

Ecosystem and Silicon Partners of Lauterbach

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Norbert Weiß
International Sales and Marketing Manager

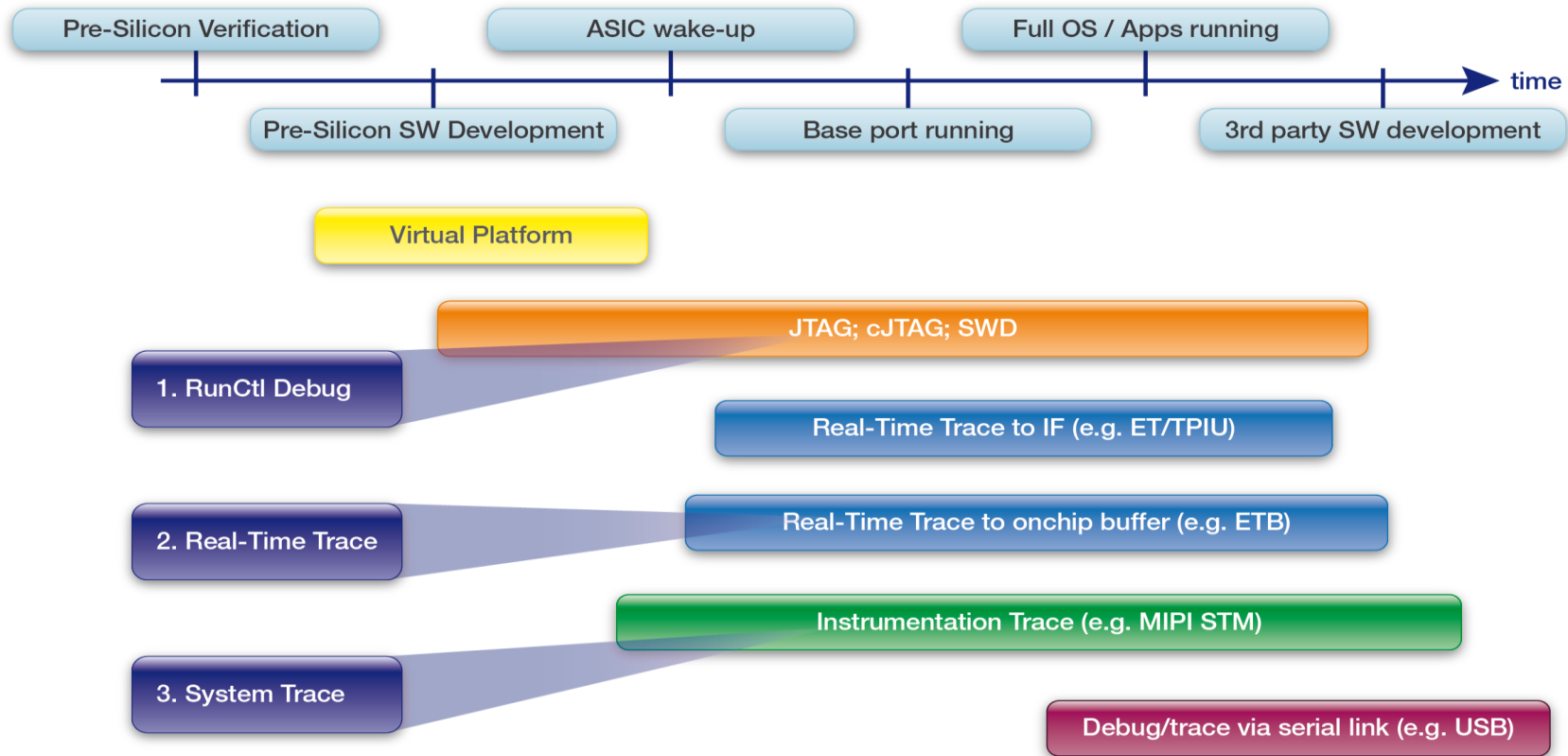
What is an ecosystem ?

- ▶ We all know the term from the nature.
- ▶ An ecosystem is a community of living organisms in conjunction with the nonliving components of their environment (things like air, water and mineral soil), interacting as a system.
- ▶ If every component is working well together with the others, we talked about a balanced ecosystems

What is an software ecosystem ?

