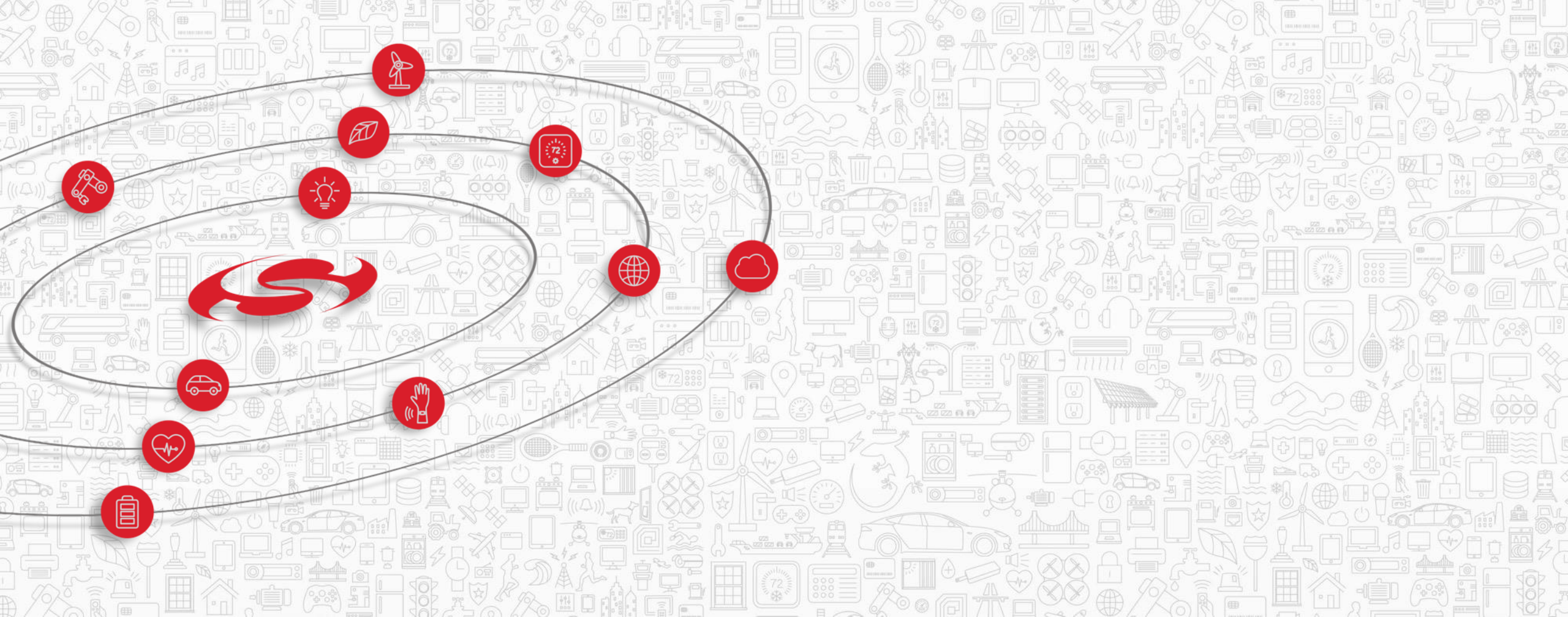




Getting Started with Thread

Thread Technology Workshop | 14th September 2017



Company Overview



- Pioneers in mesh networking (15+ years experience)
 - Thread Group - Founding Member, Board of Directors, Chair of Technical Committee
 - Zigbee Alliance - Board of Directors, Chair of Technical Committee
- Thread 1.1 certified platform
- Comprehensive portfolio of SoCs and Modules
- Preliminary support for **dotdot**  application layer
- Reference designs: Border Router, Home Automation, Connected Lighting



SoCs and Modules



Wireless Starter Kits



Border Router
Reference Designs (HW/SW)

Introducing Wireless Gecko...

Multi-Band, Multi-Protocol Wireless SoC for the IoT



- ARM® Cortex®-M4
- Multi-Band Radio
 - 2.4 GHz, sub-1 GHz
- Scalable Memory
 - Up to 1 MB Flash / 256 kB RAM
- Ultra low power
 - Down to 63 μ A/MHz (active)
 - Down to 1.3 μ A (sleep)
 - Integrated DC/DC converter
 - Autonomous peripherals
- Highly integrated
 - +20 dBm PA
 - 2.4 GHz balun
 - Advanced crypto block

