

# Tizen 3.0 Overview & Roadmap

Sunil Saxena

**TIZEN™**  
**DEVELOPER  
CONFERENCE**  
2014  
**SAN FRANCISCO**



# Agenda:

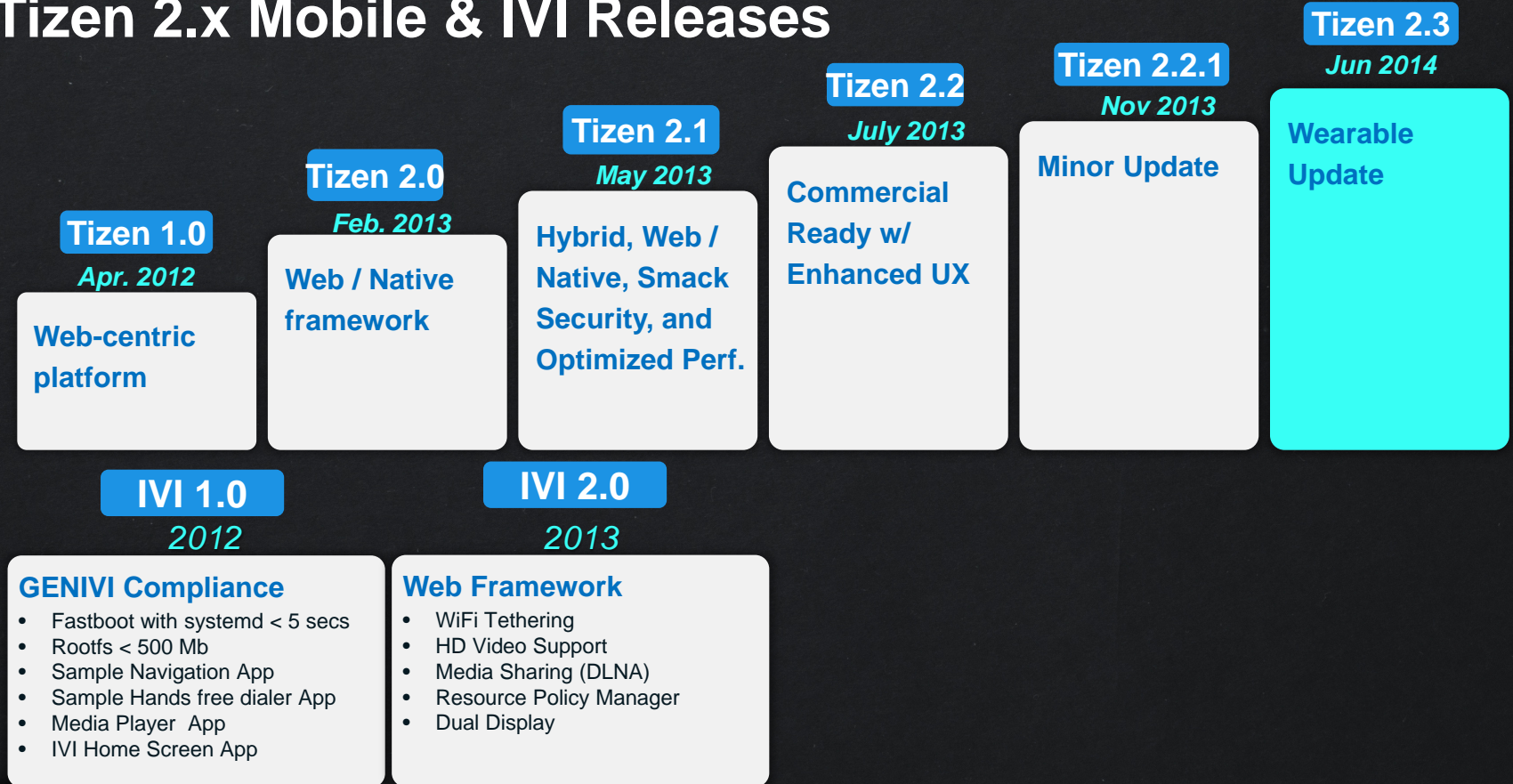
- Tizen 2.x
- Tizen 3.0
- Demos



# What is Tizen 2.x?

- **Tizen 2.x Mobile source code continues to be productized**
- **Product releases are Uploaded to tizen.org at milestones**
- **Tizen 2.3 alpha source code and SDK for Wearable was just released**

