

# Adaptation des IHMs

## Unity 3D vs Polymer



# Unity 3D



# Unity 3D - Solution cross-platforms !

- ★ Leader de l'industrie du jeu vidéo
- ★ Rapidité de prototypage (abstraction des calculs de physiques 3D...)
- ★ 1 code unique (C# ou JS) pour toutes ces plateformes :



# Unity 3D - Cross-platforms oui mais...

Oups, on a essayé sur chrome...

Failed to update Unity  
Error details

Unity

Sorry, Chrome can't run this app

Unity Web Player.  
Install now!

GameLoad - play Unity Games

GameLoad a cessé de fonctionner

GameLoad

AVERTISSEMENT Ces fonctionnalités expérimentales peuvent mordre.

chercher une solution au problème en ligne.

trouver une solution en ligne et fermer le programme

programme

problème

Check the video tutorial

If "PLAY" button is not working, try to reinstall GameLoad program.

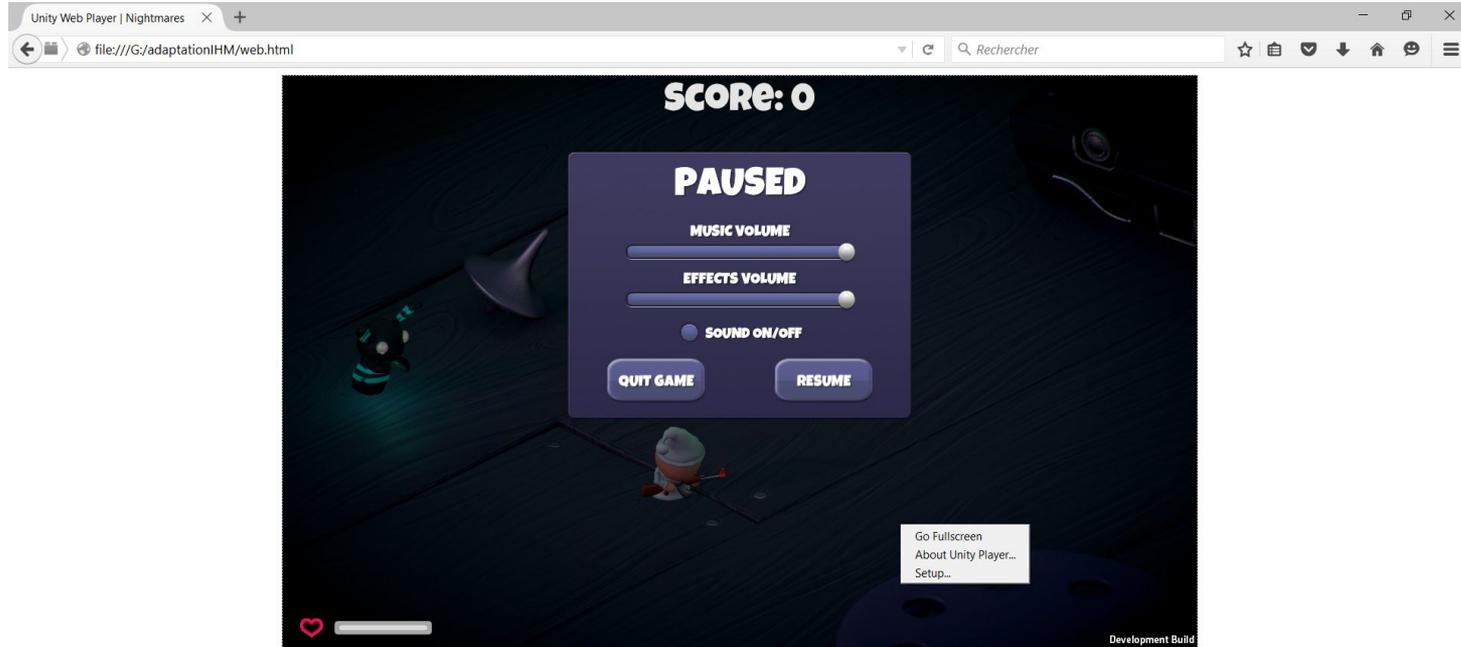
# Unity 3D - Cross-platforms oui mais...

Oups, on a essayé sur Ubuntu...

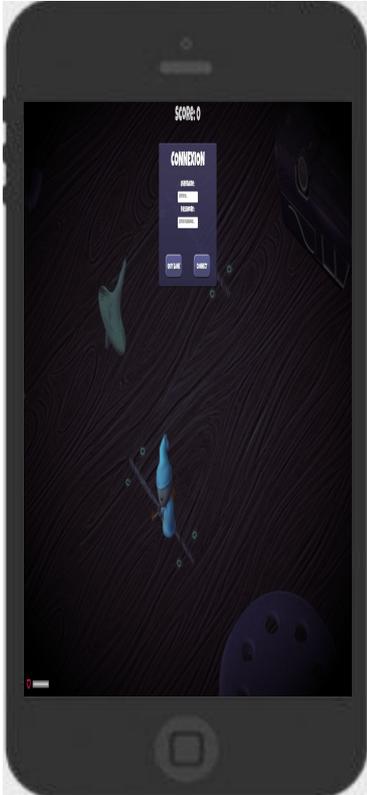


# Unity 3D - Cross-platforms, ah !

Merci firefox !



