

”The future of Erlang”

Keynote speech
ICFP Erlang Workshop

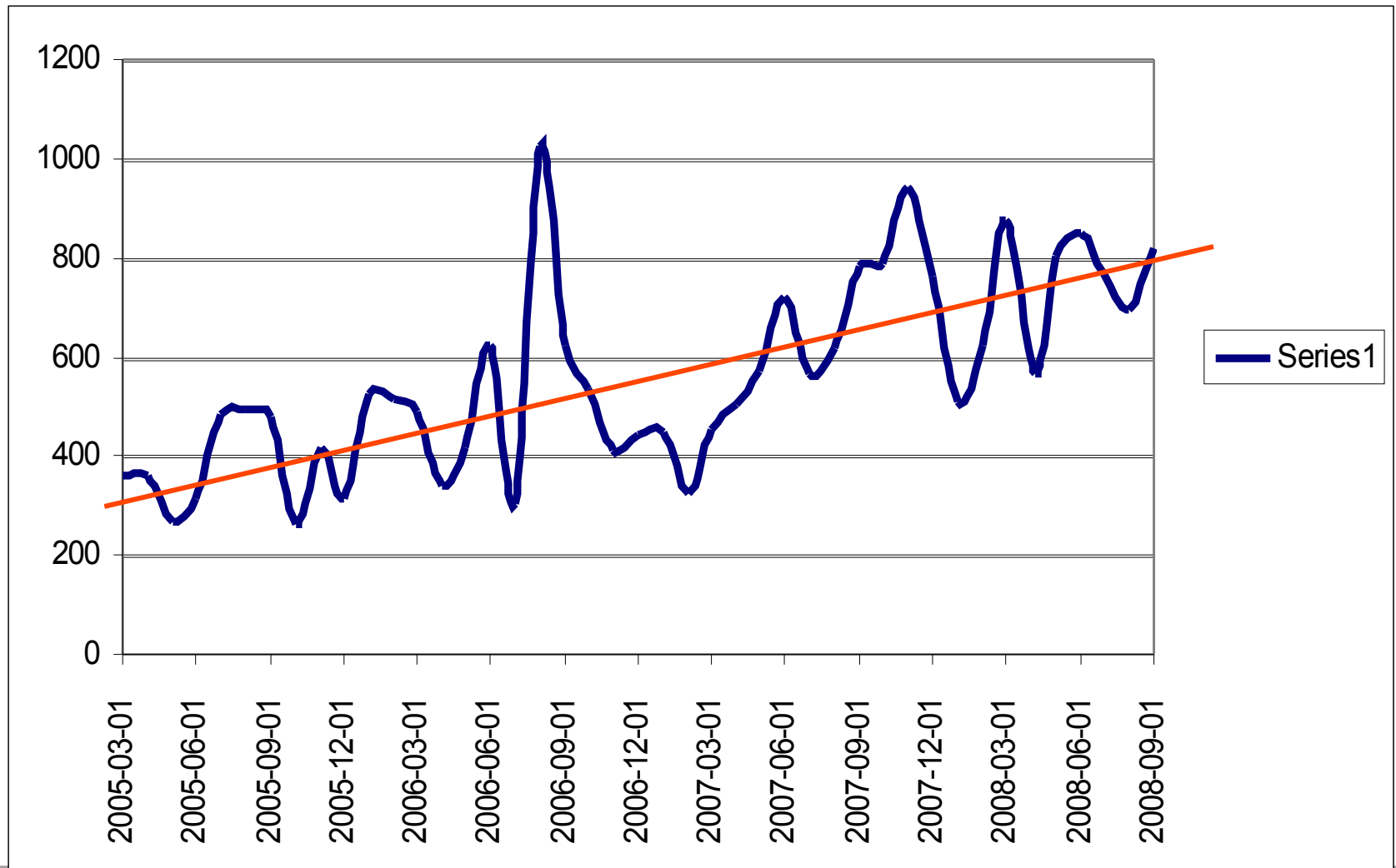
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The future seems bright!

