Introduction meetup

Next events:
- Our next event normally June 18
- https://expertday.forxamarin.com/ October 2
- Madn: build recap sessie met maddy ledger June 4

House rules

- Introduction Michiel
- Experience built-up over past year / 1.5 year – brief version on transition story / background
- goal is to give an overview of how to get started - touch on some interesting points and give some feedback about what worked/didn't work for us

Tizen Wearable 101

• Demo

- emulator showoff
- power button
- back button
- scroll wheel
- navigating through the ui
- opening an app – alarm: show the dots for pages + the save button
- closing an app
- widgets

Tizen Wearable 101 – Watch Faces

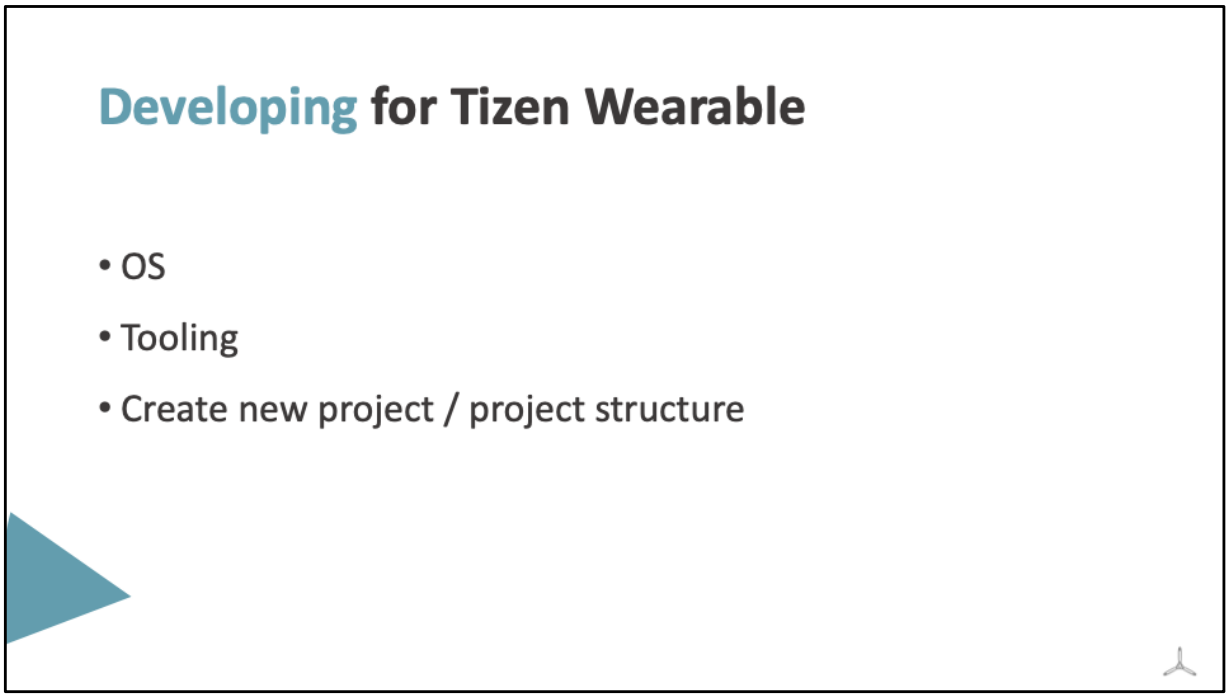
- watch face - ie showing the hour
- single screen application, no pages
- will go fairly fast over this as not that much experience
- Galaxy Watch Studio: https://developer.samsung.com/galaxy-watch-design/studio/overview.html (very short demo)
- Possible with Xamarin Forms - will be shown later on

Tizen Wearable 101 – Widget Applications

- Working sample exists in the CircularUI project to get this done in Forms
- No official documentation that this is supported currently in .NET
- => offers a widget view on data from your application which can be shown on supported places like the home screen and lock screen

