BRL Speeds Web/DB Integration

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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")
      (brl ]<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**