Baseline Integration Team Update

22/10/2016 | Planners and Engineers

Stephen Lawrence
Baseline Integration Team Co-Lead
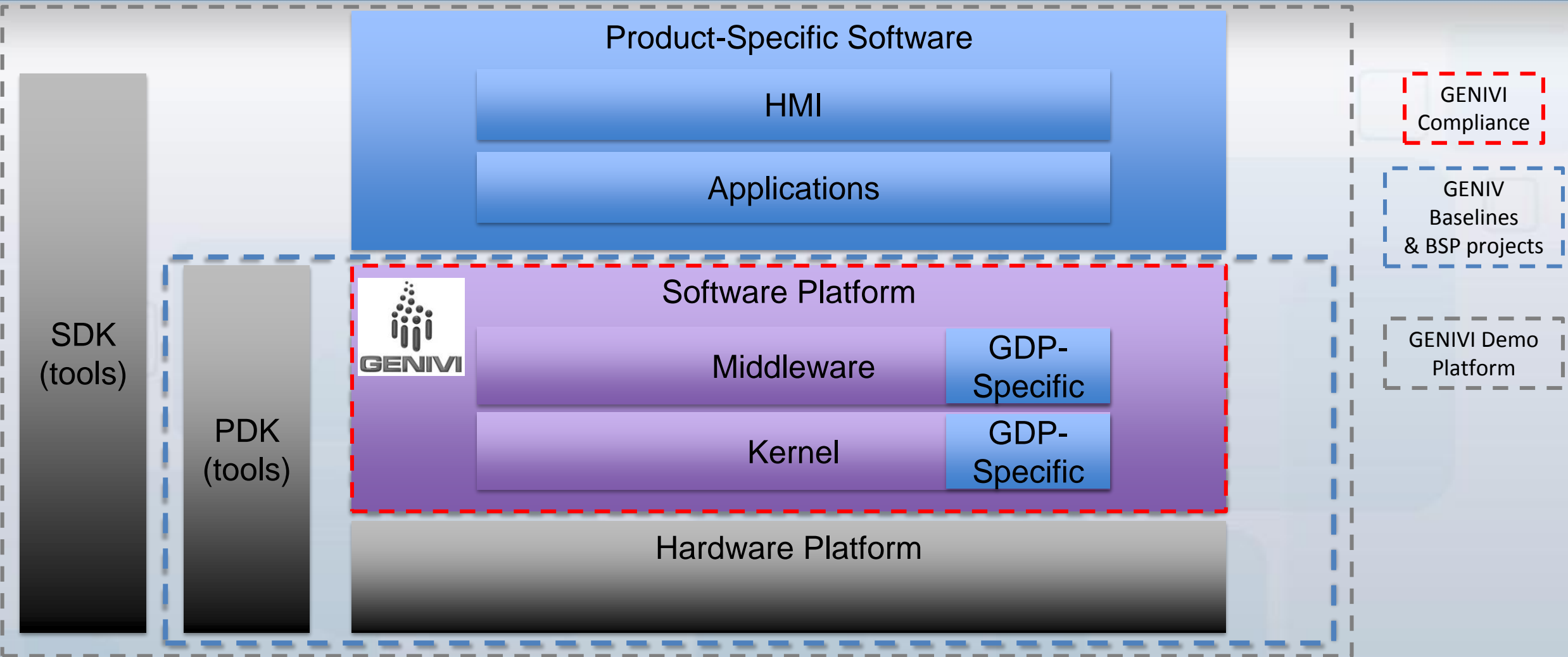Renesas Electronics