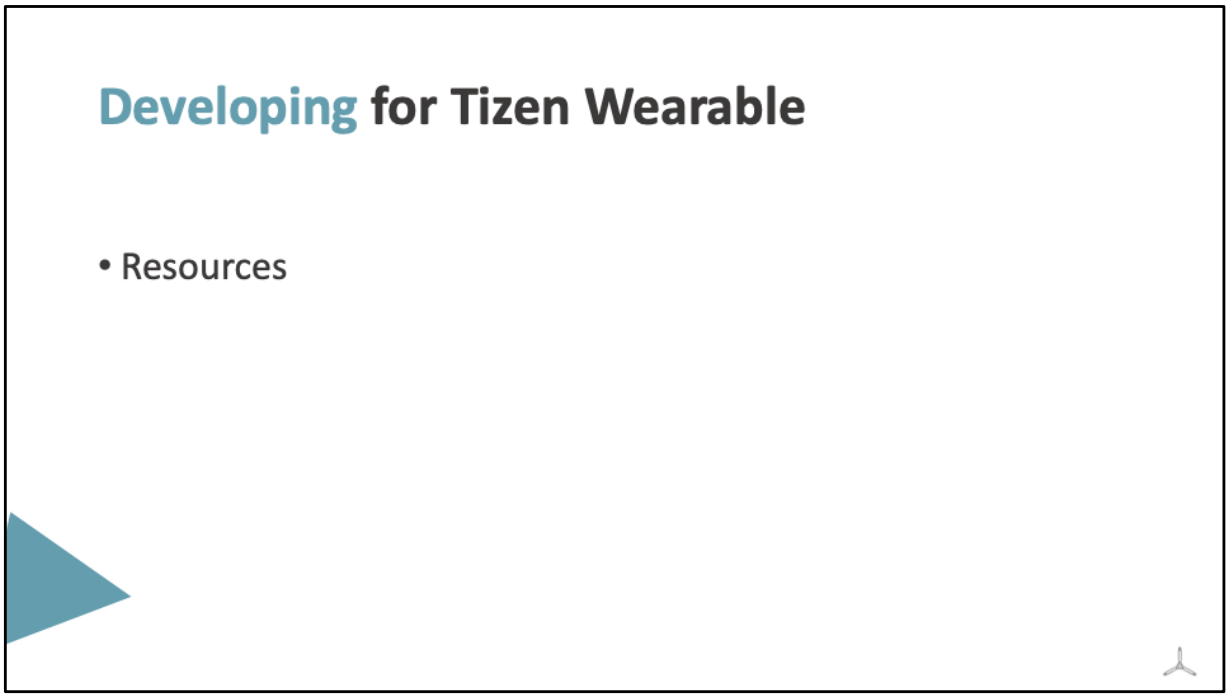
Tizen Wearable 101 – Watch Applications

- standalone 'full-fleshed' application => doesn't live as a watchface, user has to open the application to interact with it (or background services/notifications need to work on it)
- more complex possibilities UI-wise and navigation wise
- not bundled with a phone application - can be fully standalone / can be linked to a phone app
- Standalone vs Companion



- Windows vs macOS
- Visual Studio / VSCode – extensions
- Tizen Studio first or not? => I always had Tizen Studio installed already but technically not required / SDK can be downloaded by vs 4 mac tooling
- Show VS bits: additional toolbar in vs4mac: device manager / package manager / emulator manager / certificate manager
- Scaffolding projects (defaults)
- Project structure
    - standalone project (or actually any project): structure
    - lib: external library files
    - res:resource files used only by this application: images / localization / ...
    - shared: resource files to be shared with other applications
    - App.cs: default forms application - started up from tizen app
    - MainPage.xaml: initial page - CirclePage - opened from App.cs
    - tizen-manifest.xml: name, version, permissions, target, icon
    - TizenWearableXamlApp.cs: entrypoint of app, loads forms
- Very brief Watchface demo
- Demo Wearable xaml app
    - => default forms bits: circle bits technically not required (although they

should be used for the cool functionality they bring)
- Navigation
- GestureRecognizers
- Lists / default controls
- Circularui start
- rotaryfocusobject



- Excellent documentation
- Creating an account for the forums not that straightforward

