Erlang & Student

Erlang Factory Lite – Erlang Day in Kraków

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25 November 2009

Agenda

- Right tool for the right job

- No country for Erlang

- Education & performance

- Java

- C

- Ruby

- Thrieft (by Apache)

Right tool for the right job

- Erlang could do (almost) everything
    - But that's not the point!

- Right job
    - Fault-tolerant system management
    - Multiuser / concurrent systems
    - High availability systems

Erlang

No country for Erlang

- **Numerical computation**
  - No comfortable handling in manner of vectors or matrices
  - C programs can be 20x faster for simple vector operations
  - Erlang just wasn't meant for this

- **GUI**
  - Well, you can (wxWidgets)
  - "if you make an error it might crash the emulator"
  - Not much community help

- **String manipulation**
  - Funny string representation
  - Partial UTF8 support in R13A

Erlang, education, performance

- How to delegate responsibility for performance to higher abstraction

- You are not forced to do low level coding to achieve better performance

- Do not waste time on thousands of lines of code responsible for communication
  - ☑ neural networks
  - ☑ agent systems
  - ☑ handling large amount of data (i.e. text data)

C

- Pure
  - Binds to the standard input & output
  - Low-level

```c
int main() {
  int fn;
  byte buffer[1000];

  while ((fn = read_cmd(buffer)) > 0) {
    int len = fn/2;
    int act = 0;
    int sum = 0;
    for(act = 0; act < len; act++)
      sum += buffer[act] * buffer[len+act];
    buffer[0] = sum;
    write_cmd(buffer, 1);

  }
}
```

C

- Erl_Interface
  - Erlang term representation in C
  - No need to invent coding scheme

- Linked-in drivers
  - Uses linked-in shared libraries
  - Fastest
  - Danger zone!

Java (JInterface)

☑ Included in OTP

☑ JVM initializes an Erlang node

☑ Communication – distributed erlang (EPMD)

Erlang

Ruby (Erlectricity)

☑ regular gem

```
require 'erlectricity'
```

☑ transparent communication

```
f.send!([:result, count])
```

☑ keeps strengths of Ruby

```
enc_word=words[i].encode("iso-8859-2")
```

Erlang

Thrieft (Apache)

- ☑ Thrift is a RPC framework developed at Facebook

- ☑ Efficient bindings to C++, C#, Java, Perl, Python, PHP, Erlang and Ruby.

- ☑ Outperforms SOAP, no XML, isolated from application

- ☑ Similar to ICE from ZeroC

ErLounge :)

Trelkovsky Caffe   *300m from C2 building*

Czarnowiejska 55