BIT Introduction and BoF

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BIT Introduction
Baseline Integration Team scope

Software Platform
- Middleware
  - GDPR-Specific
- Kernel
  - GDPR-Specific

Product-Specific Software
- HMI
- Applications

Hardware Platform

GENIVI Compliance
- GENIVI Baselines & BSP projects
- GENIVI Development Platform

SDK (tools)
- PDK (tools)
Baseline Integration Team deliverables

- **GENIVI Baselines**
  - A GENIVI Baseline is a software platform meant to verify the compliance and offer a maintained minimal software platform to the developers.
  - The baseline is used as a reference to integrate the GENIVI SW components.
  - Useful as a starting point for your own platform.
  - The Baselines and GDP are the only Genivi codebase we all share.

- **GENIVI BSP Guidelines**
  - A GENIVI BSP is a public hardware BSP integrated with a GENIVI baseline to meet the GENIVI compliance and that meets the BIT BSP contribution guidelines.
Genivi Yocto Baseline

• The Yocto Project provides tools and meta data to create your own embedded custom Linux distribution.
• Yocto has a Poky reference distribution.
• Meta-ivi project (source, doc) modifies the Poky reference distribution to add IVI support and be Genivi compliant.

• Genivi Yocto Baseline = meta-ivi + Poky
Yocto Baseline vs GDP

• Baseline
  – When you want strict Genivi compliance.
  – Good basis for your own platform.
    • Flexibility to choose your own App Manager and HMI frameworks
  – Codebase we share for collaboration on Genivi core.

• GDP
  – Good when you just want to develop apps on top of a HMI
    • Provides HMI framework ready integrated
  – Incubator for new tech, including early PoCs from Genivi
    • May not be strictly Genivi compliant
  – Codebase for collaboration higher in the stack including App Managers
BIT BoF
Testing in the open

• Genivi components have test suites.
• Historically testing has taken place within the Expert Group dev teams and member companies.
• Now moving towards testing in the open as well
  – Reporting baseline test results
  – Easing the integration of component test suites into the baseline
  – Test automation and extending CI to CIAT
**Meta-ivi-test** Yocto layer

- Adds packages required to run test suites to meta-ivi
- Current support:
  - AudioManager
  - wayland-ivi-extension
  - Common API C++ runtime
  - Persistence: persistence-administrator, persistence-client-library, persistence-common-object
  - dlt-daemon
  - Lifecycle: node-state-manager, node-health-monitor, node-startup-controller
- Need assistance with:
  - Checking integration and test coverage of current support
  - Adding missing component tests
  - Work bring managed in open JIRA ticket [BASE-5](#)
Automated Test

- Genivi is looking for contributors for automated test
- Extending Genivi CI to CIAT
- Automating meta-ivi-test
- GDP UI testing
- Fuego, LAVA

- Automation infrastructure falls in the scope of the Tools Team
  - Bi-weekly conference call. 5pm CET
aarch64 support in Yocto

• Meta-ivi officially supports three qemu targets:
  – qemu-vexpress (armv7), qemu-x86 (IA-32), qemu-x86-64
• With physical h/w support provided by the community
• With silicon vendors shipping aarch64 based SoCs we are discussing adding it to the list of official targets.
  – Should be vendor neutral
  – Broad upstream support
  – To test ivi-extension wayland gfx support is required
• Looking for your input
  – Collecting information in open JIRA task BASE-43
Yocto Baseline (meta-ivi) Yocto BSPs

• meta-ivi project has a meta-ivi-bsp layer
  – Currently more about simple adaptions,
    e.g. recipes-graphics/wayland/Weston.bbappend: foo_porter

• Under consideration:
  – We are considering how to handle more wider ranging changes
    e.g. separate sub-trees per board family
    meta-ivi-bsp
      meta-foo-bsp
      meta-bar-bsp
  – Need to balance supporting both simple and larger adaptions
  – How to maintain link so user can see how Yocto BSP, meta-ivi-bsp adaptions and GDP adaptions all relate.
Thank you!

Visit GENIVI at http://www.genivi.org or http://projects.genivi.org
Contact us: help@genivi.org

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