Overview of GENIVI
infrastructure from git to CI
October 18, 2016 | AMM Burlingame - All Members

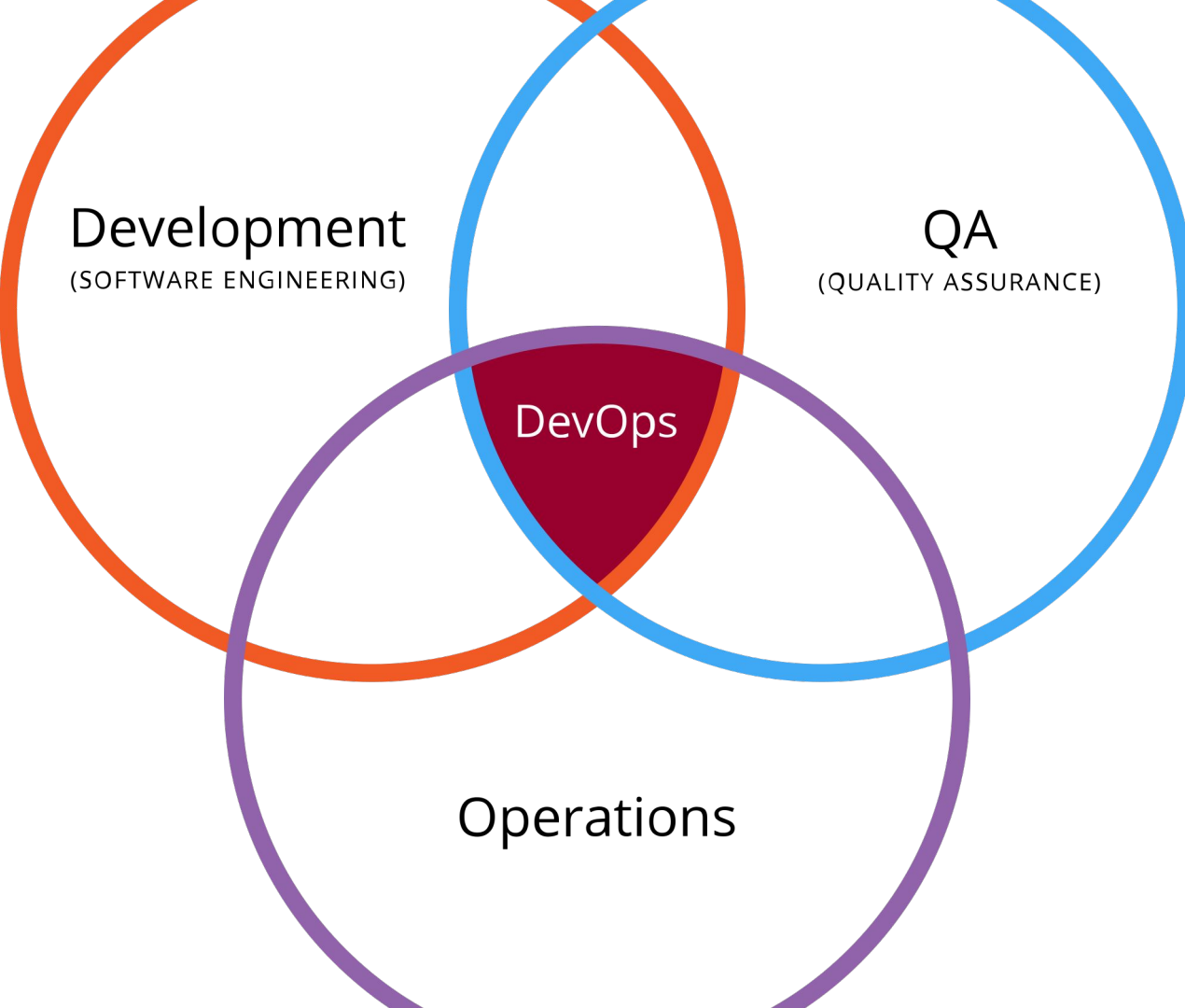Jeremiah C. Foster,
GENIVI Community Manager

Overview of GENIVI infrastructure from git to continuous integration

Jeremiah C. Foster
Community Manager
Pelagicore

GENIVI®

Development (SOFTWARE ENGINEERING)

QA (QUALITY ASSURANCE)

