namoco:)

ESCRIPT

Original URL: **http://jon.henshaw.me/2010-year-of-the-game-changer/**

BAM.

```
#!/usr/bin/env escript

main(_) ->
    io:format("Holy moly it's simple.~n", []),
    erlang:halt(0).
```

github.com/archaelus/egc_examples

WHO?

- **Geoff Cant**
- Erlang hacker at ngmoco:)
- **archaelus** on irc/stackoverflow/erlang-questions/github
- Wellington -> Paris -> San Francisco

AGENDA

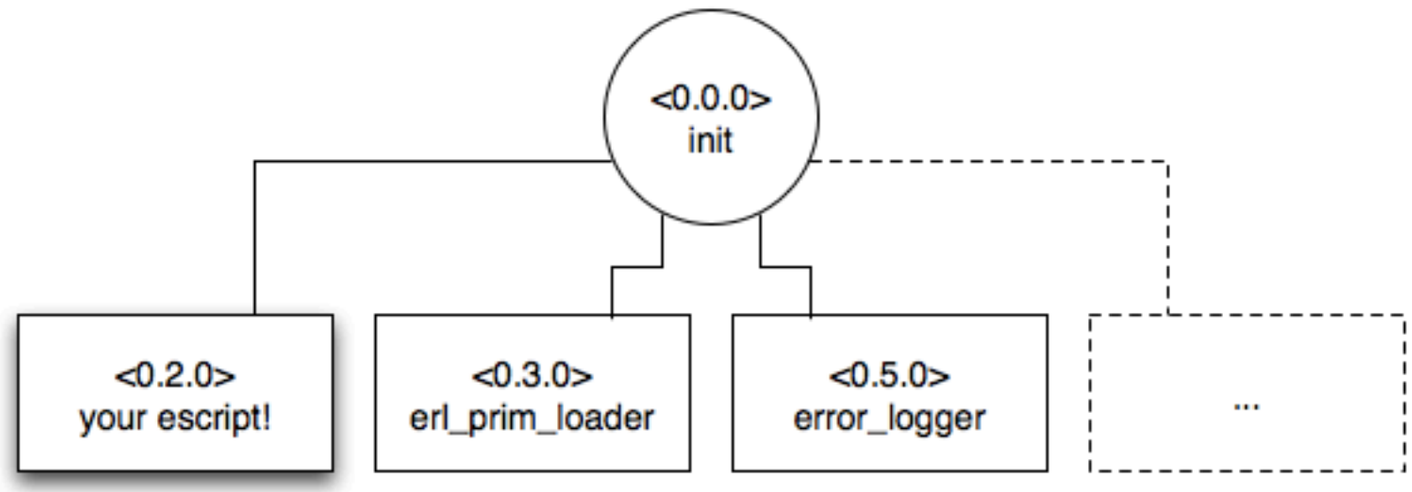
- ~~Magnets~~ Escript. How does it work?
- You said it would change the game.
- Show me some shenanigans!
- I can haz githubs?

EXPLAIN!

ESCRIPT ENVIRONMENT

- A full erlang node, but with a rapid boot sequence
- Interprets (or compiles) the escript text
- Calls main([...]) with the string arguments to the escript
- Halts the node when the main function returns.

ESCRIPT ENVIRONMENT



INTERPRETED MODE

- Generated module name
- Closer to module code than Erlang shell code.

  (?MODULE macro works!)

COMPILED MODE

- A bit faster than interpreted mode.
- Can use all standard compile options
- HiPE compile if you really want to!

