



# Latest News from the Erlang/OTP team

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Erlang Factory SF Bay Area 2010

# Positive Reflexions

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- › The positive effect of being on GitHub since Nov 25 09
  - More user involvement
  - 51 number of contributions by 32 contributors (from Nov 25 to Feb 24)
  - More visibility and more open source projects
- › Erlang User Conference doubled in size
- › New book and more books on their way
- › Increasing traffic on <http://www.erlang.org>

## The use of Erlang is really taking off!



# Erlang All over the World



# release Plans 2010

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› Next release is a new major release (R14)

**June 16:** R14A, a beta release

**Sept 01:** R14B first drop for commercial use

Service releases R14B01, 02, 03 etc. with ~2-3 months intervals

# More details about R14

## New Features

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- › Multi-core performance improvements
  - optimized rwlocks
  - delayed deallocation
  - “lock-free” process table
  
- › NIF improvements (Native Implemented Function)
  - sending messages from a NIF
  - **crypto** application as NIFs, now using a driver.

# More details about R14

## New Features

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### › search in binaries (as of [EEP-31](#))

– new module called **binary** with functions:

`match, matches, split, replace,`  
`longest_common_prefix, ... part, at, copy, first,`  
`last`

or

### › half word 64-bit Erlang VM

– 4 Gbytes process heaps (in total)

– max size of Erlang term 4 Gbytes

– ets tables and binaries in separate space can utilize the full 64 bit address space

# More details about R14

## New Features

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- › **-type, -spec** officially supported
- › edoc with support for **-type/-spec**
- › Documentation build improvements
  - possible to build only html without dependency to Java and FOP
  - enhanced format
  - improved search

# More details about R14

## New Features

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- › new SSL ready to replace old SSL
- › improved **Reltool**
  - for easy creation of minimal target systems and standalone deployments from an installed development system.
- › Compiler optimizations regarding records