Topics

- Overview

- Baseline Status

- GENIVI Demo Platform Status

- BIT Roadmap

- Q&A / Open Discussion

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
- **GENIVI BSP(s)**
  - 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 Demo Platform**
  - The GENIVI Demo Platform is a public OSS distribution providing a demonstration of the GENIVI software and design on real or emulated hardware
  - The GENIVI Demo platform is delivered with an SDK enabling software developers
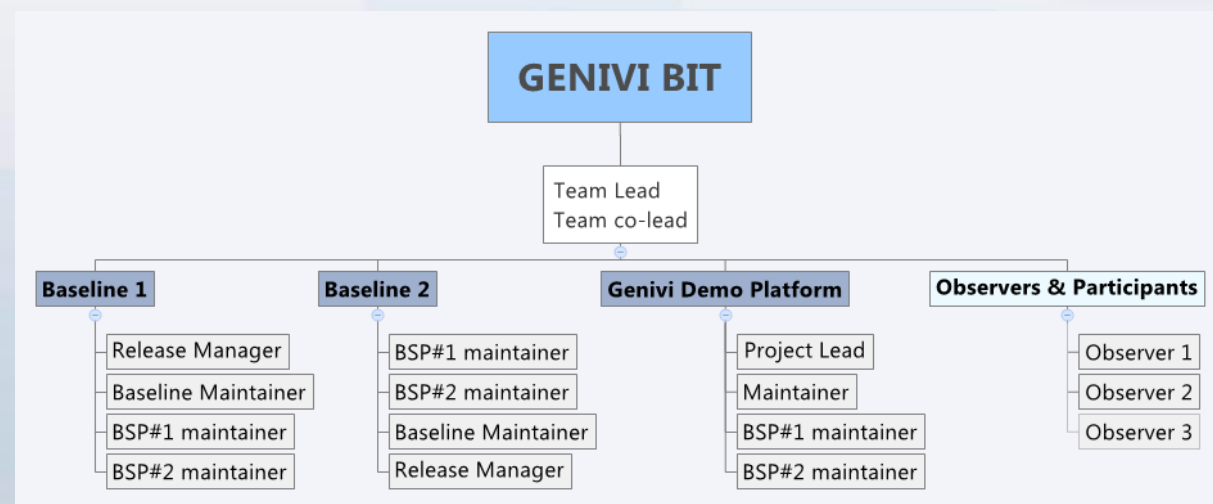
Baseline Integration Team scope

Product-Specific Software

HMI

Applications

Software Platform

Middleware

GDP-Specific

Kernel

GDP-Specific

Hardware Platform

SDK (tools)

PDK (tools)

GENIVI Compliance

GENIV Baselines & BSP projects

GENIVI Demo Platform

BIT Organization

- **BIT lead:**
  Frédéric Bourcier (Wind River): currently on leave of absence
  - Define, develop and follow the GENIVI integration process
  - Plan the releases
  - Report to PMO
  - Organize the BIT activities
- **BIT Co-Lead:**
  Stephen Lawrence (Renesas)
  - First escalation point for technical integration issues
  - Facilitates the technical link between Baselines and EGs
  - Represent the BIT for technical matters
  - Act as BIT lead when needed
- **Baseline Maintainers:**
  Joh Yong-Il (Tolkien) (Yocto - Wind River)
  Pedro Alvarez (Baserock - Codethink)
  - Manages the releases of a Baseline
  - Integrates and maintain the Baseline
- **GDP Maintainer:**
  TBC
  - Manages the releases of a Baseline
  - Integrates and maintain the Baseline

BASELINE STATUS

- Latest Release
    - K-1.0 Kronos release candidate aligned with GENIVI 9.0 compliance
- Track Record
    - Since 2012 !!!
    - Every 6 weeks release cycle
- New release process
    - Improve baselines roadmap readability (release tables)
    - Facilitates the discussion with the EG leads and the OS maintainers