DevOps

Operations

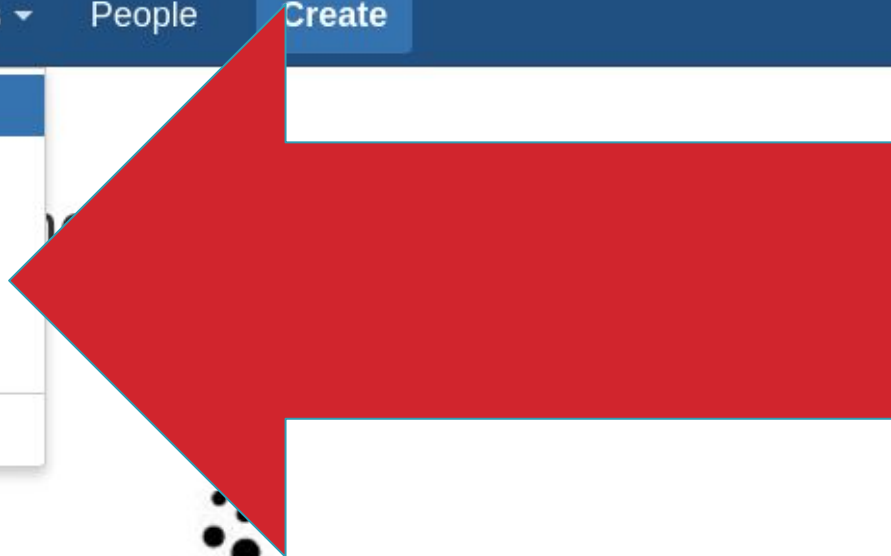"Best of breed" tooling designed to enable collaboration.