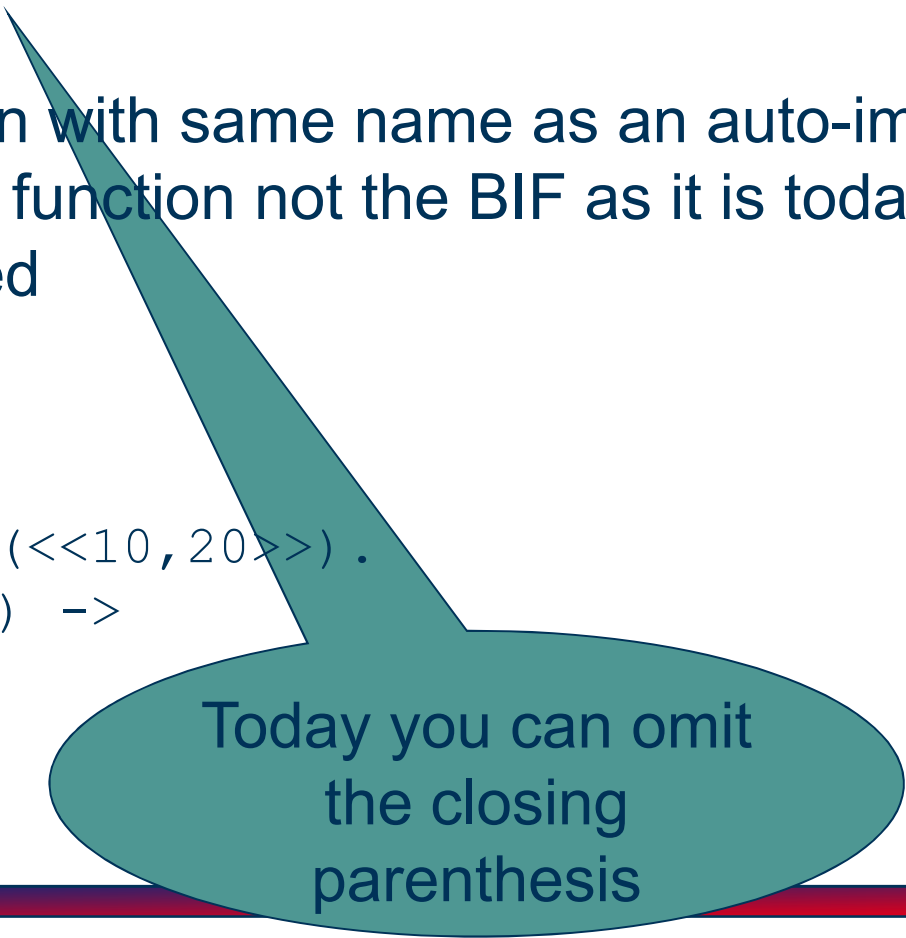
# More details about R14

## Potential incompatibilities

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- › `-define(MACRO,m)` will require closing parenthesis
- › call to a local function with same name as an auto-imported BIF will call the local function not the BIF as it is today. A warning will be issued
- › 

```
-module(m) .  
-export([foo/0]) .  
foo() ->  
    binary_to_list(<<10,20>>) .  
binary_to_list(Bin) ->  
    . . . .
```



Today you can omit  
the closing  
parenthesis

# More details about R14

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## › Tentative

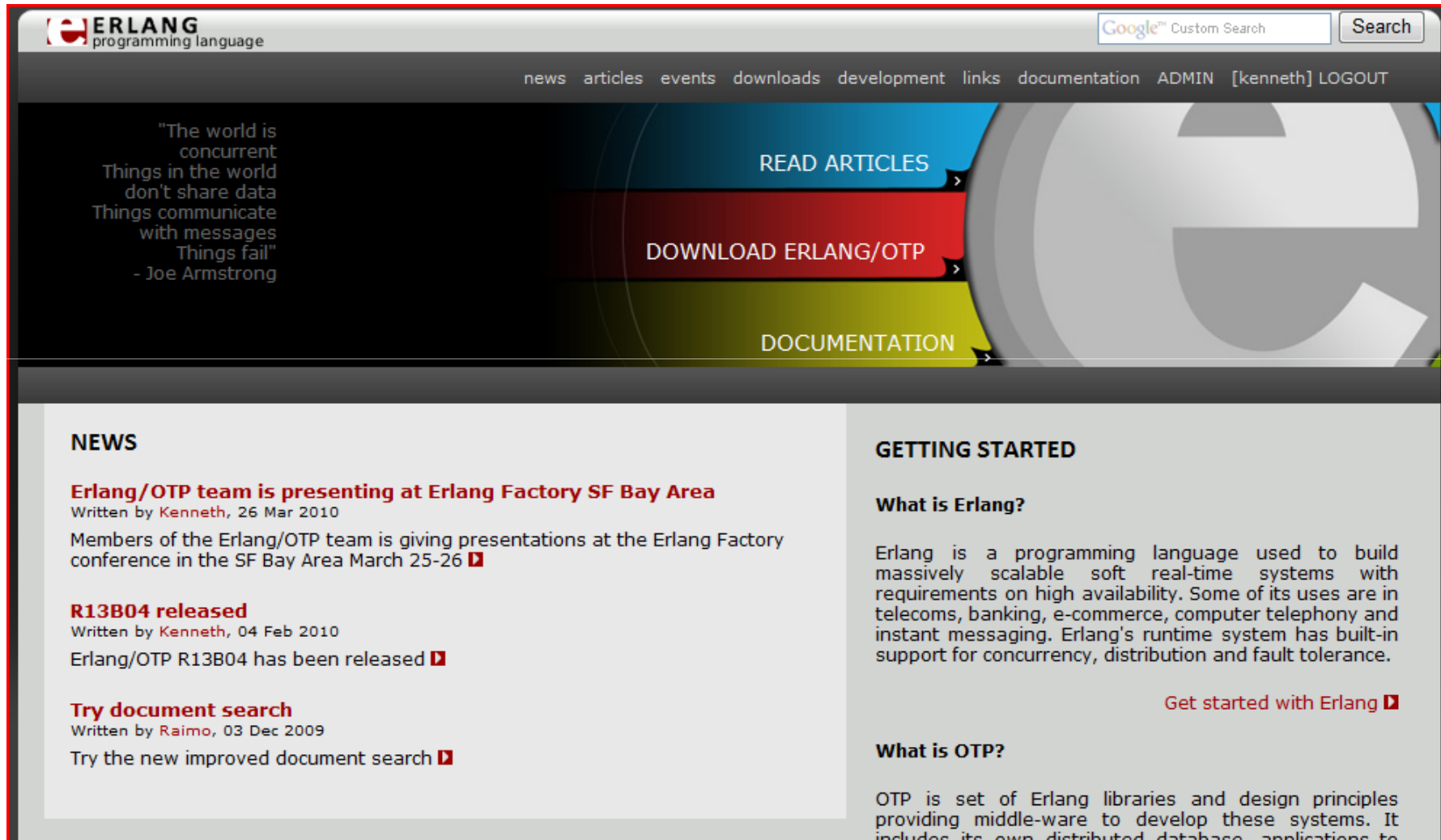
- Parameterized modules officially supported and with more efficient implementation.

