Tizen platform development

Be part of Tizen: Common platform development or community contribs!

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Context
Who am I?

- **FLOSS enthusiast**
  - DIY, Maker Communities
  - Projects:
    - MeeGo/Harmattan, Debian, Qt, gnome, maemo ...
- **Tizen co-maintainer**:
  - Domains: Automotive, Graphics, System Config
  - Worked on hardware configuration too
- **Works for Eurogiciel Open Source Dept**
  - Intel contractor for 3 years
  - Located in France (Brittany)
Agenda

- Tizen:Common
  - Install and use It
- Setup tools
  - Join tizen
  - Sources
  - Build
  - Test
- Contributing
  - Making and sharing changes
- Resources
- Q&A
Tizen:Common
What is Tizen:Common?

• Free and Libre Open Source Linux Distribution:
  – SPDX Licenses + **Open** development model
• Integration point for Tizen profiles
  – Ie: Tizen:IVI based on Tizen:Common (90%)
• Features:
  – Security, Connectivity, Multimedia, AppFw, WebApps
  – Inclusive for shared components: EFL, Qt ...
• Different Flavors:
  – Supported Arch: Intel (ia32, x64) or ARMv7l
  – Supported Devices: pc (i7+) , MinnowMax etc
  – Supported Features: **Wayland** vs x11, MBR vs EFI ...
  – More to come ...
Install and use Tizen:Common

• Download image
  – http://download.tizen.org/releases/daily/tizen/common

• Install :
  – Dump released image to disk
  – Or use installer image (NUC)

• Use :
  – Log in : root:tizen
  – Update, install RPM packages using zypper tool
  – Webapps using pkgcmd *.wgt
Join Tizen

1. Register your account at:
   - https://www.tizen.org/user/register

2. Generate a ssh key and upload public key
   - `ssh-keygen && cat ~/.ssh/*` pub
   - https://review.tizen.org/gerrit/#/settings/ssh-keys
Fetch tizen's sources with git

- Edit ~/.ssh/config:
  - Host review.tizen.org
  - Hostname review.tizen.org
  - IdentityFile ~/.ssh/id_rsa
  - Port 29418
  - User $USER # <=== EDIT WITH YOURS

- Gerrit: projects / List
  https://review.tizen.org/gerrit/#/admin/projects/

- Select one project
  - git clone review.tizen.org:/$project
  - git branch -a
  - git checkout -b tizen
Building sources

- Configure repos: ~/gbs.conf
  - Add new profiles and associated repos if needed
  - We prefer common snapshot x86_64 wayland repos

- Build from sources (git) to binaries (rpm)

```
gbs build \n  -P "profile.tizen_common_x86_64" \n  --arch x86_64

find ~/tmp-GBS-tizen_common_x86_64/local/repos/ -iname "*.rpm"
```
Deploy & Test

• Copy **RPM** files to target
  - `scp *.rpm root@$targethost:/tmp`
  - `sudo zypper in /tmp/*.rpm`

• Or better setup your **own repo** from your host
  - Setup local httpd server (apache's mod_user_dir)
    ```
    url=http://$host/~$user/.../tmp-GBS-tizen_common_x86_64//tizen/x86_64/
    
    zypper ar $host $user # Add your repository
    zypper ref -r $user    # Refresh it
    
    zypper up -r $user     # Upgrade system from it
    zypper in -r $user $package # Or install single package (+deps)
    ```
Contributing
Bug reporting

- Entry point is: http://bugs.tizen.org
  - JIRA bug tracker

- Find or create new bugs
  - Tell version, see /etc/os-release

- Be proactive then ask on mailing lists to attract attention
Fixing problems

• Make changes:
  - Rebuild: gbs build
  - Test: zypper
  - Check: gbs export, git diff

• Make a patch:
  - Mention **context in** commit message:

• Sharing patch
  - https://review.tizen.org/gerrit/#
  - **Improve** it until maintainer merge it

• Expect it to be released in repos and image

```bash
gbs build \
  -P "profile.tizen_common_x86_64" \
  --arch x86_64 \
  --include-all

git commit -sam \
"packaging: fix that Bug-Tizen: TC-42"

git push origin \
  HEAD:refs/for/tizen
```
Resources
Resources

• Entry points
  – https://developer.tizen.org/

• Support
  – http://lists.tizen.org
  – irc://irc.freenode.net/#tizen

• Tools
  – https://source.tizen.org/documentation/reference/git-build-system

• More :
  – http://www.slideshare.net/rzrfreefr/tizen-upstreamcooptdc2014pcoval
Thanks

• Tizen Community
  - Inside: Intel, Samsung, Tizen Association
  - Outside: Qt, mono-for-tizen, tizen-sunxi
  - Others: MeeGo, TizenExperts ...

• Sponsorship
  - Linux Foundation
  - Eurogiciel

• You and all FLOSS developers
Q & A
Ask me online too!
Open source development and integration:
- Several Maintainers for tizen.org
- Embedded systems for real-time multimedia:
  - Widi/Miracast stack,
  - Wayland/Weston,
  - Webkit2 browser with HW acceleration
  - Linux base port
- Application: HTML5/CSS3, jquery, jqmobi, Cordova

Location: Brittany - France
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