# Tizen 2.x Mobile & IVI Releases



# What is Tizen 3.0?

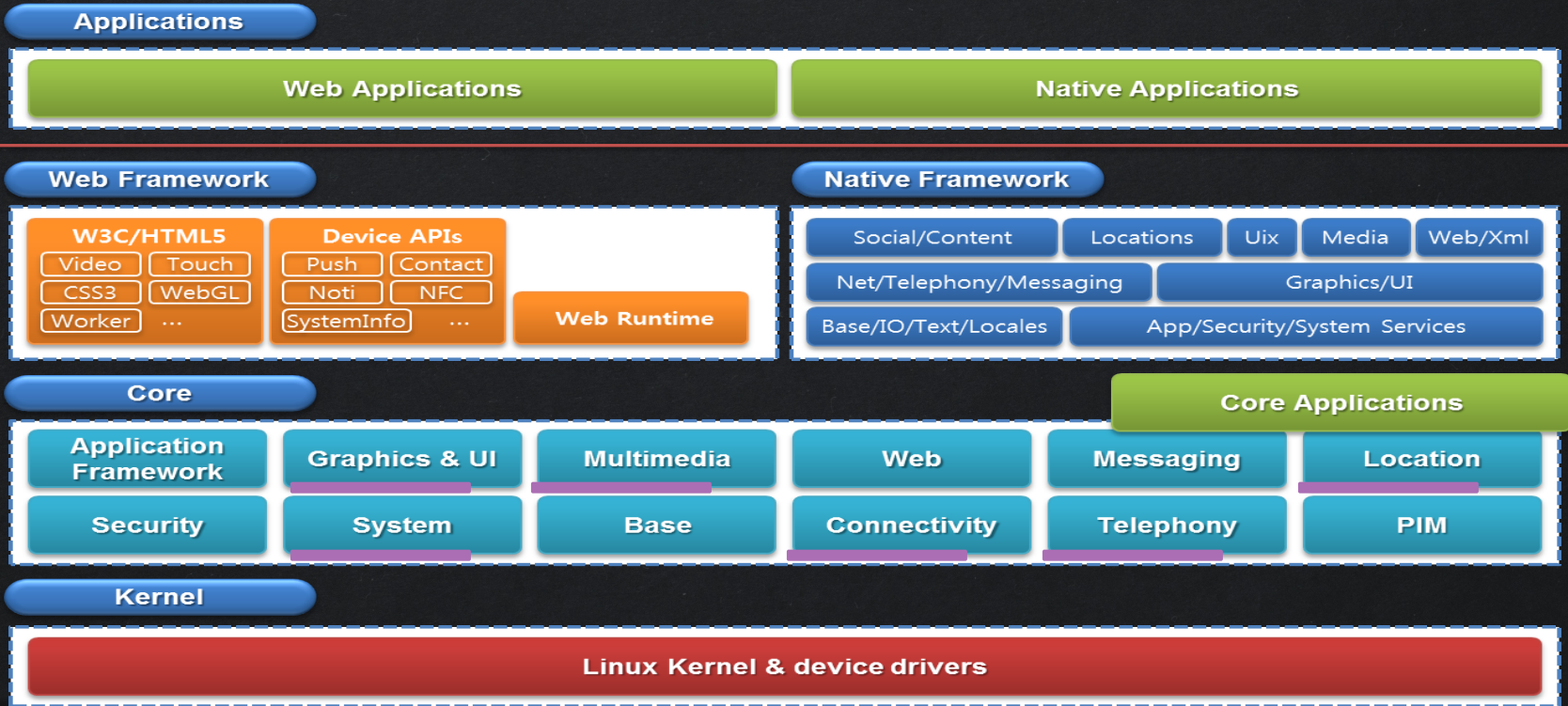




# Tizen 3.0 @tizen.org

- **All development happens at tizen.org**
  - Most of the code is common and close to upstream development
- **Moved from in-out to out-in development**
- **Tizen IVI continues to be developed in tizen.org**

