

BRL Speeds Web/DB Integration

Bruce Lewis

Senior Programmer

Eaton Vance Management

brlewis@users.sourceforge.net

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About This Talk

Not a ``How-To'', but a ``Why''

- Experience that motivated BRL
- Evolution to a compiled system
- Examples of BRL's simplicity

cgiemail templates (1995)

To: strangeman@chasm.big

Subject: questions three

What is your name? [yourname]

What is your quest? [quest]

Your favourite colour? [colour]

Benefits of releasing free software

- Bugs fixed before MIT saw them
- User-contributed enhancement
- Documentation Quality Assurance
- New hire needed no training

Idea to redo cgiemail

- Some mechanism to combine functions
- Parsing should remain simple
- Only one special character
- Scheme syntax

Introducing Scheme

- **Think expressions, not commands**
- **Same syntax for every function**
- **Variable substitution like cgiemail**
- **Conciseness helpful in templates**

Think expressions, not commands

```
> "Hello, World"
```

```
Hello, World
```

```
> (define h "Hello, World")
```

```
> h
```

```
Hello, World
```

Same syntax for every function

```
> (string-append h "!!")
```

```
Hello, World!!
```

```
> (+ (* 2 3 4) 5 6)
```

35


```
> (define (quiz op n1 n2)
      (display "Your answer? ")
      (if (equal? (op n1 n2) (read))
          "Correct!"
          (op n1 n2)))
```

```
> (quiz * 2 3)
```

```
Your answer? 6
```

```
Correct!
```

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BRL 1 (1997)

```
<pre>[(html-repeat
      (sql "select * from favcolor"))]</pre>
<ul>
  <li>[name] likes [color]
</ul>
```

Problems with BRL 1

- Oracle only
- One-second response with light load
- Little potential for compilation
- Inspiration: Dynamo

<http://www.gnu.org/software/kawa/>

- Easy-to-use Scheme compiler**
- Java base enables JDBC**
- Free software**
- Responsive maintainer**

Eaton Vance, free software publisher

- ``What others use'' mentality
- cgiemail free-software essay
- Legal department analysis of GPL
- CEO sees no downside to it

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```
<body>
```

```
  [(inputs word)]
```

```
<p>[word] spelled backwards is
```

```
  [(list->string
```

```
    (reverse (string->list word)))]
```

```
</p>
```

```
</body>
```

Centralized SQL Configuration

```
(sql-driver "com.internetcds.jdbc.tds.Driver")  
(define (db1 brl-context)  
  (brl-sql-connection brl-context  
    "jdbc:url-here"  
    "user-here" "password-here"))
```

```
<ul>
```

```
  [(define rowcount
```

```
    (sql-repeat st (name color)
```

```
      ("select * from favcolor")
```

```
      (br1 ]<li> [name] likes [color]
```

```
    ])))]
```

```
</ul>
```

```
[(exmail '("strangeman@example.com")
```

```
  (string-append
```

```
]From: [email]
```

```
To: strangeman@example.com
```

```
Subject: questions three
```

```
What is your name?      [yourname]
```

```
What is your quest?    [quest]
```

```
Your favourite colour? [colour]
```

```
[)])]
```

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More Examples

`http://brl.sourceforge.net/`

Discussion

1. `comp.infosystems.www.databases`
2. `comp.lang.scheme`
3. `brl-users@lists.sourceforge.net`