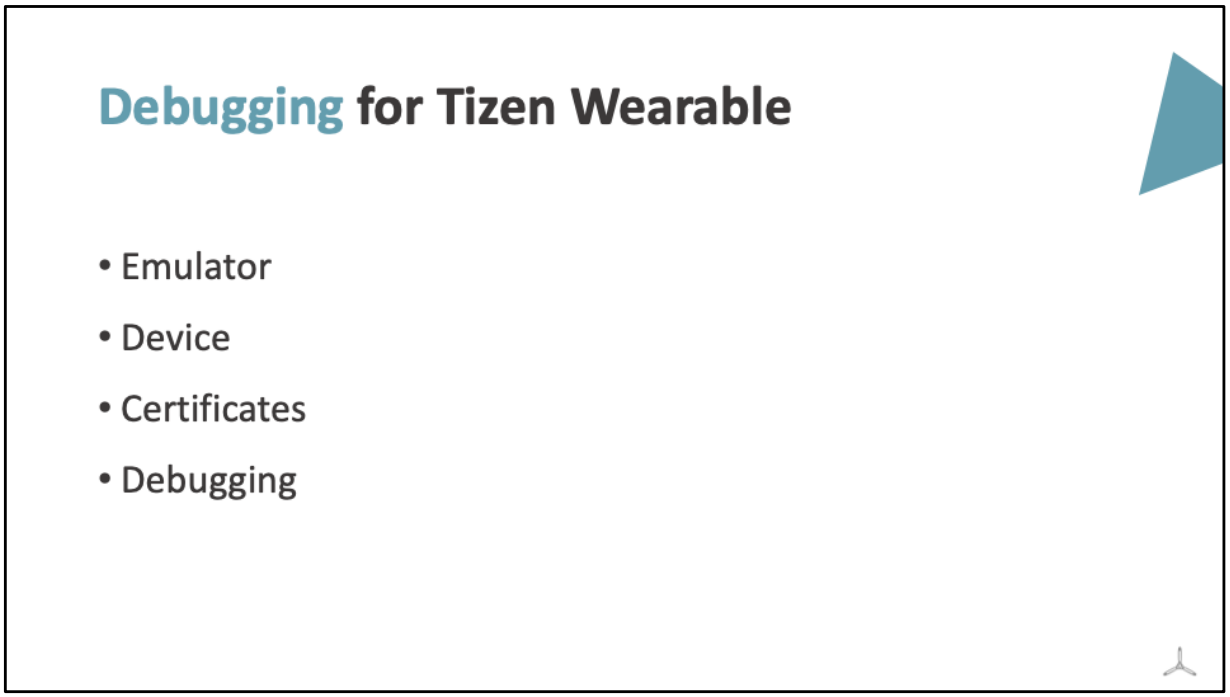
- Design docs: https://developer.samsung.com/galaxy-watch-design/principle.html
- Watch specific docs: https://developer.samsung.com/galaxy-watch-develop
- Tizen Development docs: https://docs.tizen.org/application/dotnet/index

- Note that there are some different .net ways for UI elements + that documentation isn't necessarily specific for wearable

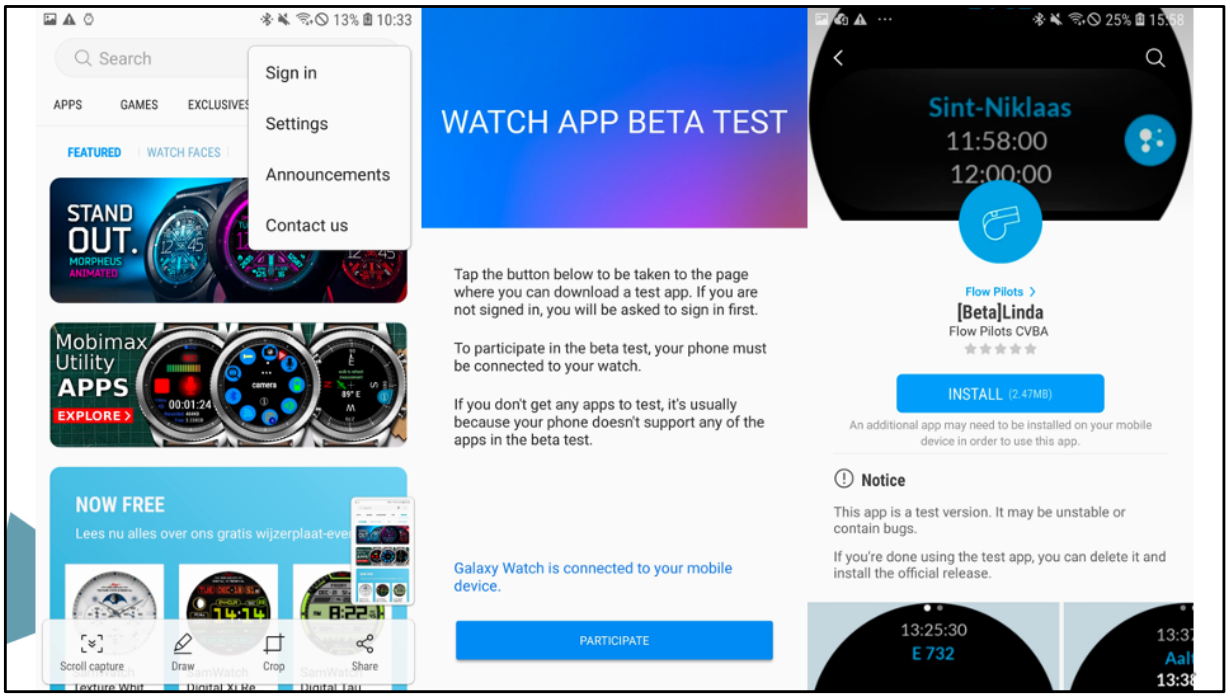
- CircularUI: Tizen Xamarin Forms UI elements - https://github.com/Samsung/Tizen.CircularUI
    - Demo circularUI elements / demo widgets