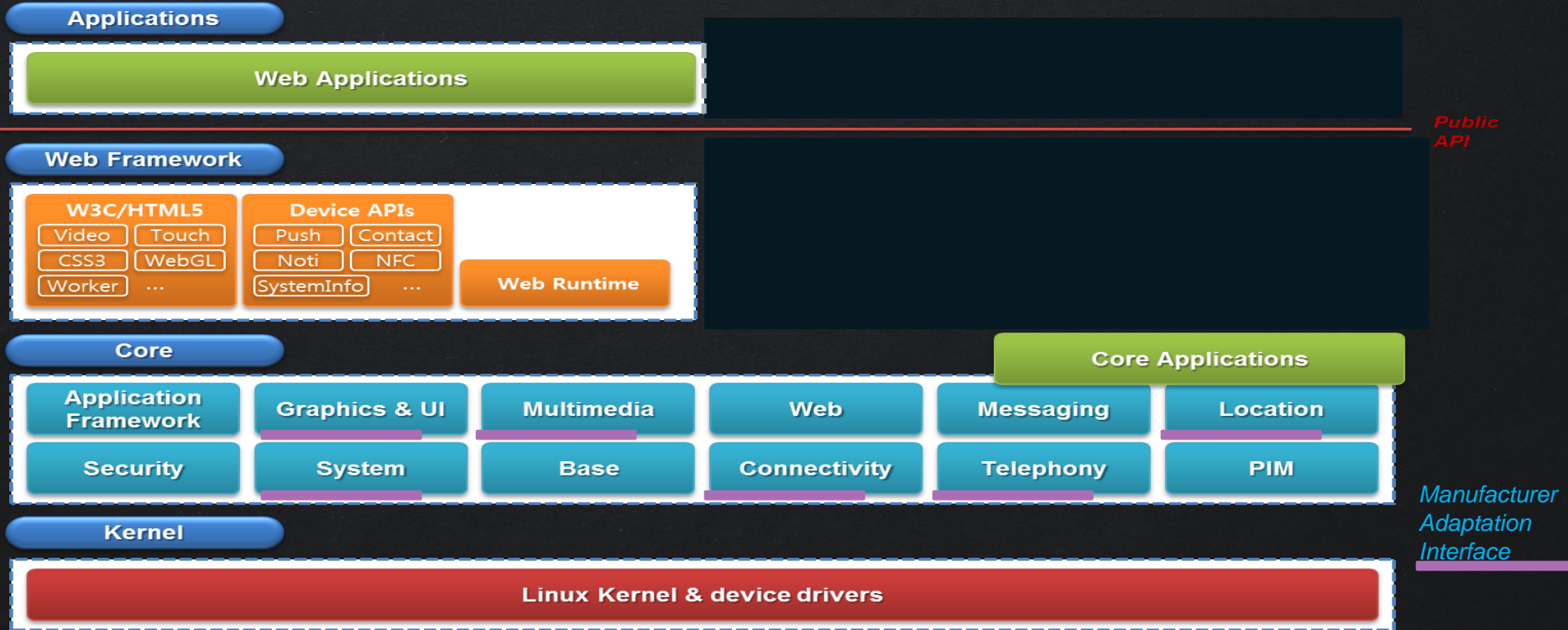
# Tizen Architecture stays the same – Full (Mobile)