## › Misc

- Change from Erlang Public License to something more well known.

# The NEW Erlang.org

<http://demo.erlang.org>



The screenshot shows the Erlang.org website interface. At the top, there is a header with the Erlang logo and navigation links: news, articles, events, downloads, development, links, documentation, ADMIN, [kenneth] LOGOUT. A Google Custom Search bar is also present. Below the header, a large banner features a quote by Joe Armstrong: "The world is concurrent. Things in the world don't share data. Things communicate with messages. Things fail." To the right of the quote are three prominent buttons: "READ ARTICLES" (blue), "DOWNLOAD ERLANG/OTP" (red), and "DOCUMENTATION" (yellow). The main content area is divided into two columns. The left column, titled "NEWS", contains three articles: "Erlang/OTP team is presenting at Erlang Factory SF Bay Area" (written by Kenneth, 26 Mar 2010), "R13B04 released" (written by Kenneth, 04 Feb 2010), and "Try document search" (written by Raimo, 03 Dec 2009). The right column, titled "GETTING STARTED", contains two sections: "What is Erlang?" and "What is OTP?". The "What is Erlang?" section describes Erlang as a programming language for building scalable real-time systems. The "What is OTP?" section describes OTP as a set of Erlang libraries and design principles for developing systems. A link "Get started with Erlang" is located between the two sections in the right column.

**ERLANG**  
programming language

news articles events downloads development links documentation ADMIN [kenneth] LOGOUT

"The world is concurrent  
Things in the world don't share data  
Things communicate with messages  
Things fail"  
- Joe Armstrong

READ ARTICLES

DOWNLOAD ERLANG/OTP

DOCUMENTATION

### NEWS

**Erlang/OTP team is presenting at Erlang Factory SF Bay Area**  
Written by **Kenneth**, 26 Mar 2010  
Members of the Erlang/OTP team is giving presentations at the Erlang Factory conference in the SF Bay Area March 25-26

**R13B04 released**  
Written by **Kenneth**, 04 Feb 2010  
Erlang/OTP R13B04 has been released

**Try document search**  
Written by **Raimo**, 03 Dec 2009  
Try the new improved document search

### GETTING STARTED

#### What is Erlang?

Erlang is a programming language used to build massively scalable soft real-time systems with requirements on high availability. Some of its uses are in telecoms, banking, e-commerce, computer telephony and instant messaging. Erlang's runtime system has built-in support for concurrency, distribution and fault tolerance.

[Get started with Erlang](#)

#### What is OTP?

OTP is set of Erlang libraries and design principles providing middle-ware to develop these systems. It includes its own distributed database, applications to

# Longer term plans

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- › More multi core performance improvements
  - lock free pre-allocators (thread specific pre allocated buffers)
  - Scheduler specific `mseg_alloc` reducing lock contention and necessary for future NUMA optimizations. Intel Nehalem, AMD Opteron
- › Clustered shared heap or other solution to allow parallel computing on large sets of data avoiding copying.
- › New XML-schema/dtd validator complementing the XML SAX parser we already have.
- › SMP optimizations in existing applications (Mnesia, ASN.1 ...)
- › Improved `eprof` profiler

# Contributions are welcome

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- › JSON encode/decode as a NIFs (based on EEP-18, <http://www.erlang.org/eeps/eep-0018.html>)
- › Suggestions and implementations for better layout and search in documentation
- › A replacement for DETS which is better and can handle data > 4 Gbyte



**ERICSSON**