Hardware support: GENIVI BSP program

6 Hardware targets are supported for J-1.0

- – ARM v7 - QEMU
- – x86 – QEMU
- – x86 64 - QEMU
- – Renesas R-Car M2 Porter Low Cost Board
- – Renesas R-Car M2 Koelsch, E2 Alt, H2 Lager Evaluation Boards
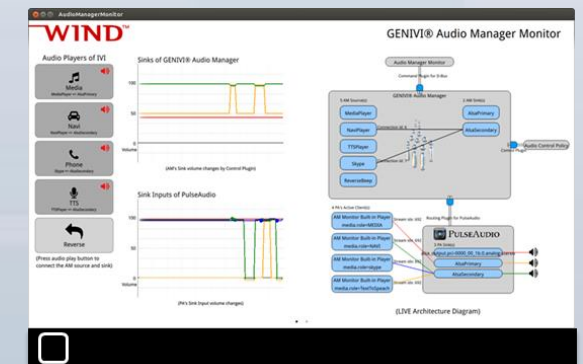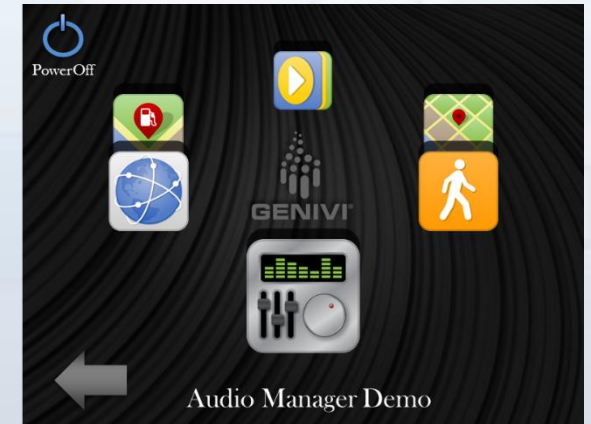- – Intel Minnowboard Max
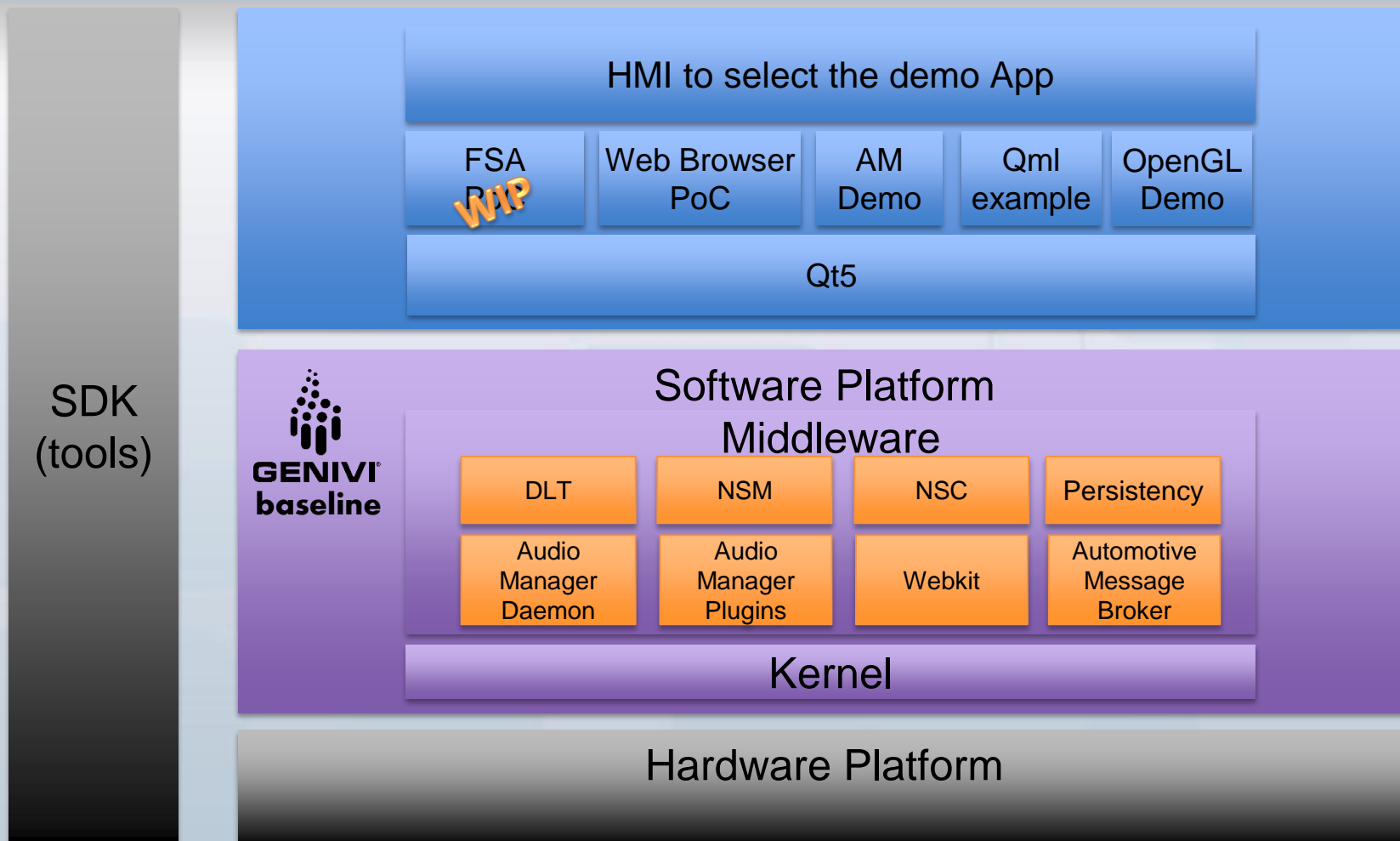
- – x86 64
- – nVIDIA Jetson TK1

GENIVI DEMO PLATFORM STATUS

Improvements since Last AMM

- Stabilization improvements

- Simpler build setup
  - Git submodules used for layer checkout

- Fuel Stop Advisor PoC in process of being integrated

- Google Android Auto close to integration

- Support of Renesas R-Car E2 Silk Low Cost Board

- Support of Intel VTC 1010

- Genivi 8 branch

The current picture

SDK (tools)

GENIVI baseline

HMI to select the demo App

| FSA WIP | Web Browser PoC | AM Demo | Qml example | OpenGL Demo |

Qt5

Software Platform
Middleware

| DLT | NSM | NSC | Persistency |

| Audio Manager Daemon | Audio Manager Plugins | Webkit | Automotive Message Broker |

Kernel

Hardware Platform

Legend

| HMI and Apps |
| GENIVI Component |
| Hardware & Tools |

GENIVI demo Platform live!

