

BINSA - YOUR SWISS ARMY APP

BINSA

Motivation

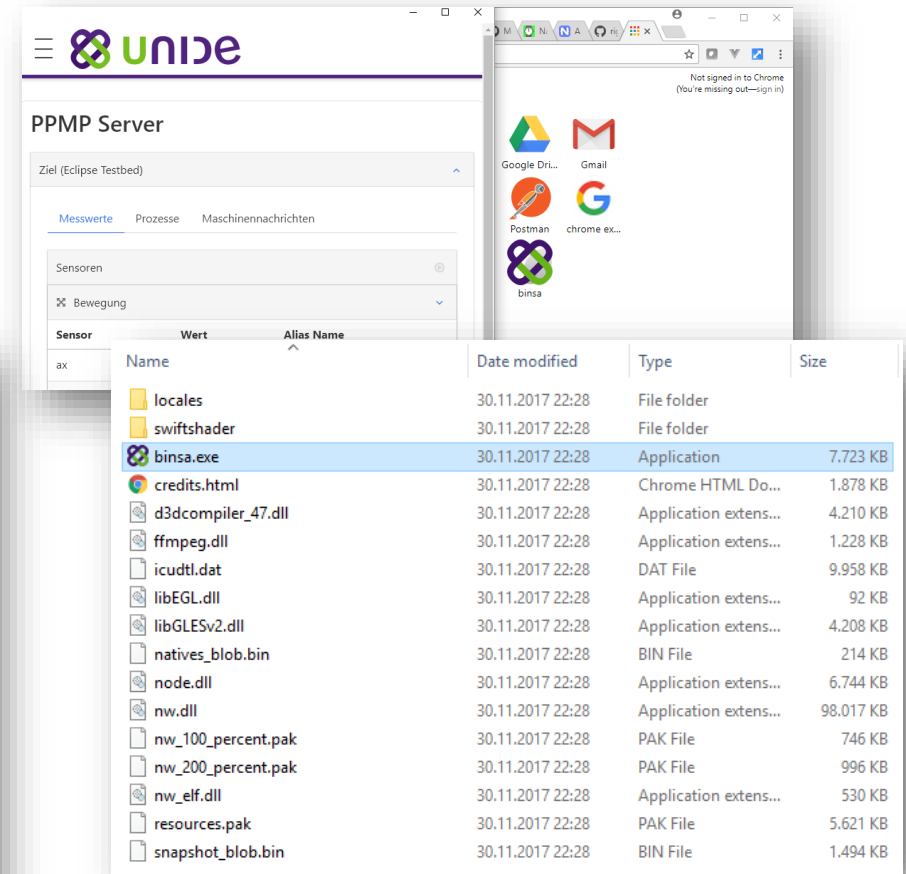
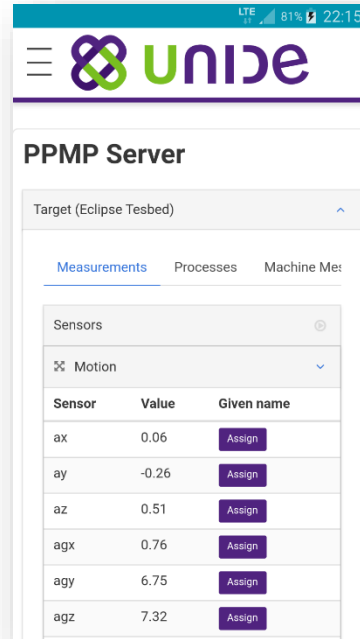
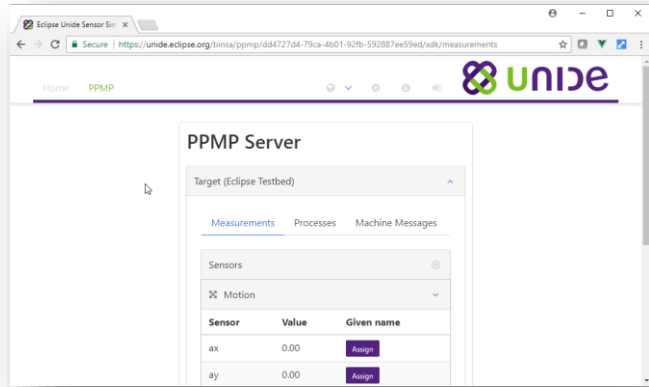
- ▶ Learn & evaluate cutting edge web technology
- ▶ Provide a tool to promote PPMP / Eclipse Unide
- ▶ Contribute useful artifact for PPM ecosystem
- ▶ Easy installation / use
- ▶ Comply with Eclipse & Bosch guidelines