Public API

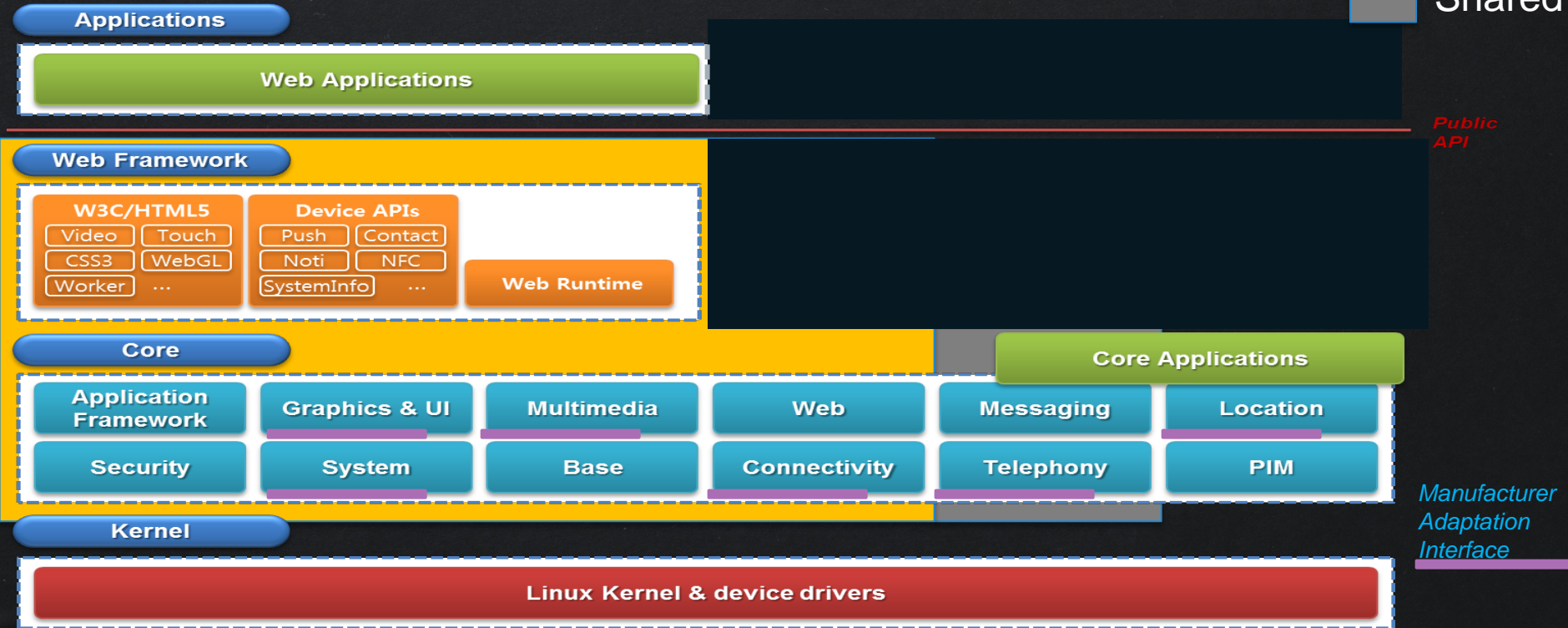
Manufacturer Adaptation Interface

# Tizen Architecture Overview – Light (Common)





# Tizen Architecture Overview – Common



# Architecture Overview (Automotive)

## Applications

Web Applications

Public  
API

## Web Framework

### W3C/HTML5

Video

CSS3

Worker

Touch

WebGL

Automotive

### Device APIs

BT

LBS

Msg

Call

NFC

...

Web Runtime (configured for IVI)

## Core

Application  
Framework

Graphics & UI

Multimedia

Web

Messaging

Location

IVI  
(Murphy, AMB,  
Etc.)