- Increasing interest for Erlang
 - Activity on mailing lists
 - Traffic on erlang.org site from all over the world
 - Blogs about Erlang
 - More books on their way
 - New products built with Erlang

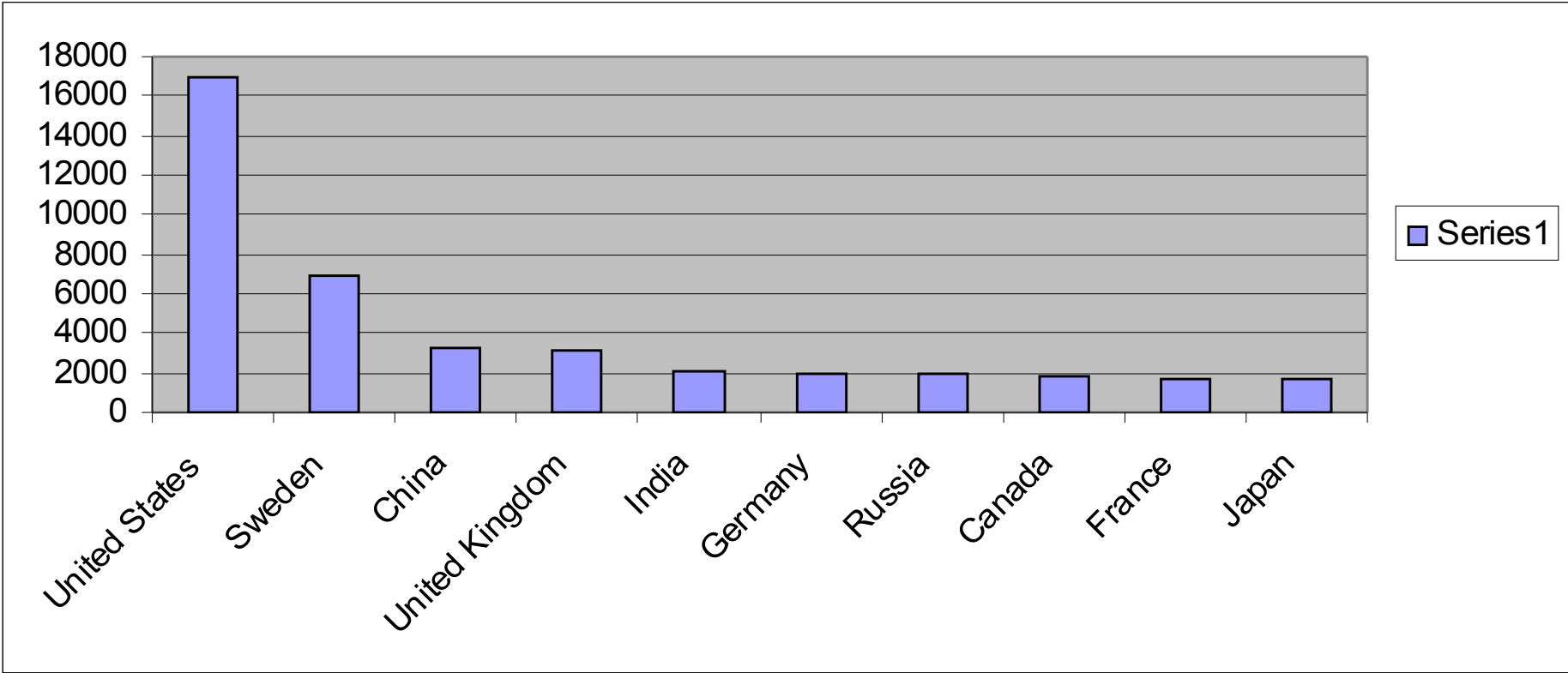
Some positive statistics

Number of mails per month to the Erlang-Questions mailing list



Increasing Interest World Wide

Number of visits on Erlang.org last month (Aug 27- Sep 26)