- Confluence

JIRA

GitHub

go.cd

Website

Configure…

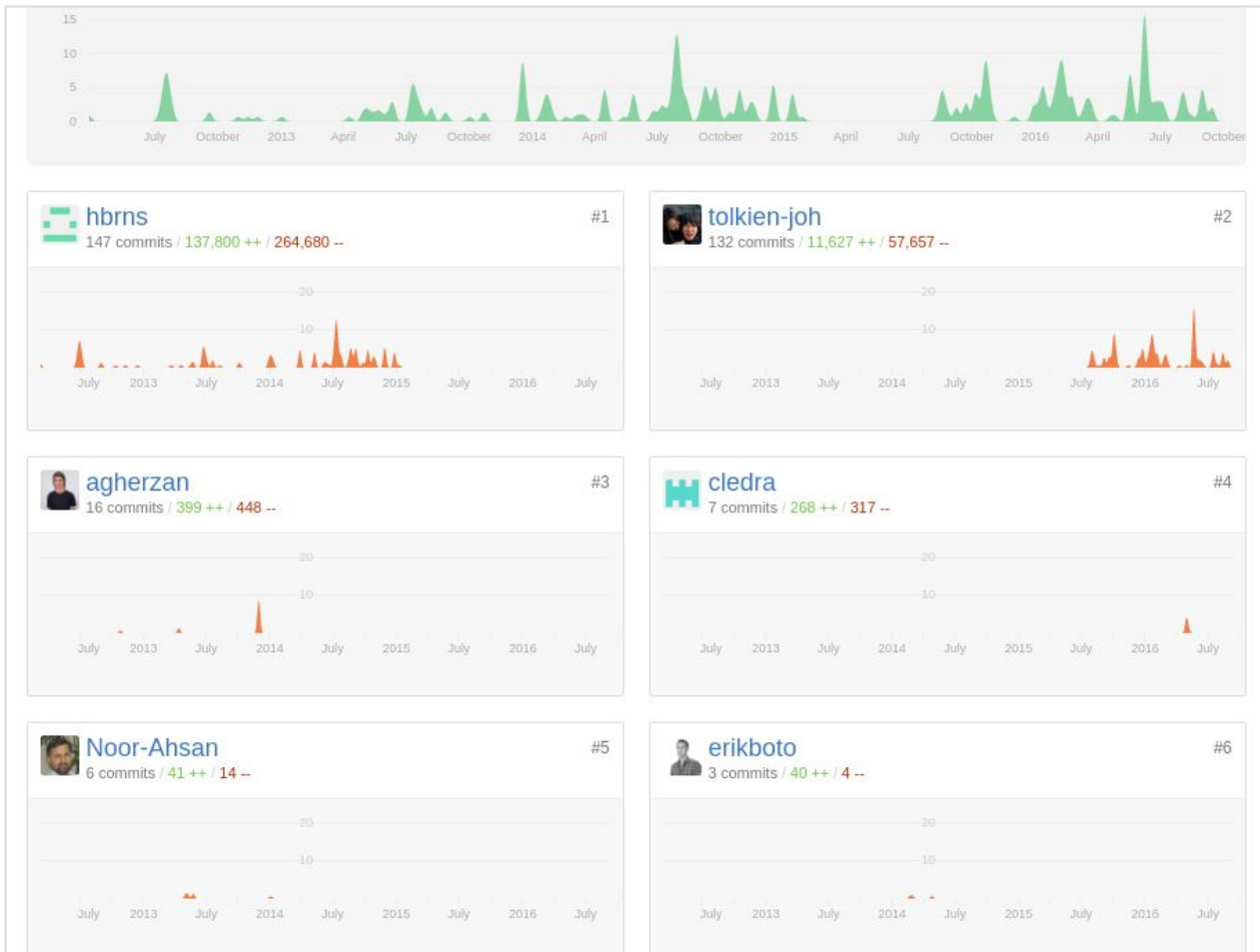ce Projects Wiki

, 2016

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user-management/user-data-migration-service.git	Data migration service	GENIVI Git User	*No commits*
common-api/c-poc.git	Common API C implementation PoC	GENIVI Git User	*13 hours ago*
lbs/positioning.git	Positioning services	GENIVI Git User	4 days ago
lbs/navigation-application.git	LBS Navigation application	GENIVI Git User	6 days ago
persistence/persistence-administrator.git	Administrator application...	GENIVI Git User	9 days ago
lbs/navigation.gi		Git User	10 days ago
dlt-viewer.git		Git User	11 days ago
dlt-daemon.git	Diagnostic Log and Trace daemon	GENIVI Git User	11 days ago
genivi-demo-platform.git	Demonstration Platform and...	GENIVI Git User	2 weeks ago
meta-genivi-demo.git	Yocto based GENIVI Demo Platform	GENIVI Git User	2 weeks ago
wayland-ivi-exte	Wayland...	GENIVI Git User	2 weeks ago
browser-poc.git	oncept.	GENIVI Git User	3 weeks ago
gdp-test-suite.git	Test suite for demo platform	GENIVI Git User	5 weeks ago
persistence/persistence-health-monitor.git	Persistence Health Monitor...	GENIVI Git User	7 weeks ago
persistence/persistence-client-library.git	Client library for persistent...	GENIVI Git User	7 weeks ago
AudioManager.git	Low level audio manager /...	GENIVI Git User	8 weeks ago
ivi-speech.git	API for Speech services	GENIVI Git User	2 months ago

Legacy git repository

This is for older versions of GENIVI compliance, new work is done at GitHub

This is where new work is being done

Stats update
61 Git repositories
64 Members
25 Teams

- **GENIVI has created GENIVI accounts on GitHub that are tailored for specific GENIVI maintenance tasks**

- **This can help you if your company doesn't permit the use of GitHub**

- **Also; protected repos, CLAs, access control via teams, secret repos**

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Welcome to the GENIVI Open Source Projects Wiki

Created by Joel Replogle [Administrator], last modified by Robert Marshall on Oct 19, 2016

GENIVI hosts a suite of Open Source Projects that focus on non-differentiating elements of the software stack of an In-Vehicle Infotainment system. These elements form a reusable software foundation for the efficient development of unique automaker and supplier offerings. A detailed overview of GENIVI Alliance deliverables and Alliance Member Benefits may be found in the GENIVI Resource Kit.

Architecture

- Overview of Reference Architecture - (You may want to start at the *beginning* of the GENIVI Resource Kit)
- Open Source Project block diagram

Software Components and Standard Interfaces/APIs

- IPC CommonAPI C++
- Media Manager
- Application Framework
- more

Platforms/Baselines

- Baserock Baseline
- Yocto Baseline

Demonstrators, development, and tooling

Projects Home

Created by Joel Replogle [Administrator], last modified by Jeremiah Foster on Oct 04, 2016

ⓘ Contributing to GENIVI is described here, working with working with GENIVI source code is also available. GENIVI Teams are organized separately.

GENIVI Software Projects

Project Name and wiki page	Documentation	Code repositories	Mailing list	Issue Tracking	Current source code maintainer(s)
Audio Manager (AM) Audio Manager routes "sources" and "sinks" through the Head Unit.	Doxygen based documentation for AM	• Audio Manager • Audio Manager Plugins • AM Demo used in GENIVI Demo platform	• Audio Manager mailing list • Please use GENIVI projects mailing list for demo discussion	Bugzilla for Audio Manager	Current as of 🗓13 May 2016: Christian Linke Audio Manager Demo Maintainer: JoonCheol Park
Diagnostic Log and Trace (DLT) Diagnostics	DLT usage guide and examples	• diagnostic log and trace • dlt-t • dlt-viewer	dlt mailing list	Bugzilla for DLT	Current as of 🗓15 Mar 2016 • Gernot Wirschal
Persistence Administrator Service (PAS) For storing persistent data to the flash memory	Persistence Architecture Manual (PDF) GENIVI Persistence Management Persistence Database Configuration Tool (PDF)	• persistence-administrator • persistence-client-library • persistence-db-configuration-tool • persistence-health-manager • persistence-common-object	persistence mailing list	PCL JIRA, PAS JIRA	Current as of 🗓05 Sep 2016 • @ Guy Sagnes • @ Ingo Huerner
Common API C (CAPIC)	Common API C	• CAPIC Proof of Concept	GENIVI IPC mailing list	CAPIC JIRA	Current as of 🗓02 Feb 2016