Security

System

Base

Connectivity

Telephony

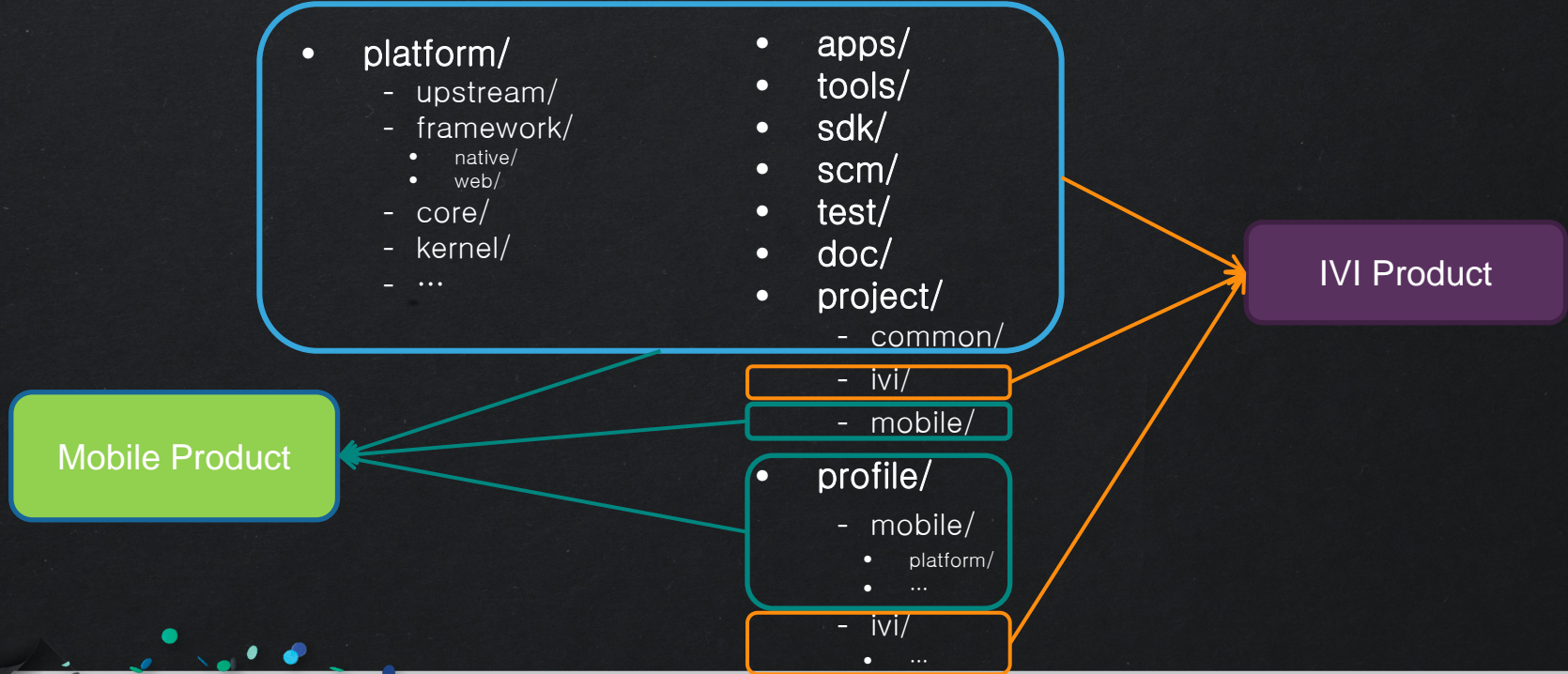
PIM

## Kernel

Linux Kernel & device drivers

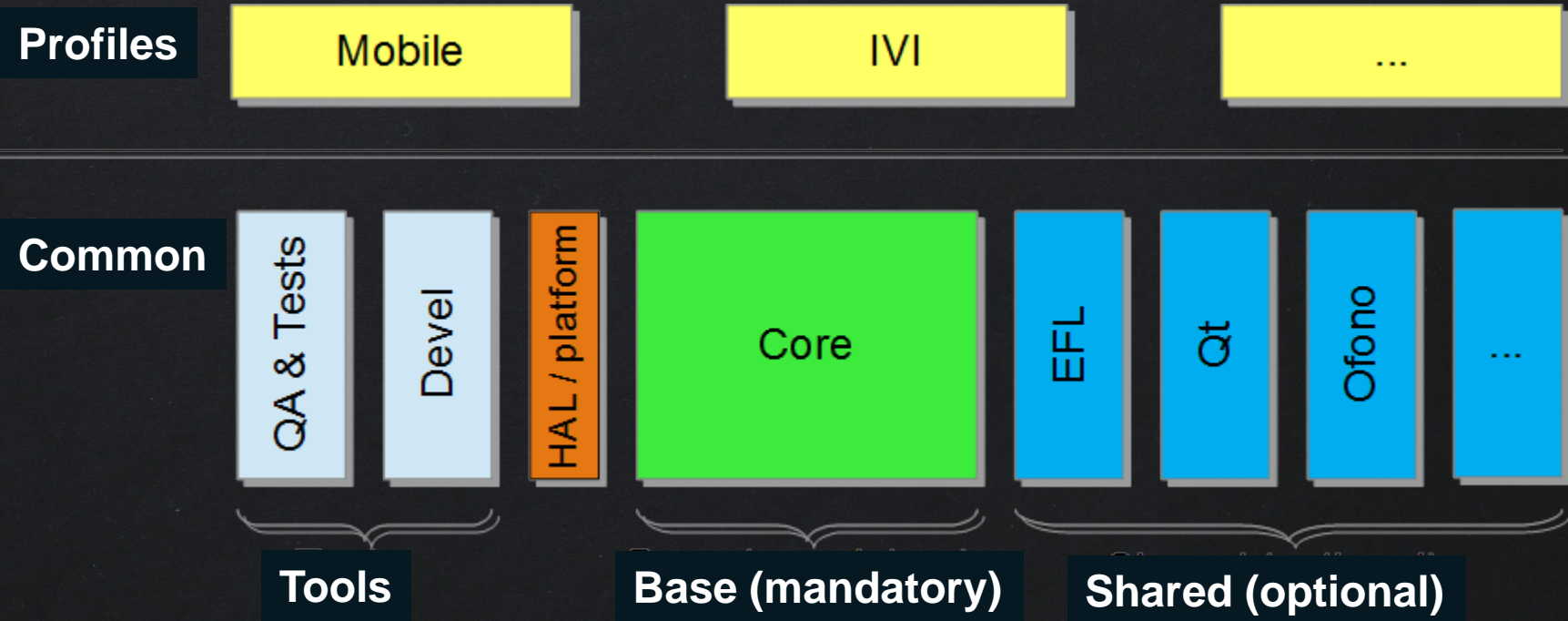
# Tizen 3.0

- Configurable and multi-product support with one code base





# How to Create a Tizen 3.0 Profile



# Tizen 3.0 Common *Source/build*

## Products

## Devices

### Common

3D UI

Multi-User

64-bit

KDBUS

Buxton

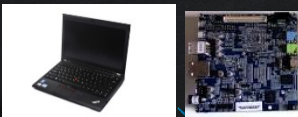
Blink/Crosswalk

Wayland

SMACK

...

Tizen Base OS



+

Native

Mobile

NFC

Enlightment

Security Container

Telephony

=



Weston

Automotive

AMB

GENIVI Layer Manager

Murphy Audio Manager

=



TV

=



Watch

=



Refrigerator

=



# Common is integration / development / test platform

- **Share source for common features across products**
- **Test on reference devices**
- **Daily Images available, Quarterly Milestone release**
  - Images for x86 and ARM
  - Products will pick a Quarterly Common release and add product enhancements for its releases



# Tizen 3.0 Repositories

- **Classification for repositories**

- <https://review.tizen.org/gerrit/#/admin/projects/scm/meta/git>
- Viewer: <https://panel.tizen.org/app/packagedb/>
- Domains
- Subdomain
- Profile
- Maintainers
- Common
- [https://wiki.tizen.org/wiki/Common\\_Packages](https://wiki.tizen.org/wiki/Common_Packages)

[Code Review](#) / [scm](#) / [meta](#) / [git.git](#) / blob