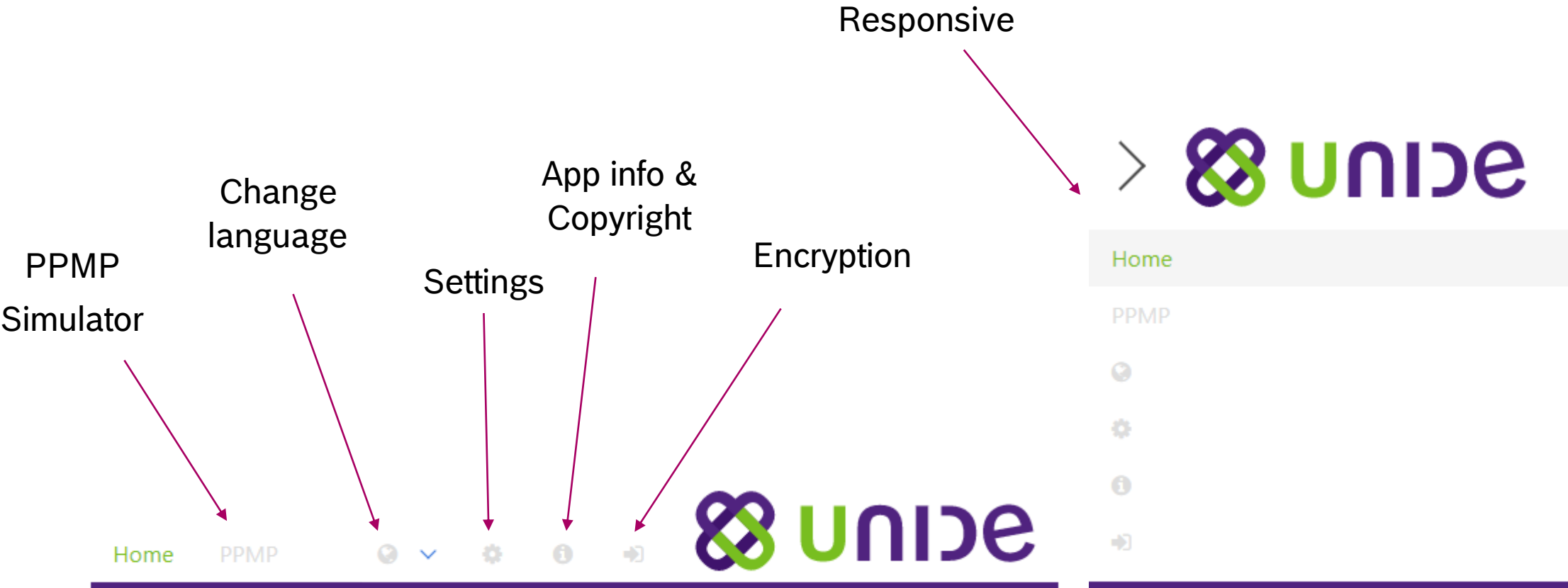
OVERVIEW

BINSA Platforms

- ▶ [Progressive Webapp](#) (last 2 versions of browsers, IE11+)
- ▶ Native Win32/64, Linux32/64, MacOS32/64 executable
- ▶ Chrome WebApp
- ▶ Native Android app
- ▶ Same look & feel on every platform!