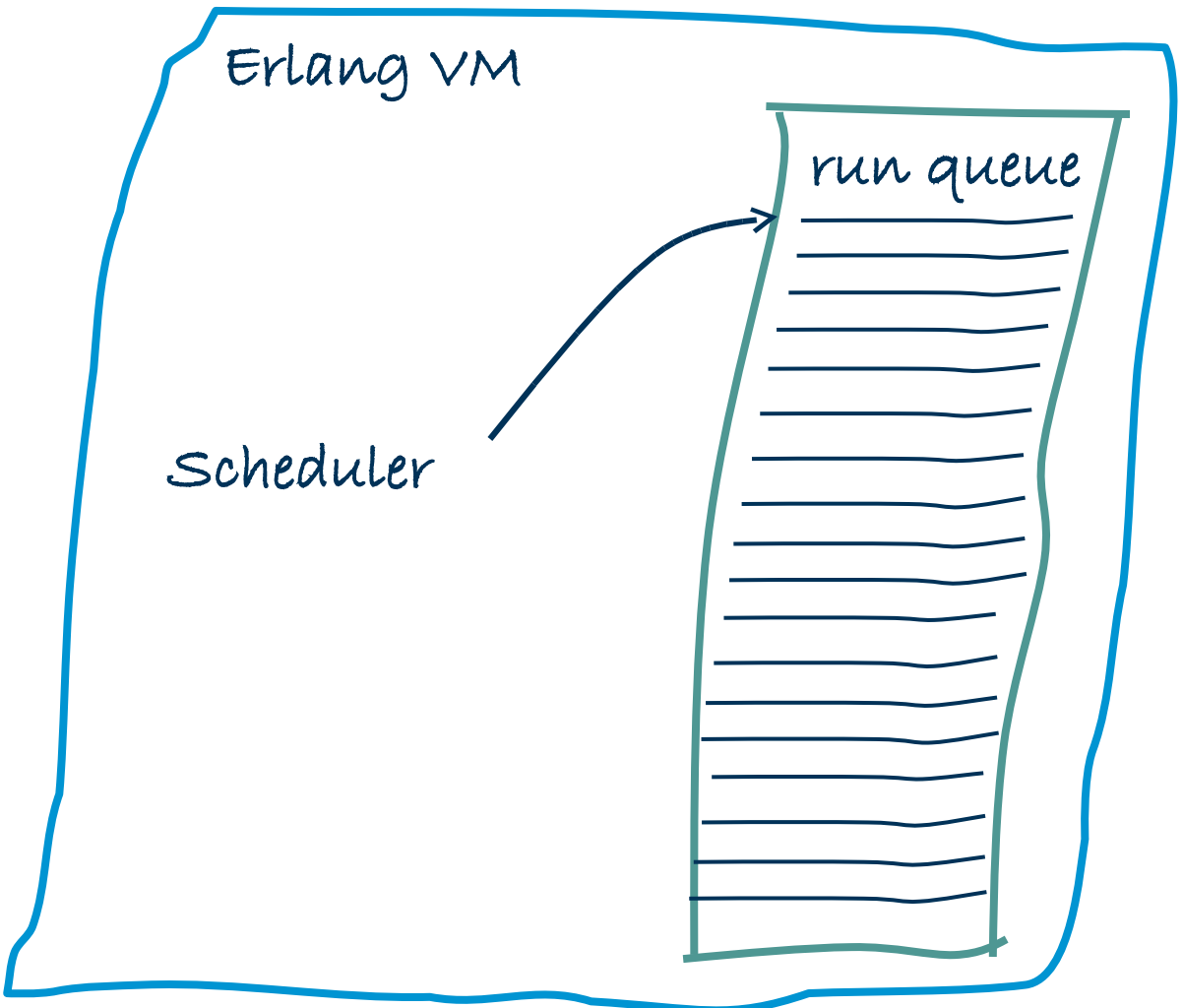
Why is the Future Bright?

- Multi core support, one of the strengths of Erlang
- Increased interest for FP and high level programming languages
- More focus on R&D efficiency
- Solutions which combine components (written in different languages)