Wireless Gecko Starter Kit



3 x Mainboards



Swappable Radio Boards

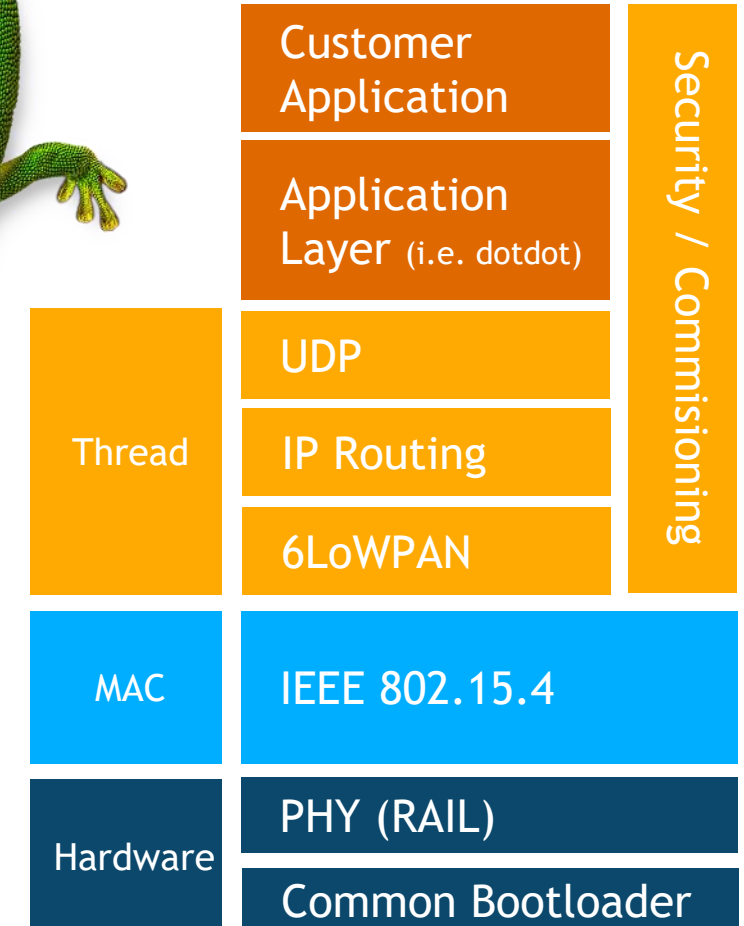


Stacks and Development Tools

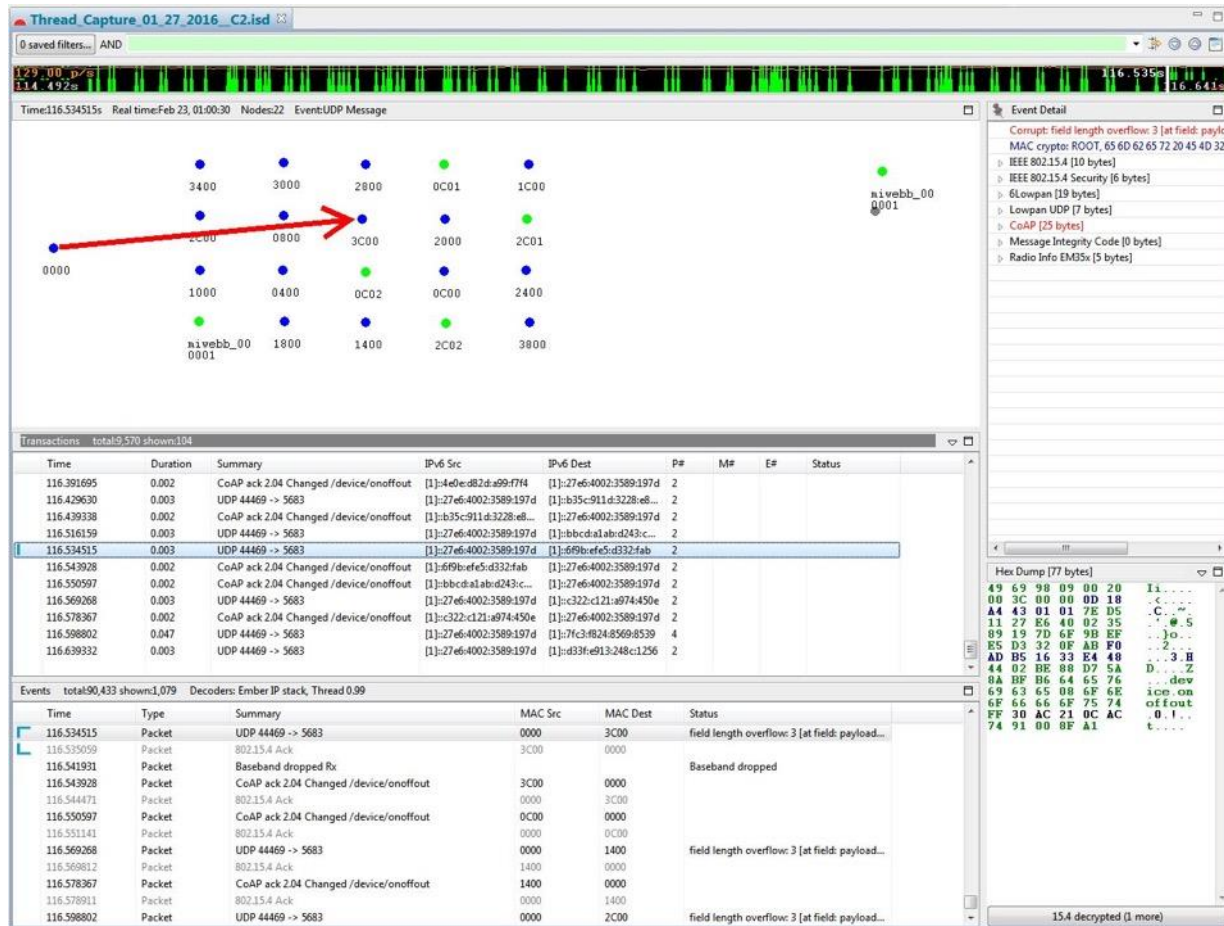


Silicon Labs Thread SDK

- Integrated Stack
 - Thread 1.1 certified
 - Supports IPv6 addresses and simple IP bridging
 - Support for both SoC and NCP architectures
- Flexible, easy-to-use
 - Simplified commissioning and security
 - Seamless integration with AppBuilder
 - Migrate from zigbee on the same hardware
- Field Upgradable