BAM.

```
#!/usr/bin/env escript

-mode(compile).


main(_) ->
    io:format("Holy moly it's simple.~n", []),
    erlang:halt(0).
```

BAM.

```
#!/usr/bin/env escript

-mode(compile).
-compile(native).

main(_) ->
    io:format("Holy moly it's simple.~n", []),
    erlang:halt(0).
```

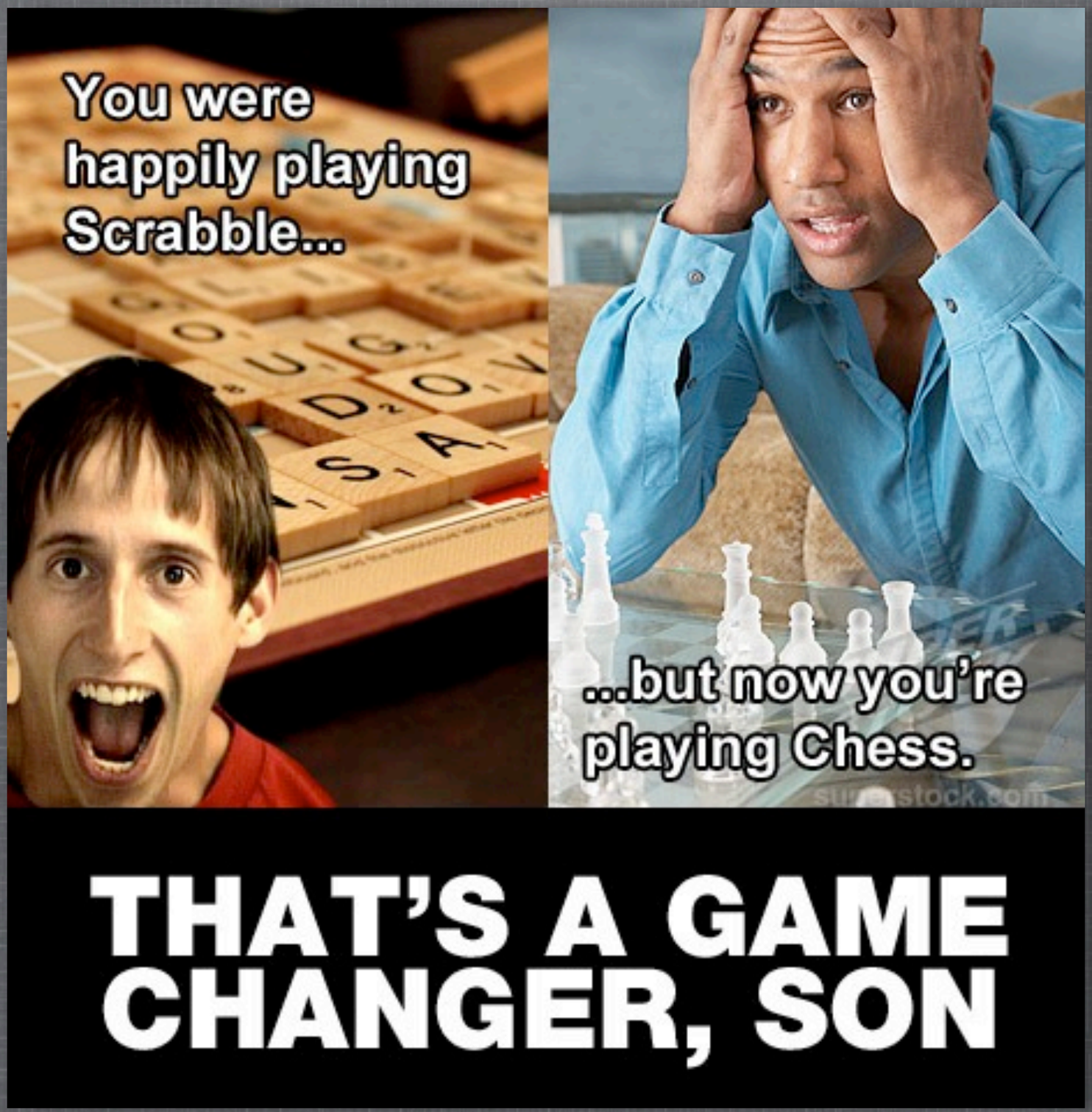
CODE ARCHIVES

- An escript can be:
  - an interpreted script
  - a compiled module
  - a zip file of compiled modules
- You can package an application or system as a (mostly) standalone executable

EXTRA GOODIES

- You can supply beam arguments
  - %%! -escript main my_main_module
  - %%! -node soopah_script -setcookie blah
- You don't have to create fancy escripts by hand
  - escript:create/2
- escript -s

CHANGE THE GAME!