[summary](#) | [shortlog](#) | [log](#) | [commit](#) | [commitdiff](#) | [review](#) | [tree](#)  
[history](#) | [raw](#) | [HEAD](#)

Fix remaining missing domains

[\[scm/meta/git.git\]](#) / [README.txt](#)

```
1 Format of the files with metadata
2 -----
3
4
5 General formatting rules
6 -----
7
8 - Each file consists of one or more sections
9 - Each section separated by one or more empty lines
10 - Each line in section starts with capital letter (key), colon and space(s)
11 - Lines without key element are ignored
12
13
14 Git tree project object
15 -----
16
17 Filename: "git-trees"
18 I: [mandatory] tree path
19 D: [mandatory] Domain
20 O: [optional] Description
21 P: [optional] Profile (Mobile,IVI,...)
22 S: [optional] Status (Maintained, Obsoleted, ...)
23 M: [optional] Maintainer(s)
24 I: [optional] Integrator(s)
25 R: [optional] Reviewers(s)
26 B: [optional] Branch(es)
27 L: [optional] License(s)
28 H: [optional] Web site or web page related to project
29 U: [optional] Upstream URL
30 V: [optional] Upstream version control system URL
31 C: [optional] Comments
32
33
34 Domain object
35 -----
36
37 Filename: "domains"
38 D: [mandatory] Domain
39 A: [mandatory] Architect(s)
40 P: [optional] Profile (Mobile,IVI,...)
41 O: [optional] Description
42 S: [optional] Status (Maintained, Obsoleted, ...)
43 M: [optional] Maintainer(s)
```