Get Started with GENIVI Demo Platform

- Documentation: http://wiki.projects.genivi.org/index.php/GENIVI_Demo_Platform

- Yocto GDP: http://git.projects.genivi.org/?p=meta-genivi-demo.git

- Baserock GDP: http://wiki.projects.genivi.org/index.php/GENIVI_Demo_Platform#Baserock_Baseline

BIT ROADMAP

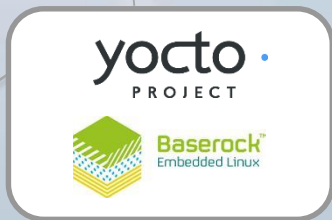Baselines, BSPs, GENIVI Demo Platform

BIT Ecosystem: 90% OSS

GENIVI governance
GENIVI Compliance program
GENIVI Technical groups
GENIVI Baselines project management
GENIVI Demo Platform project management

Alliance

OSS

Tools community
Kernel maintenance program
Upstream compliance program
Upstream compatibility program
GENIVI Baseline recipes
GENIVI BSPs

GENIVI software components
GENIVI Demo Platform recipes
GENIVI OSS mailing lists
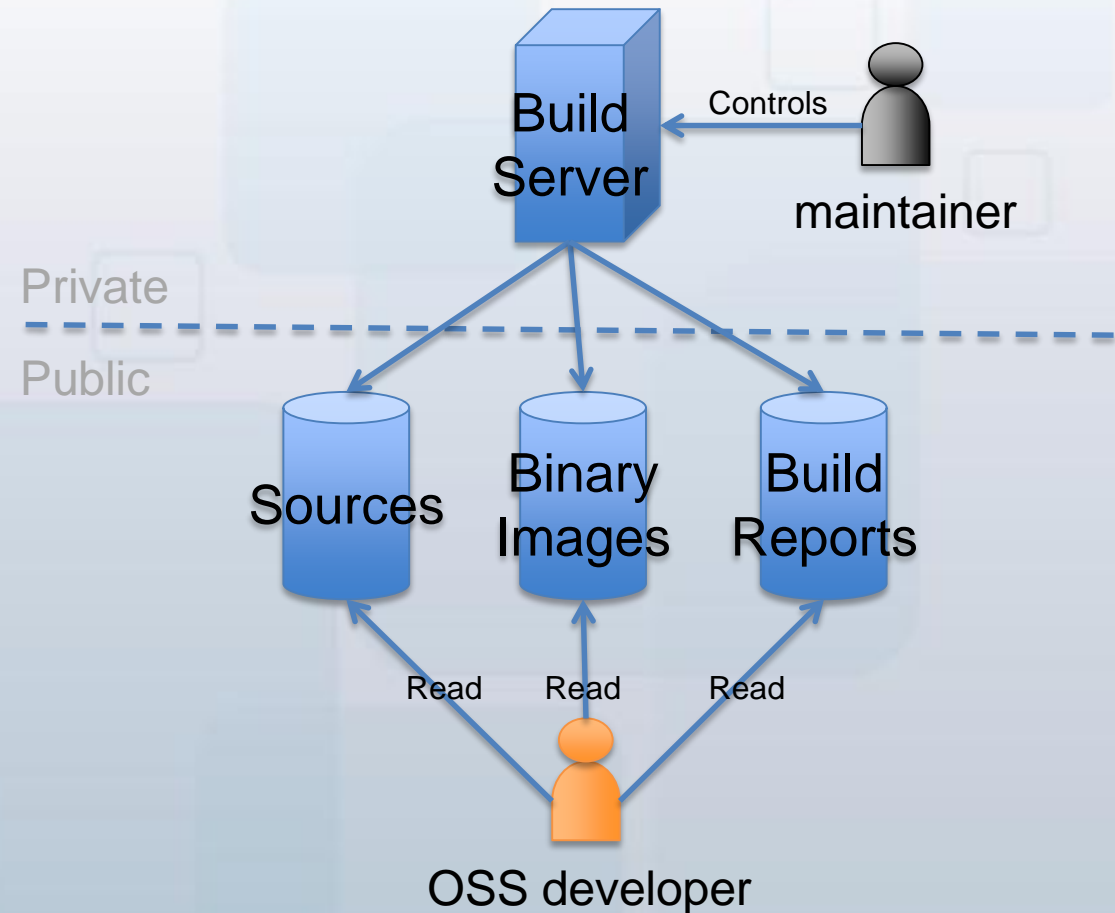GENIVI bug tracker
GENIVI wiki