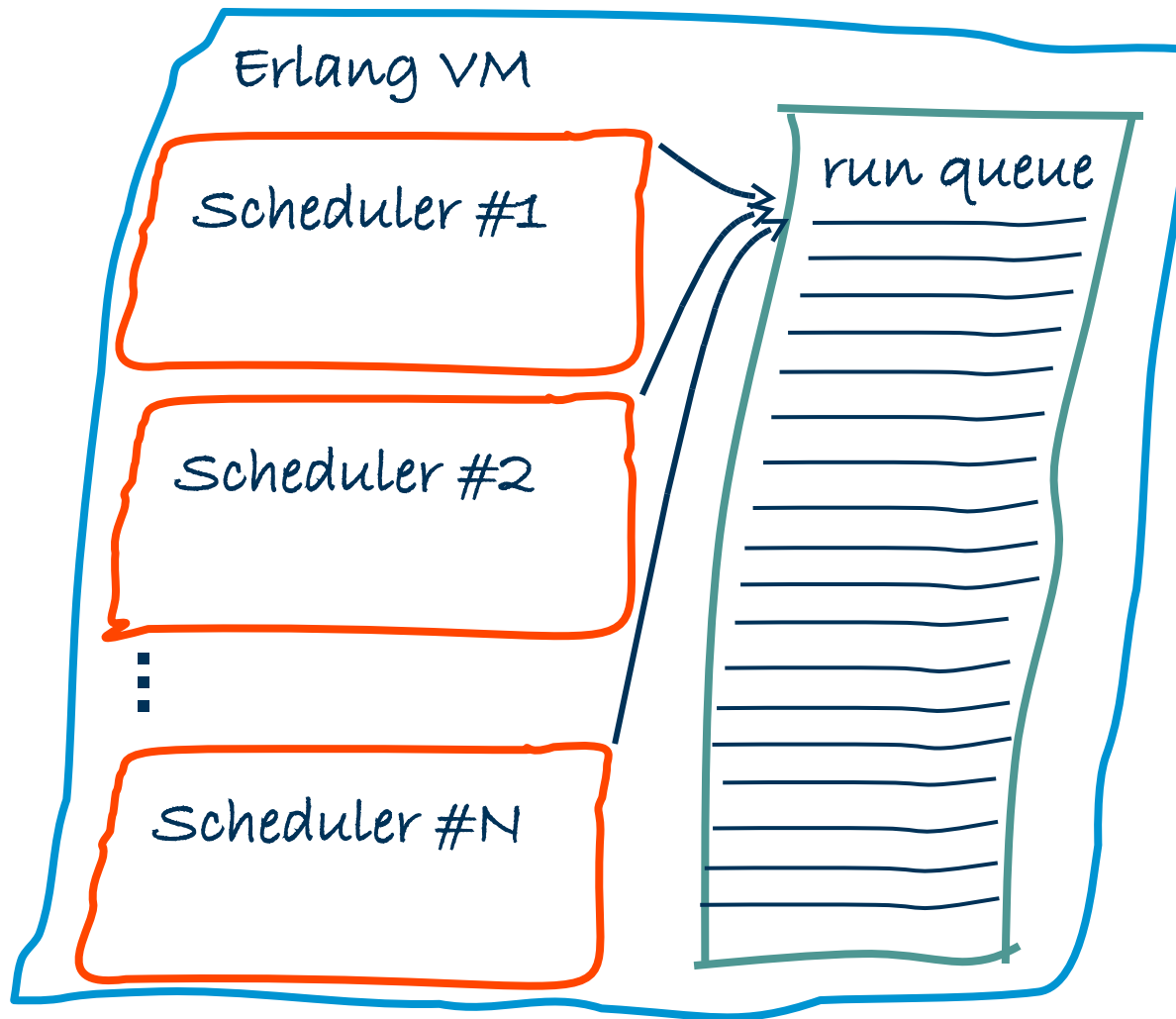
More about Multi core (and SMP)

- Started work on VM with SMP support 2005
- Strategy
 - First, "make it work"
 - Second, "measure"
 - Third, "optimize" by removing and moving locks
- First release was in OTP R11B May 2006
- Remove Big IO-lock
- Process lock optimized
- March 2007 first use in product
 - 1.7 speed improvement from single to dual core