 - Over-the-Air firmware updates (via dotdot)
 - NCP firmware updates over serial interface



Network Analyzer

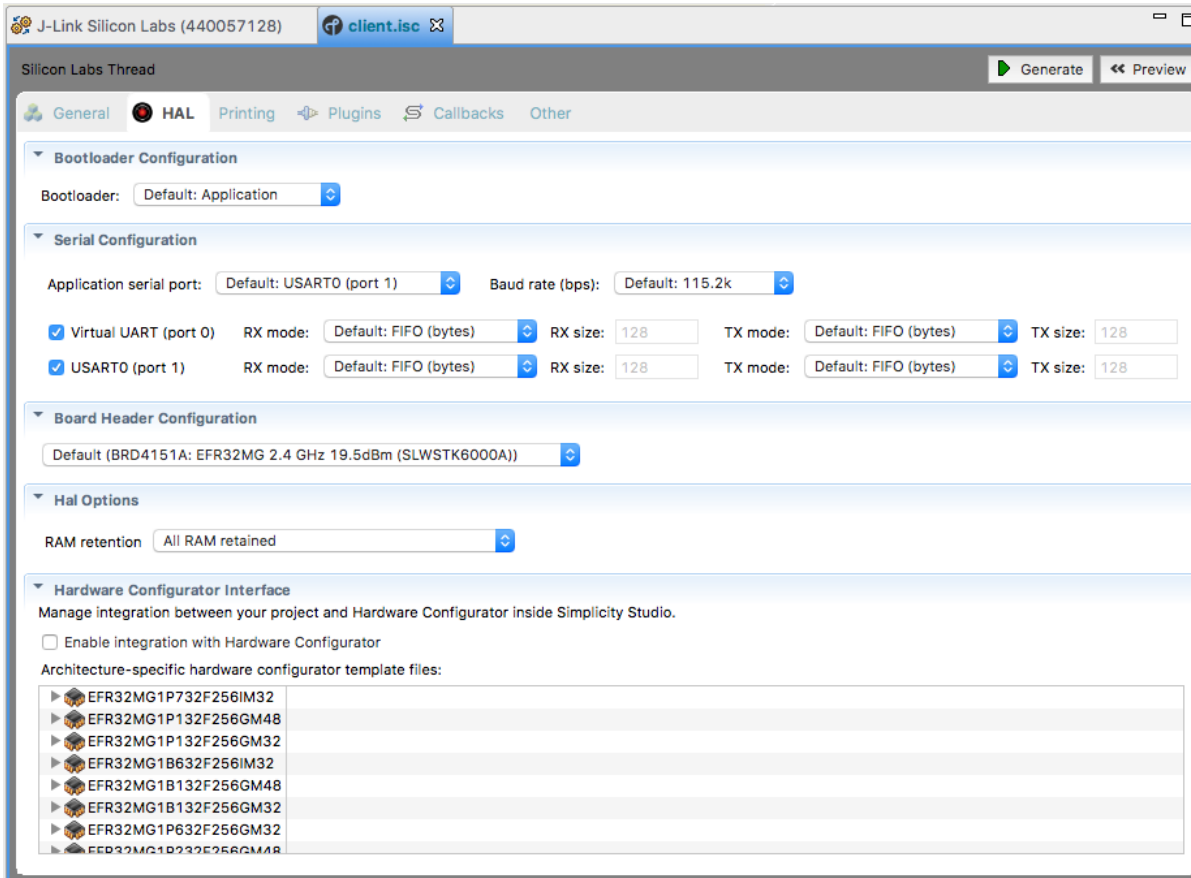


- Network-wide view of all packet activity
- Correlates network traffic into events
- Custom decoding and filtering options
- Log files accelerate Silicon Labs support
- Uses unique Packet Trace Port feature
 - Two wire interface
 - Outputs every packet sent and received with link quality
 - Can be used to output application debug statements