- Who influences the roadmap?
  - GENIVI members
  - GENIVI executives
  - GENIVI BIT
  - OSS developers
- Who decides the roadmap?
  - GENIVI SAT
  - GENIVI BIT
- Who executes the roadmap?
  - Baseline maintainers
  - GENIVI Demo Platform maintainers
  - OSS contributors

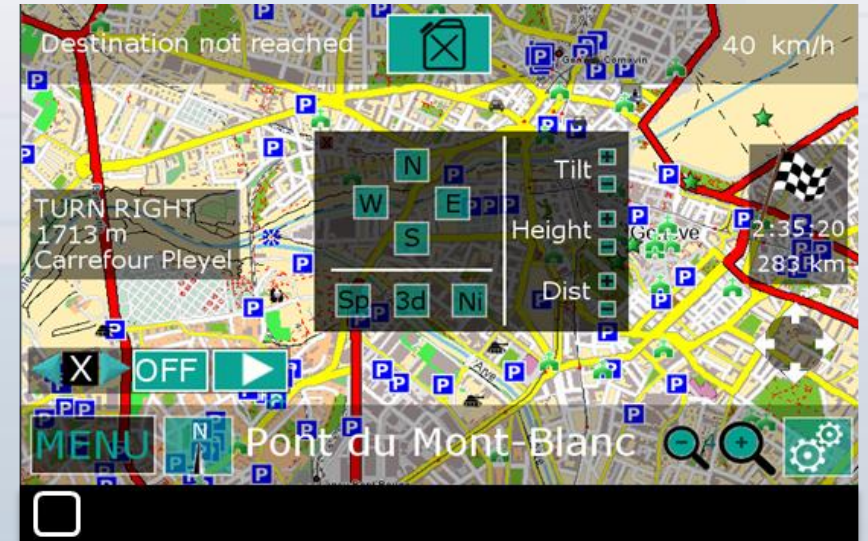# Public binary images and source code repos

- **Problem to solve**
  - Accessing GDP or baselines requires time to build the distribution, such step should not be avoided to target certain types do developers

- **Proposal for both GDP and baselines**
  - Build server under maintainer control
  - Source server publicly accessible
  - Binary image publicly available

This Solution is under discussion with the license review team

Build Server — Controls — maintainer

Private
Public

Sources — Binary Images — Build Reports

Read — Read — Read

OSS developer

The GDP roadmap

- Proposed Applications
  - GENIVI FSA Demo integration
  - Google AAP Demo integration
- Middleware and Infrastructure
  - Upgrade to Genivi 8 (Jupiter)
  - Upgrade to Genivi 9 (Kronos)
  - Navigation data partition for Navit (and FSA)
  - Better support for SI components
- BSPs
  - Additional BSPs
- Packaging
  - Binary distribution improvement
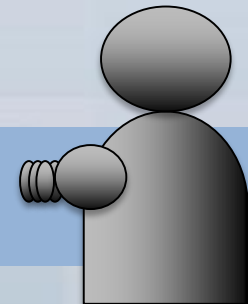
Baseline Automated Testing

- Goal:
  - Improve GENIVI software quality
  - Define and deploying baseline validation process

- How
  - Collect the GENIVI test software into a GENIVI test suite
  - Integrate it with a test framework

To achieve this, the BIT needs to grow in resources.

We look for individuals willing to contribute tests, or to select and integrate the test framework.

If you are interested, please contact the BIT lead or write to genivi-projects mailing list!

BIT NEEDS YOU !!

Coordination with the GENIVI Tools Team

- Mission
  - [Tools Team](#) coordinates the activities on selection, adoption, adaptation, creation and maintenance of the tools that help making the GENIVI development activities more efficient.

- Scope
  - Tools for building software
  - Tools for UML modeling
  - Tools for debugging and analysis
  - Tools for automated testing

- BIT and Tools Team will interface to discuss topics such as
  - GENIVI Demo Platform SDK
  - GENIVI Baselines automated testing
  - Common API workflow for baseline builds

Baseline Integration Team Vision

Features

SW product

SW platform

SW component

Variants

More SW components
Increase of compliance scope ✓

More BSPs ✓

Baselines & BSP projects

More testing !

Quality