

The Need for a Universal Bible Annotation Format

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Bible Gateway

About Bible Gateway

- ~ Roughly 80 Bible translations in 50 languages
- ~ 6 million unique visitors every month
- ~ 75% of visitors from U.S.
- ~ Zondervan acquired it in November 2008

The Problem

- ~ Personal Bible notes aren't portable
 - ~ Print
 - ~ Bible software
 - ~ Mobile
 - ~ Websites

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5. Don't have all the answers

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2. Enable both “user” and “professional” content
3. Accept text, audio, video, and future formats
4. Give people control over their content

Proposed Solution

1. Content format (data)
2. Exchange format (metadata)
3. Exchange system (protocol)

Content Format

(X)HTML

- ~ Universal (or close to it)
- ~ Allows basic formatting with CSS
- ~ HTML5?
 - ~ Useful new elements: `<aside>`, `<figure>`, `<time>`,
`<audio>`, `<video>`

Bible References

Problem: how to encode Bible references

- ~Independent: not links to Bible Gateway
- ~Unambiguous: easy for developers to handle

Bible References

Partial solution: OSIS identifiers

- ~ www.bibletechnologies.net (ABS)
- ~ Unambiguous references to Bible passages
- ~ Sub-verse addressing
- ~ Can tie to specific translation
- ~ Examples:
 - ~ Matt.5.6
 - ~ Matt.5.6-Matt.7.2
 - ~ ESV: Matt.5

Bible References

How to indicate?

1. `...`
2. `<a href="http://..."
class="bibleref" title="Matt.5.6">`
3. `<a href="http://..."
property="br:ref" content="Matt.5.6">`
4. `<span property="br:ref"
content="Matt.5.6">`
5. `<bibleref ref="Matt.5.6">`

Exchange Format (Atom)

- ~ Similar to RSS
- ~ Standard way of exchanging HTML
- ~ Built-in support in many toolkits
- ~ Integrates well with other standards

Exchange Format (Atom)

```
<feed>
```

```
...
```

```
<entry>
```

```
  <title>...</title>
```

```
  <summary>...</summary>
```

```
  <content>...</content>
```

```
</entry>
```

```
</feed>
```

Exchange Format (Atom)

```
<entry>  
  <author><name/><uri/><email/></author>  
  <published/> <updated/>  
  <rights>...</rights>  
  <source>  
    <title>...</title>  
    <author>...</author>  
    <rights>...</rights>  
  </source>  
</entry>
```

Exchange Format (Atom)

```
<entry>  
  <category term="Matt.5.6"  
            scheme="http://..." />  
  <content>...</content>  
</entry>
```

Exchange Format (Atom)

- ~ <category> also lets us predefine certain kinds of content if we want:
 - ~ Inline (highlight)
 - ~ Note
 - ~ Sermon
 - ~ Dictionary
 - ~ Commentary
 - ~ Bible

Exchange Protocol (AtomPub)

- ~ Works well with Atom
- ~ Standard
- ~ RESTful (uses HTTP verbs)
- ~ Allows <workspace>s to keep notes separate

Unresolved

- ~ Authentication
- ~ Conflict resolution (syncing)
- ~ Super-commentary

Future

- ~ We'll be implementing this protocol on Bible Gateway
- ~ Generic content-delivery mechanism
- ~ Feel free to implement your own server
- ~ Enable innovation at a higher level

Collaboration

- ~ Stephen.Smith@zondervan.com
- ~ Watch Bible Gateway blog
- ~ Google group?