BINSA User Interface



BINSA Measurement UI

Connection &
Device settings

Available
sensors

PPMP Server

Target ▼

Configuration*: Eclipse Server ▼

Device Id*: handson ⊞

Op. Status:

Measurements Processes Machine Messages

Sensors 2 selected ⊞

- Motion ⬆
- Orientation ⬇

Sensor	Value	Given name
lr	23.67	Assign
fb	42.63	Assign
dir	-79.21	orientation-dir ✖

- Position ⬆
- Battery 1 selected ⬆

Scan QR Code

Send with a frequency of (ms)

Sampling frequency of (ms)

Cancel Send

Start / stop
sending

Name & activate
sensor

BINSA Process UI

The screenshot shows the 'Processes' tab in the BINSA interface. At the top, there are three tabs: 'Measurements', 'Processes' (selected), and 'Machine Messages'. Below the tabs is a red control bar with a white square in the center. Below this is a white bar with a play/pause icon. The main content area contains four summary cards: 'Start Time: 12/08/17, 1:12:25 PM', 'Duration: 35.302', 'Total Measurements: 76', and 'Phases: 3'. At the bottom is a 'Details' section with a dropdown arrow, containing four fields: 'result: OK', 'externalProcessId: 123', 'program.id: 456', and 'program.name: Tumble dry'. Annotations with arrows point to the red bar, the play/pause icon, the 'Start Time' card, and the 'result' field.

Measurements Processes Machine Messages

Start recording / stop & send

Skip phases

Basic recording information

Additional detail (set before stop/send)

Start Time:	12/08/17, 1:12:25 PM	Duration:	35.302
Total Measurements:	76	Phases:	3

Details

result:	OK
externalProcessId:	123
program.id:	456
program.name:	Tumble dry

BINSA Configuration UI

Indicate status of configuration object

Filter message by attribute

Preconfigure PPMP messages

The screenshot shows the 'Configurations (anonymous)' page. At the top, there is a green '+-' button. Below it, a configuration for 'PPMP Server' is shown with a 'changed' status (green button) and an 'error' status (red button). The configuration details include: Name: Eclipse Server, URL: https://unide.eclipse.org:443. Under 'Preconfigured messages', there is a filter set to 'code' with 'Alarm' selected. The message details are: code: Alarm, title: ALARM, description: optional, origin: optional, hint: optional, type: (dropdown), severity: (dropdown), and color: (red bar). A 'Delete' button is at the bottom right of the message form. At the bottom of the page, there are 'Cancel' and 'Save' buttons, and a red message: 'Document update conflict (409 - conflict)'. The footer contains 'Preferences (#preferences)' and the Bosch logo.

Encrypted for

Add a new configuration section of type

Add a preconfigured message

Save / cancel

Versioning / Conflict detection

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Login UI: Security by design

- ▶ Creates & loads the configuration store “User”
- ▶ Encrypts the configuration store aes-gcm/aes-256
- ▶ Configuration are versioned
- ▶ Collision detection built in
- ▶ Configuration store could be connected to central remote db ([Apache couchdb](#))

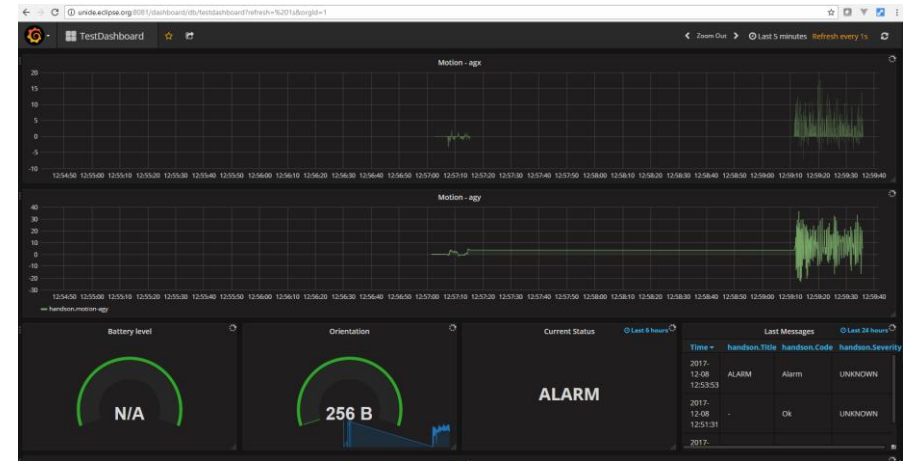


HANDS-ON DEMO

BINSA

INSTALLATION of PWA

- ▶ On mobile: go to unide.eclipse.org/binsa
 - ▶ Possible to “add to homescreen”
- ▶ Configure Eclipse Server: <https://unide.eclipse.org>
device: “handson”
- ▶ On desktop: go to
“testdashboard” on <http://unide.eclipse.org:8081> (handson/handson)