UNIX INTEGRATION

- Makefiles
- Rakefiles
- autotools

UNIX INTEGRATION

- init scripts
- Control scripts (reload config, ...)
- Health check scripts (nagios)
- System statistics (munin)

PREVIOUS OPTIONS

- Integrating with erlang is hard.
- Boot an erlang VM with a _huge_ set of command line arguments
- Crazy RPC (REST interface? XML-RPC? ...)
- erl_call is pretty limited

ESCRIPT

- You start from a working Erlang environment
- No escaping or string interpolation problems
- Access to all kinds of information about the Erlang environment
- You get unix niceties

FETCH ME MY GAME CHANGING TROUSERS

Text

DISTRIBUTION

- Start net_kernel
- Set a cookie
- Connect
- rpc:go_hog_wild

```
#!/usr/bin/env escript

-define(ME, filename:basename(escript:script_name())).

main(["ping", Node, Cookie]) ->
    net_kernel:start([my_name(), longnames]),
    erlang:set_cookie(my_name(), list_to_atom(Cookie)),
    Target = list_to_atom(Node),
    case net_adm:ping(Target) of
        pong ->
            io:format(rpc:call(Target, erlang, whereis, [user]),
                      "Hello from ~p.~n", [node()]),
            io:format("~s: ~s ~p~n", [?ME, Target, pong]),
            halt(0);
        Else ->
            io:format("~s: ~s ~p~n", [?ME, Node, Else]),
            halt(1)
    end;
main(_) ->
    io:format("~s: ping <Node> <Cookie>~n"
              "\tAttempt to contact the erlang node <Node>"
              " using the erlang distribution cookie <Cookie>.~n",
              [?ME]),
    halt(0).


my_name() ->
    Localhost = net_adm:localhost(),
    list_to_atom(?ME ++ "@" ++ Localhost).
```

SHENANIGANS!

REMOTE SHELL

- %%! -noshell -noinput
- user_drv:start(['tty_sl -c -e',{Node,shell,start,[]}])
- trap_exit, wait for exit.

```
#!/usr/bin/env escript
%%! -noshell -noinput
-define(ME, filename:basename(escript:script_name())).

main(["remsh", Node, Cookie]) ->
    net_kernel:start([my_name(), longnames]),
    erlang:set_cookie(my_name(), list_to_atom(Cookie)),
    Target = list_to_atom(Node),
    case net_adm:ping(Target) of
        pong ->
            process_flag(trap_exit, true),
            Shell = user_drv:start(['tty_sl -c -e',{Target,shell,start,[]}]),
            true = erlang:link(Shell),
            io:format("Grabbed a remote shell on ~p~n.", [Target]),
            receive
                {'EXIT', Shell, _} -> ok
            end,
            halt(0);
        Else ->
            io:format("~s: ~s ~p~n", [?ME, Node, Else]),
            halt(1)
    end;
main(_) ->
    io:format("~s: remsh <Node> <Cookie>~n"
              "\tAttempt to start a remote shell on the erlang node <Node>"
              " using the erlang distribution cookie <Cookie>.~n",
              [?ME]),
    halt(0).


my_name() ->
    Localhost = net_adm:localhost(),
    list_to_atom(?ME ++ "@" ++ Localhost).
```

ALRIGHT, FINE, I'LL CHECK OUT ESCRIPT

RESOURCES

- https://github.com/jcomellas/getopt
- https://github.com/basho/rebar

namoco :)

We're hiring.