# Tizen 3.0 Repositories contd.

Domains	Count of Tizen 3 Git Repos (Missing Subdomain)
App Framework	34
Applications	145
Automotive	56(7)
Base	153(77)
Graphics & UI Framework	222(3)
Location	11
Messaging	6
Mobile	31
Multimedia	76
Native API	38
Network & Connectivity	52
Platform Development	143(5)
SDK	126(1)
Security	41
Social & Content	9
System	96(64)
Telephony	18
Web Framework	14
Missing Domain	26(26)
<b>Grand Total</b>	<b>1297(183)</b>



# Tizen 3.0 JIRA

- <https://bugs.tizen.org/jira/browse/TC> has been created to track bugs for Tizen 3.0 bugs for Common and all profile releases
- [https://wiki.tizen.org/wiki/Tizen\\_3.0\\_Bug\\_Tracking](https://wiki.tizen.org/wiki/Tizen_3.0_Bug_Tracking) documents all the configuration, processes and work flow
- IVI bugs are being migrated into TC JIRA
- Tizen 3.0 Features (<https://bugs.tizen.org/jira/browse/PTF>) and Tizen IVI Features are planned to be migrated into TC JIRA



# Hardware for testing Common

- **i586:**
  - Intel NUC Atom (E38xx)
- **x86\_64:**
  - Intel NUC Haswell (core i5)
  - Lenovo x230 IvyBridge (core i5)
  - VTC 1010-IVI Intel Atom/BayTrail (847E)
- **ARM:**
  - Odroid U3
- **Images**
  - For IA32 Wayland: <http://download.tizen.org/snapshots/tizen/common/common-wayland-ia32/>
  - For ARM Wayland: <http://download.tizen.org/snapshots/tizen/common/common-wayland-arm/>
  - For Emulator: <http://download.tizen.org/snapshots/tizen/common/common-wayland-emulator32/>
  - For X86\_64 Wayland: [http://download.tizen.org/snapshots/tizen/common/common-wayland-x86\\_64/](http://download.tizen.org/snapshots/tizen/common/common-wayland-x86_64/)

# Tizen 3.0 IVI

- **Tizen IVI has evolved from:**
  - Customer requirements
  - GENIVI
  - AGL
- **Tizen IVI 3.0 M2 was released in April'2014**
  - <https://wiki.tizen.org/wiki/IVI>
- **Next release will be based on Tizen 3.0 common**
- **Tizen IVI 3.0 M2 Feature Highlight**
  - BT - Serial Port Profile 1.1, AVRCP, A2DP, HFP 1.6, MAP
  - Web APIs (Vehicle Info, DLNA, Device, Speech)
  - Smack based Security
  - Apps2App Comms (MessagePort)
  - Media Player w/BT and DLNA
  - Dialer App w/BT, TTS, STT
  - NFC BT/WiFi Pairing
  - WebGL, Video and CSS HW accel
  - PIM and sync (including Google contacts)
  - Smartdevicelink
  - ...