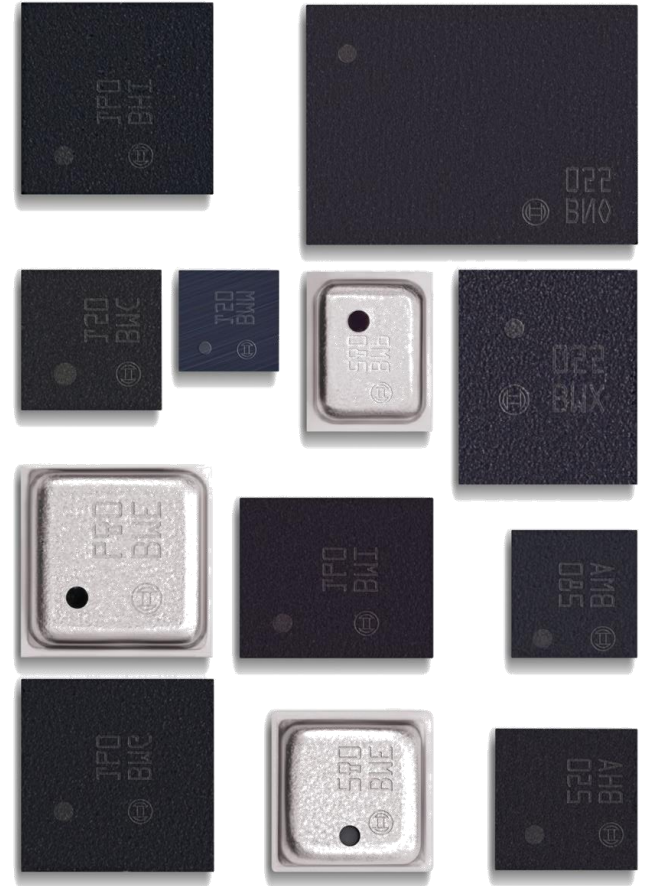


TECHNOLOGY

BINSA Sensors

- ▶ Motion
- ▶ Orientation
- ▶ Battery
- ▶ Geolocation
- ▶ CPU / RAM (exe / chrome app)
- ▶ Camera / Microphone
- ▶ Bluetooth
- ▶ Javascript function (random, sinus etc.), mouse / touch
- ▶ Generic Sensor API currently [W3C working draft](#) ([demo](#))

- ▶ See [whatwebcando.today](#), [caniuse.com](#)

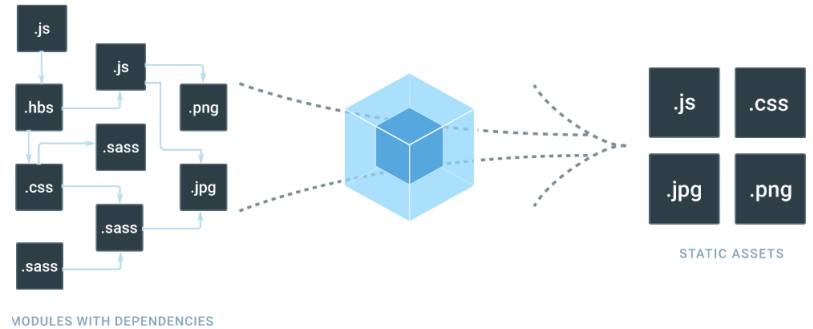


BINSA

Progressive Webapp

- ▶ [Vue.js](#) & ecosystem for reactive UI
- ▶ [Bulma](#) / Sass for flexbox design
- ▶ [PouchDB](#) & ecosystem as storage system
- ▶ ES6 transpiled with [babel.js](#) (last 2 ver. of browsers, IE11+)
- ▶ Uses webworker to cache minified files
- ▶ HTML5 History API for manipulating the location
- ▶ [Webpack](#) for developing / bundling / building

- ▶ Hosted with http2 / gzipped / ssl (letsencrypt.org)



BABEL  **BULMA**

 pouchdb 

BINSA

Page speed is important!

↓ | unide.eclipse.org 30.11.2017, 15:05:48 ▼ ⓧ

100

Progressive Web App

76

Performance

89

Accessibility

100

Best Practices