An Insight into [Erlang – Java interface -JikesRVM(Research Virtual Machine) – YANNI] based Informatics Platform for Telecom R&D.

[Erlang/OTP/Hardware/Software/Firmware based Co-Design of Intelligent Telecommunication Systems]

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[I] Inspiration & Introduction :

" Erlang is a general purpose, concurrency-oriented functional programming language suited for fault-tolerant, distributed, soft real-time systems. It features strong dynamic typing, lightweight concurrency, eager evaluation and prolog like pattern matching. Erlang was developed in the 1980s at the Ericsson Computer Science Laboratory to address a then-unfulfilled need for telecommunications programming: a high-level, expressive language suitable for rapid development that offered the error recovery, concurrency, distribution and performance features required by telecommunications equipment. "

[**Source :** **https://en.wikibooks.org/wiki/Erlang_Programming**]

"Exploring Eclipse Mita in the Context of Embedded Systems/iot/bosch-XDK Iot Kit/ Jikes RVM a Simple Suggestion Using Research Virtual Machine Environment/iot/ Embedded Systems."

- [Nirmal Tej Kumar](#)
- Published 2018.

{ Source : *@inproceedings{Kumar2018ExploringEM, title={Exploring Eclipse Mita in the Context of Embedded Systems/iot/bosch-XDK Iot Kit/ Jikes RVM a Simple Suggestion Using Research Virtual Machine Environment/iot/ Embedded Systems.}, author={Nirmal Tej Kumar}, year={2018} }* **}**
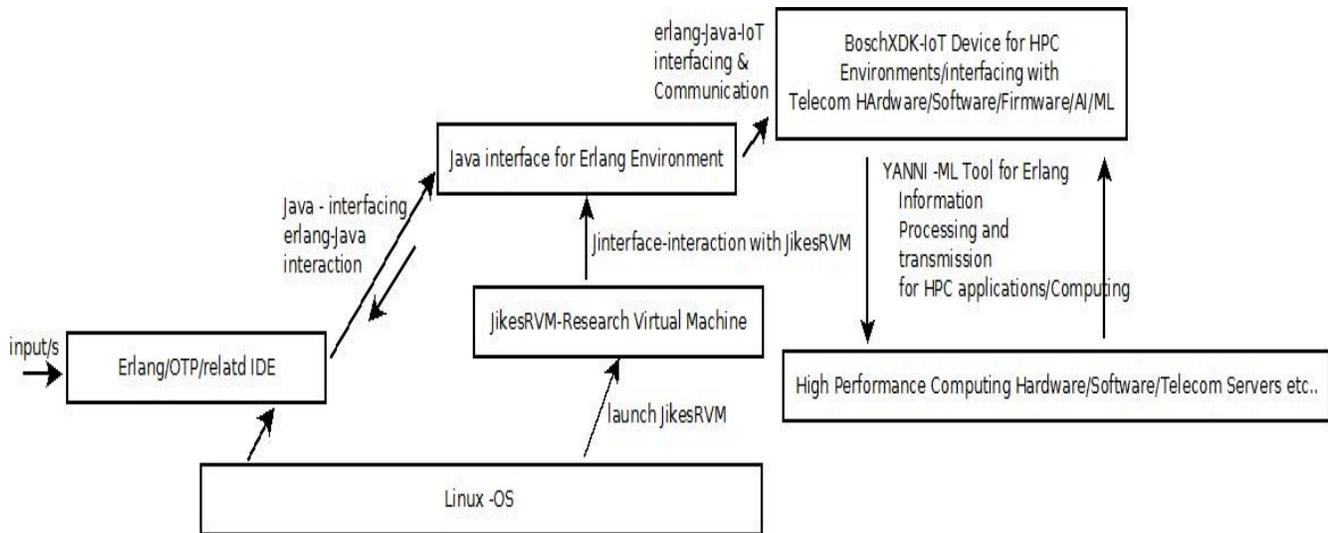
"Erlang is a programming language designed by Ericsson and used by a number of companies such as WhatsApp, Amazon and Facebook. We had the chance to talk to its creator Joe Armstrong about its development and enduring popularity. *Joe Armstrong was a long-time employee of Ericsson. He joined the company in 1985 and within a year had developed an early version of Erlang.*"

[Source : https://joearms.github.io/#Index] && [https://en.wikipedia.org/wiki/Joe_Armstrong_(programmer)]
[Source : https://www.ericsson.com/en/news/2014/12/inside-erlang--creator-joe-armstrong-tells-his-story]
[Source : http://armstrongonsoftware.blogspot.com/]

[II] Erlang based TELECOM/OTP/YANNI Informatics Framework Implementation :

Approximate Erlang-Java-IoT-HPC Informatics & Telecom Application/s Framework
A Simple Suggestion

We are not endorsing any commercial Hardware/Software/Firmware here.
Only to demonstrate a simple framework.
There could be other possibilities also
readers kindly check & satisfy yourselves.

Figure I – Our Total Overview of Telecommunications Informatics Framework for R&D.[AI + Embedded Systems+IoT+ Telecom Servers + Middle ware + HPC/Hi-End Linux Clusters & Other Computing Environments]

For Erlang programming tasks,we have used Eclipse IDE/JikesRVM or any other JVM could be used.

Please check the Eclipse IDE documentation for more information.

[Testing in progress at the time of submission]

[III] Conclusion/s With Future Perspectives :

Erlang is an excellent option in developing Telecom related applications involving Embedded Systems/IoT/HPC "Hi-End Mission Critical" applications.

******** Fine tuning is needed please check & satisfy yourself. Thanks – Dr.Nirmal. ********

[IV] Additional Information on related Erlang Software & Other Libraries Used/Useful :

https://www.erlang.org/

https://www.ibm.com/developerworks/library/os-erlang1/index.html

https://en.wikibooks.org/wiki/Erlang_Programming

https://en.wikibooks.org/wiki/Erlang_Programming/Erlang_Resources

http://vixra.org/author/nirmal_tej_kumar

https://github.com/josephmisiti/awesome-machine-learning – YANNI Tool

https://news.ycombinator.com/item?id=14771104

https://en.wikipedia.org/wiki/Open_Telecom_Platform

https://en.wikipedia.org/wiki/RabbitMQ

https://www.ericsson.com/en/news/2014/12/inside-erlang--creator-joe-armstrong-tells-his-story

[V] Acknowledgment/s :

Special Thanks to all who made this happen in my LIFE. Non-Profit Academic R&D.

[V] Some Useful Important References :

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- *Armstrong, Joe (11 July 2007). Programming Erlang: Software for a Concurrent World (1st ed.). Pragmatic Bookshelf. p.536. ISBN978-1-934356-00-5.*

- *Thompson, Simon J.; Cesarini, Francesco (19 June 2009). Erlang Programming: A Concurrent Approach to Software Development (1st ed.). Sebastopol, California: O'Reilly Media, Inc. p.496. ISBN978-0-596-51818-9.*

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- *Martin, Brown (10 May 2011). "Introduction to programming in Erlang, Part 1: The basics". developerWorks. IBM. Retrieved 10 May 2011.*

- *Martin, Brown (17 May 2011). "Introduction to programming in Erlang, Part 2: Use advanced features and functionality". developerWorks. IBM. Retrieved 17 May 2011.*

- *Wiger, Ulf (30 March 2001). "Four-fold Increase in Productivity and Quality: Industrial-Strength Functional Programming in Telecom-Class Products" (PDF). FEmSYS 2001 Deployment on distributed architectures. Ericsson Telecom AB. Retrieved 16 September 2014. "*

[Source : Wikipedia]

THE END.