# Tizen 3.0 Common Feature Highlight

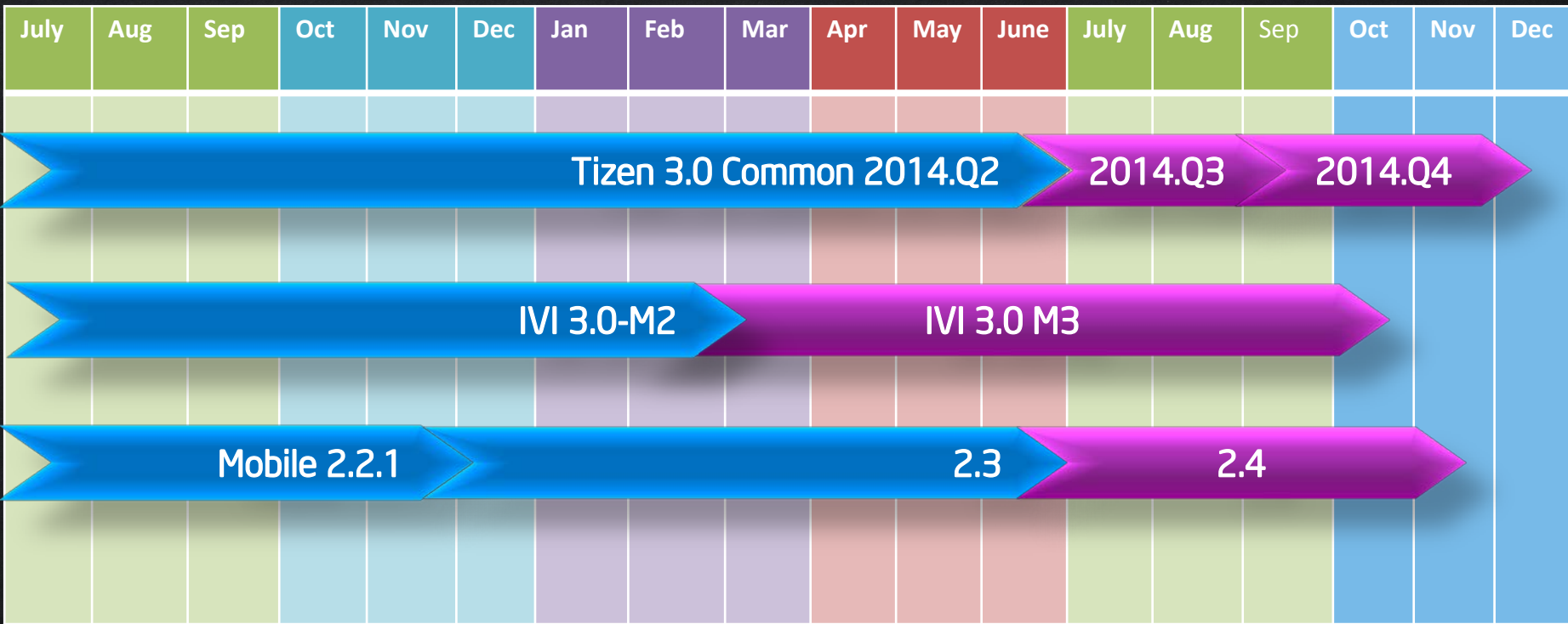
- **Key Features 2014-Q2 release:**
  - Multi-user
  - SMACK – 3 domain security
  - Wayland, Enlightenment Window Manager
  - Crosswalk / BLINK
  - 64-bit IA / ARM
  - New Configuration System – BUXTON
  - KDBUS
  - 3D UI & Rendering Engine
  - New Bluetooth Framework
  - WiFi Framework to combine WiFi DirectManager, Mobile AP-agent and net-config



# Tizen Roadmaps

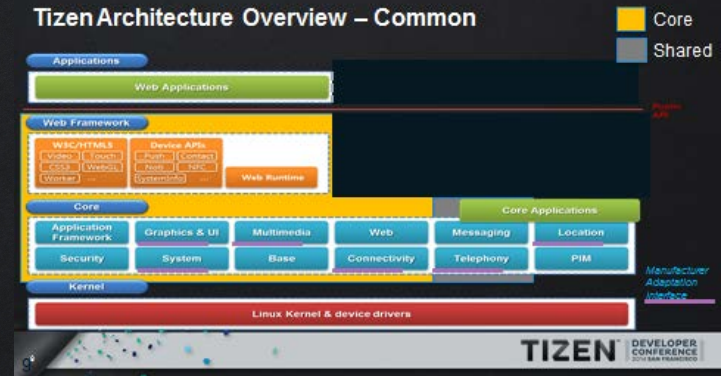
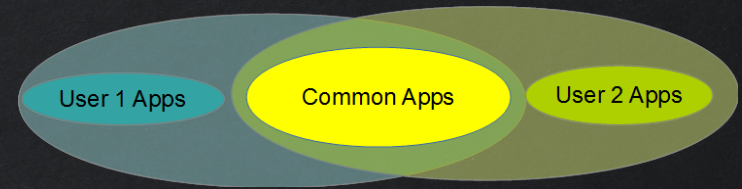
2013

2014



# Tizen 3.0 Talks

- **Tizen 3.0 Multi-User Features**
  - Baptiste Durand
- **Tizen:Common**
  - Stéphane Desneux
- **Secure your apps with Artichokes**
  - Casey Schaufler, Tomasz Swierczek



# Demos





Questions?



Thank you

