter an alternate title for this song:

Some new title

OK **Cancel**

Please enter song information and content, then click Save. **Save** **Cancel**

PSALM

■ Limitations:

- Key recognition element dropped
- Themes need to be created

■ Achievements

- Successful theme detection
- Clear & fast enough for use in a service
- Song recommender gives good suggestions!

- Display, transposition
- Theme detection
- Song recommendations
- Database + editor



Research

- Expand sample surveyed
- Future of IT in churches

Software

- Integrate PSALM with other software
- Input methods (pedals?) for PSALM
- Key recognition
- Communication with other people involved in a service

■ Achievements

- Software working as desired
- Uncovered state of IT in churches
- I have learnt a lot from this project!

■ Limitations

- Research limited in scope
- No key recognition possible as had been hoped

- Steve Russ (supervisor)
- Georgina Cosma (LSA)
- All who helped in research
- Those who showed interest via direct contact with me or through the blog



...questions?



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Thank you for listening

For more: blogs.warwick.ac.uk/church-it