Erlang (non SMP) VM today



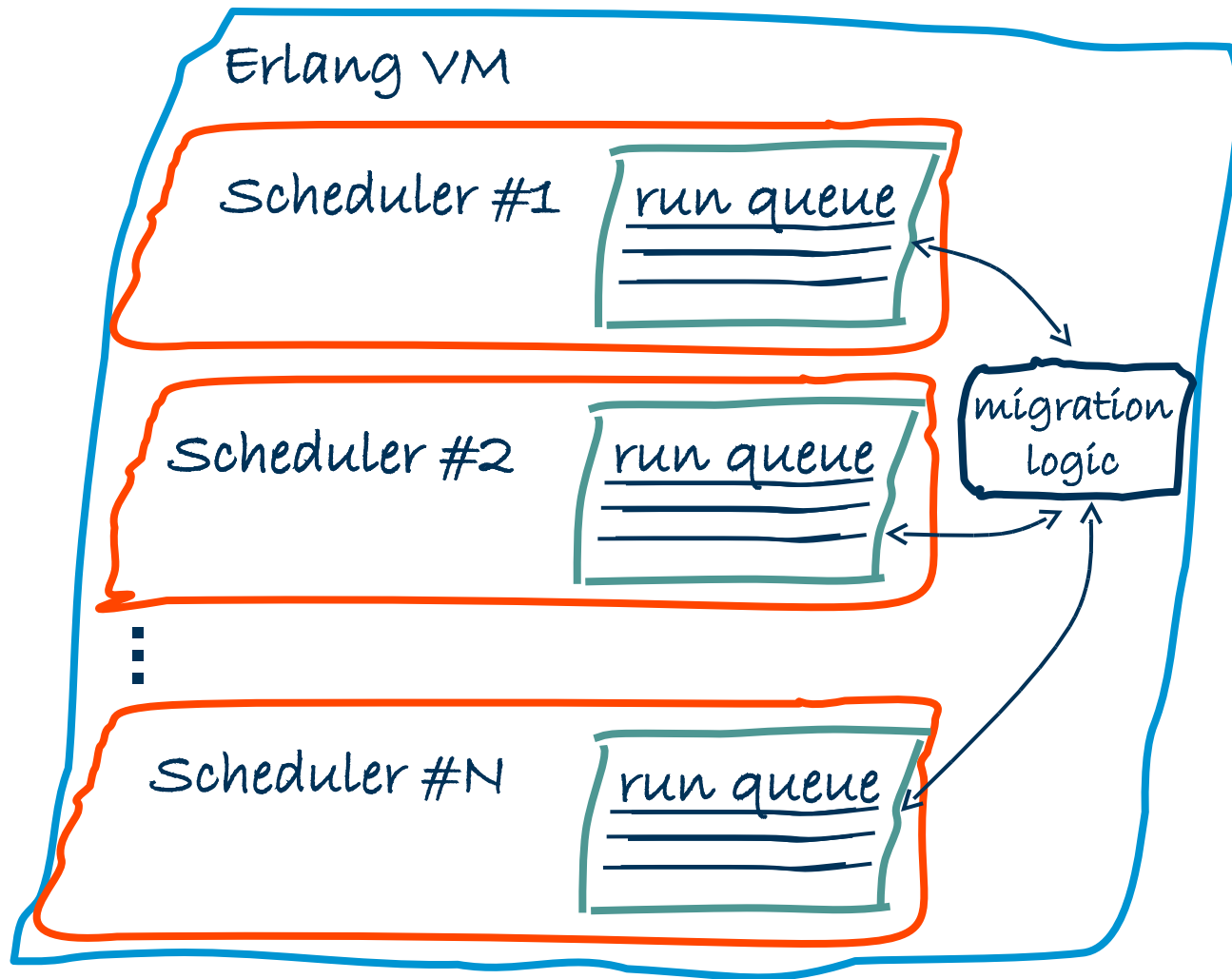
Erlang SMP VM today



Multi core is a strong selling point

- Erlang is already good at Multi Core (SMP)
- But we still need to improve
 - Better scalability on 8,16, ... Cores
 - Separate run queues per scheduler
 - Migration of processes is the tricky thing here
 - Separate IO locks per scheduler
 - Optimize locks around internal database access (ETS and Mnesia)
 - Process level locking

Erlang SMP VM next step



Other important features to add

- Unicode support (in R12B-5)
- "Standalone" programs
- FFI, Foreign Function Interface or loadable BIF's
- JSON support as part of standard distribution (BIF?)
- Fine granular parallelism (Erlang threads or fibers)

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