Migration

As GENIVI moves to a self-supporting infrastructure it allows GENIVI to move more quickly

There are bumps in the road during the migration, but we've become a lot more stable and endeavor to have communicate clear expectations about the abvailability of GENIVI services.

More migration on the way;
Gitweb (self-hosted) → GitHub 99% complete
Bugzilla → JIRA   80% complete
Sympa ML → Mailman   5% complete
Drupal → Confluence   95% complete
Go.CD → New host   75% complete

GENIVI IT also responsible for LDAP, email server, DNS, racking new machines, document server, etc.

== Working on the code & contribution

.First get the code from the git:
    git clone

.Get an overview of all branches:
    git branch

.Switch to the branch you want to work on (see versioning scheme, the master is the feature branch) and verify that it has switched (* changed)
    git checkout <your branch>
    git branch

.Best practice is to create a local branch based on the current branch:
    git branch working_branch

Start working, best practice is to commit smaller, compilable peaced during the work that makes it easier to
handle later on.

If you want to commit you changes, send them to the audiomanager-dev list, you can create a patch like this:
    git format-patch working_branch <your branch>

This creates a set of patches that are published via the mailing list.The patches will be discussed and then merged & uploaded on the git by the maintainer.

Patches can be accepted either under GENIVI Cla or MPL 2.0 (see section License). Please be sure that the signed-off-by is set correctly. For more, check out http://gerrit.googlecode.com/svn/documentation/2.0/user-signedoffby.html

Communication

→ Important to remember that GENIVI software developers are distributed throughout the world; North America, Europe, Asia

→ Requires a distributed communication channel that is asynchronous, that channel is a mailing list quite often

→ The mailing list serves as a database of searchable discussion that aggregates by subject matter

→ Use the mailing lists!

→ It is in the open, so mailing lists are public

→ English is not everyone's first language and that is totally fine

Tracking bugs

→ GENIVI has a public bug tracker which holds bugs for GENIVI components as well as for the GENIVI Demo platform

→ Easy to sign up to the bug tracker and file bugs, add patches, triage bugs

→ Sometimes it can be good to discuss the issue on the mailing list first to see if it is a known issue or a local issue

Patches

→ Important to have a signed-off-by line on your first commit or patch. This way GENIVI knows the provenance of the code.

→ It is often best to discover the best means to contribute to GENIVI first, some companies prefer the Contribution License Agreement, other companies prefer to contribute via the Open Source model. Both are welcome though the open source development model is often a bit easier in some ways since it is better known and quite straightforward.

→ More information on patches available on the wiki: https://at.projects.genivi.org/wiki/display/PROJ/Community+Office#CommunityOffice-Sendingapatch

GENIVI has an open source software team, a tools team, and an IT team.

➔ Public ssh key from the machine you develop on
➔ Subscription to (at least) genivi-projects
➔ git (there are numerous GUI git clients)
➔ GitHub account (nice to have)
➔ Login to GENIVI public Jira and Wiki (easy to get)
➔ Continuous Integration service (Go.CD)
➔ non-html mail client (nice to have)
➔ FOSSology and Coverity
➔ Gerrit? Source code mirrors? Other tools that you think are missing?

Legacy GENIVI git repository
http://git.projects.genivi.org

GENIVI wiki
https://at.projects.genivi.org/wiki/display/WIK4/Welcome+to+the+GENIVI+Open+Source+Projects+Wiki

GENIVI project pages
https://at.projects.genivi.org/wiki/display/PROJ/Projects+Home

GENIVI bugzilla and public JIRA
http://bugs.genivi.org → https://at.projects.genivi.org/jira/secure/Dashboard.jspa

Checklist for pushing code into the open
https://collab.genivi.org/wiki/display/genivi/Checklist+for+pushing+code+into+the+open

Patch policies
https://at.projects.genivi.org/wiki/display/PROJ/Community+Office#CommunityOffice-Sendingapatch

Q & A