- TizenFX: Tizen API bindings - https://github.com/Samsung/TizenFX

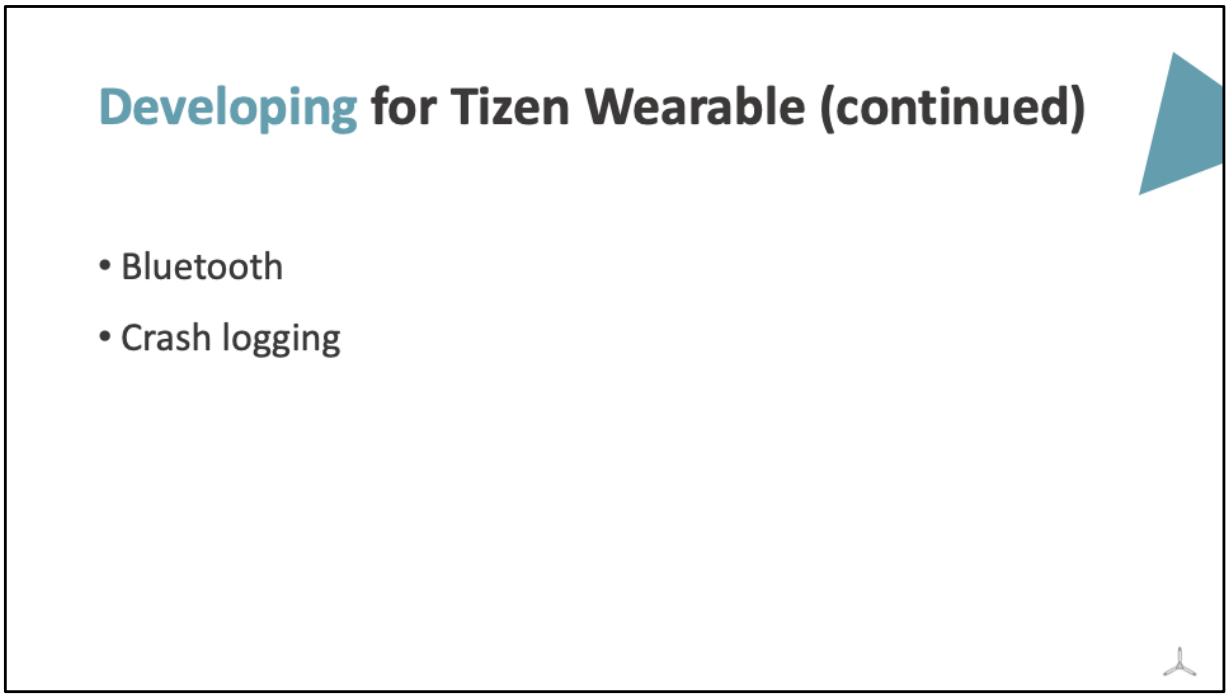
- Nuget: https://www.nuget.org/profiles/tizen



- Emulator
  - virtualization required so not in virtual machine - stuck in boot loop
  - Final testing definitely on device necessary – technical complications + sometimes UI bugs
- Device
  - setting up / connecting / issues
  - device manager vs sdb
- certificates
- debugging (breakpoints / output log / ...)
  - Sdb: show on both device manager and with commandline (visual studio)
  - sdb dlog DOTNET_LAUNCHER
  - Breakpoints: as expected
  - Immediate/editing of values



- Build pipeline
- Installing a tpk file with tooling => hard to do / certificate issues / testers need tooling
- Samsung Galaxy Store - Beta program



- Bluetooth (SAP)
  - started out with Samsung Accessory Protocol: according to documentation, supported on android and tizen, simple to start with, allows setting up to test in emulator
  - https://developer.samsung.com/galaxy-watch-develop/creating-your-first-app/net-companion/use-sap.html
  - https://www.nuget.org/packages/Samsung.Sap/
  - Splits messages up for you, connections very easily handled, low memory/battery impact
- Bluetooth (custom)
  - works with multiple profiles, full control, more platforms possible, more work to manage properly
- Crashlogging
  - Not default / we're currently interecepting .net issues and transferring them over bluetooth
- Issues we're still struggling with

- Notifications
- Alarms

- Media
- Location
- Input
- Settings

- Constantly new bits as well – ML / NLP / …

Question Time

Michiel Sioen
CTO

michiel.sioen@flowpilots.com
@MichielSioen
www.michielsioen.be
www.flowpilots.com

Flow Pilots