- ▶ A software ecosystem describes the interaction and cooperation of organizations and companies in a shared market. They build a network (partner program) to ensure that their products interact in the sense of their customers seamless in the right way.
- ▶ Our customers should have the choice to pick the right product (tool) for their project. All the products should build a common system with common interfaces.

Typical Use Case of a Lauterbach Customer in different development phases



Product focus of Lauterbach

- ▶ TRACE32® is focused on the following fields of embedded systems:
 - ▶ Debugging with software based solution
 - ▶ Debugging with hardware assisted tools
 - ▶ Real-time tracing with hardware assisted tools

Tool Chain

- ▶ TRACE32® is only a member of complete tool chain that the developers use for their embedded design.
- ▶ Customers will need more tools in all of their development phases TRACE32® PowerView provides an open interface for easy integration with them:
 - ▶ Host platforms
 - ▶ Model-based designs
 - ▶ Compilers
 - ▶ Target OSs
 - ▶ Per-silicon emulation
 - ▶ Simulators and virtual prototypes

Host platforms

- ▶ Lauterbach has to ensure that TRACE32® is running on most common host platform
 - ▶ Windows, different versions Win7,8 and 10
 - ▶ Linux, different versions and distributions
 - ▶ iOS
 - ▶ HP-UX
 - ▶ Solaris

Model based design tools

- ▶ Lauterbach has to ensure that TRACE32® is running together with Model based designs tools:
 - ▶ Mathworks Simulink
 - ▶ UML tools
 - ▶ Vector Informatik targetlink
 - ▶ ..
 - ▶ ..

Compilers

- ▶ Lauterbach has to ensure that TRACE32® is running together with compilers:
 - ▶ More than 250 compiler in different versions

Real-time operating Systems

- ▶ Lauterbach has to ensure that TRACE32® is running together with most common Real Time OSs.
- ▶ RTOSs from 46 different vendors in different version for different microcontroller architectures

Pre-silicon emulation systems

- ▶ Lauterbach has to ensure that TRACE32® is running together with most common Pre-silicon emulation systems.
 - ▶ Cadence
 - ▶ Synopsys
 - ▶ Mentor Graphics

Virtual Prototypes

- ▶ Lauterbach has to ensure that TRACE32® is running together with most common Pre-silicon virtual prototypes.
 - ▶ Synopsys, Cadence, Texas Instruments, ARM®, etc
 - ▶ Interfaces: CADI, MCD, VDI, GDI, MDI, GDB, etc

Strategic Alliances with Microarchitecture IP vendors and Chip Manufacturers

This partnership include:

- ▶ Exchange of technology and products road maps
- ▶ Lauterbach to adapt their technology to the chip partner needs
- ▶ Chip partner to adapt their technology to Lauterbach products
- ▶ Develop new debuggers for proprietary CPUs DSPs etc.
- ▶ Develop and realize together new ideas and future debug and technologies

Strategic Alliances with Microarchitecture IP vendors and Chip Manufacturers

This partnership will result in :

- ▶ Availability of tools with first silicon
- ▶ Seamless interaction of TRACE32® with the chip

Strategic Alliances with Microarchitecture IP vendors and Chip Manufacturers

Examples

- ▶ ARM
- ▶ Intel
- ▶ MIPS
- ▶ Qualcomm
- ▶ Freescale
- ▶ Infineon
- ▶ And many many more

Strategic Alliances with Microarchitecture IP vendors and Chip Manufacturers

Any Chip Manufacturer who might be interested in such a partnership is invited to discuss it with Lauterbach !

Cooperation with Chip Manufacturers in Forums

- ▶ Debug Workgroup of MIPI[®] (Mobile Industry Processor Interface)
Alliance contributing companies: ARM[®], Intel[®], Lauterbach, Nokia, Qualcomm[®], ST-Ericsson, ST-Microelectronics, Texas Instruments
- ▶ NEXUS Forum for Automotive
- ▶ Common Debug Interface Technical Subcommittee in Power.Org



Conclusion :

Lauterbach has to maintain the interaction of TRACE32® with a few hundred products in it ´ s ecosystem

Lauterbach hast to support over 50 different microprocessor architectures



A tough task, but we will manage it for YOU !

THANK YOU!

▪ Lauterbach GmbH ▪
info@lauterbach.com
Phone +49 8102 9876-0

Questions?