Advanced tool for system-wide network debug and support

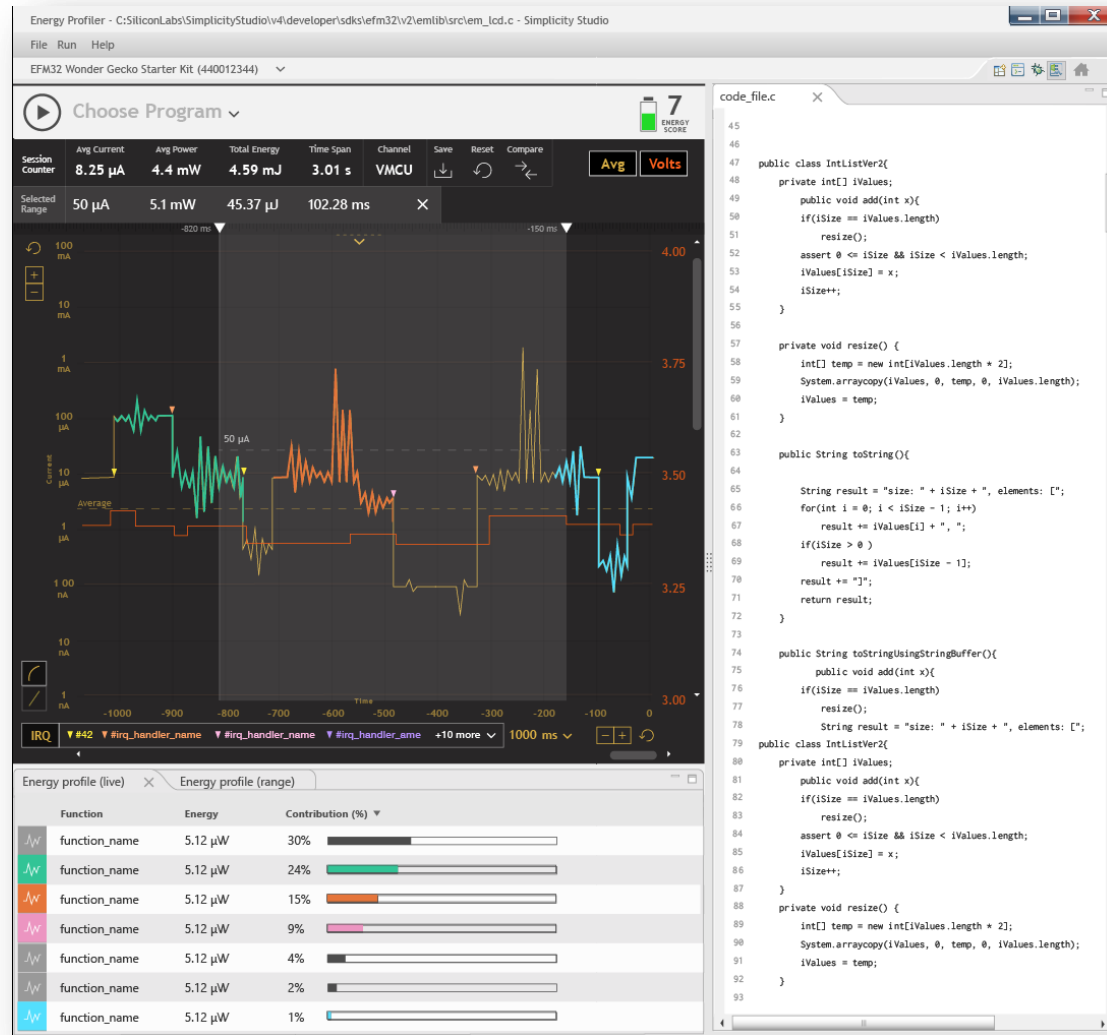
AppBuilder



- Rapid application development
 - Ready for certification “template applications”
 - Framework of easy-to-use callbacks and plug-ins
 - Selectable profiles easily pulled into application
- Simple GUI to configure devices + network
 - Device type, commands and behaviors
 - Network forming and joining behaviors
 - Security modes and operation
- Easy vendor customizations
 - Add vendor-specific code to complete the application

Generates certifiable applications and reduces time to market

Energy Profiler



- Improve battery life
- Simple energy optimization and debugging
- Analyze real-time current consumption
- Correlate energy consumption to code



Advanced real-time energy profiling tools for optimization and debugging



Thank You!

www.silabs.com