# Unity 3D - Cross-platforms, sur mobile ?



Le jeu se lance  $\neq$  Le jeu est utilisable

- ★ mauvaise résolution
- ★ écriture illisible
- ★ mais surtout on ne peut pas se déplacer (ZQSD)



# Unity 3D - Cross-platforms, sur mobile ?



- ★ Revoir le gameplay
- ★ Input souris => Input touch
- ★ Input keyboard => boutons, joystick etc.
- ★ Joysticks payants

# Unity 3D - Cross-platforms, en pratique !

- ★ "Platforms dependent compilation"
- ★ Lisibilité ?
- ★ Maintenabilité ?
- ★ Performance ?

```
#if UNITY_EDITOR
    Debug.Log("Unity Editor");
#endif

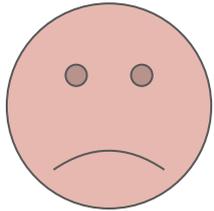
#if UNITY_IPHONE
    Debug.Log("Iphone");
#endif

#if UNITY_STANDALONE_OSX
    Debug.Log("Stand Alone OSX");
#endif

#if UNITY_STANDALONE_WIN
    Debug.Log("Stand Alone Windows");
#endif
```

# Unity 3D - Tester le cross-platforms ?

- ★ l'affichage : résolution intégrée dans l'interface !
- ★ le comportement : prévisualisation de l'aperçu en jeu



- ★ Tester la platform dependent compilation ?
- ★ Compiler (jusqu'à 10 min) & déployer
- ★ Émulateur

# Unity 3D - Finalement, le cross-platforms



- ★ Nombre de plateformes
- ★ Facilité à créer un jeu
- ★ Accès aux API natives
- ★ Platform dependent compilation



- ★ Requirements importants
- ★ Tester les plateformes
- ★ Fonctionnalités payantes
- ★ Platform dependent compilation

# Polymer

Menu

- Home
- Connexion
- Game
- References
- Score example

## Survival

Welcome to Survival Shooter homepage



### What is about ?

This is the website of an interfaces adaptation project.  
The goal of this project is to study and compare technologies Unity3D and Polymer in terms of interfaces adaptation on several platforms.  
We choose the Survival Shooter game because it's a free game in 3D developed by Unity quite good to meet issue of adaptation of a game on cross-platforms and quite simple for our level.  
For the example, we will approach the platforms : web, desktop and android.

### News (17/10/15) : we are working on a tutorial soon, finished !

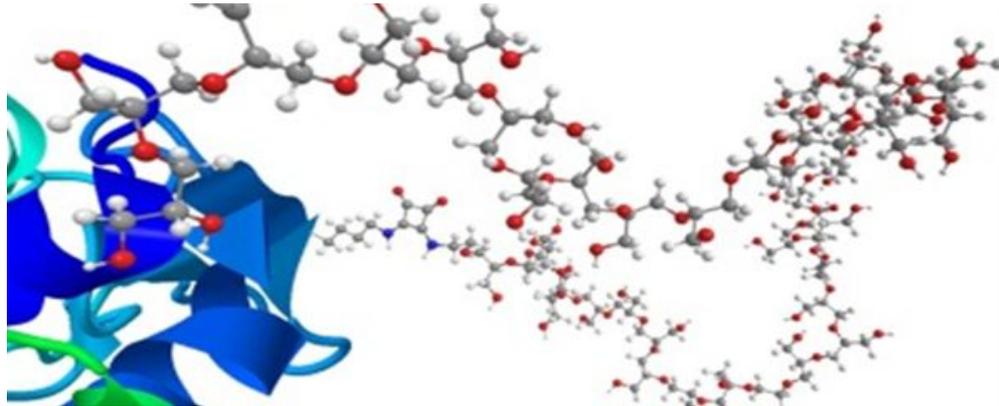
Lorem ipsum Cuius acerbitati uxor grave accesserat incentivum, germanitate Augusti turgida supra modum, quam Hannibaliano regi fratris filio antehac Constantinus iunxerat pater, Megaera quaedam mortalis, inflammatrix saevientis adsidua, humani cruoris avida nihil mitius quam maritus; qui paulatim eruditores facti processu temporis ad nocendum per clandestinos versutosque rumigerulos conpertis leviter addere quaedam male suetos falsa et placentia sibi discentes, adfectati regni vel artium nefandarum calumnias insontibus adfligebant.

### News (15/10/15) : we work very hard on the project !

Lorem ipsum Cuius acerbitati uxor grave accesserat incentivum, germanitate Augusti turgida supra modum, quam Hannibaliano regi fratris filio antehac

# Polymer - Solution web components !

- ★ Un peu d'étymologie : du grec *polus* (plusieurs) et *meros* (partie)
- ★ Un polymère est une macromolécule constituées de plusieurs sous unités



# Polymer - Web components, le catalogue !

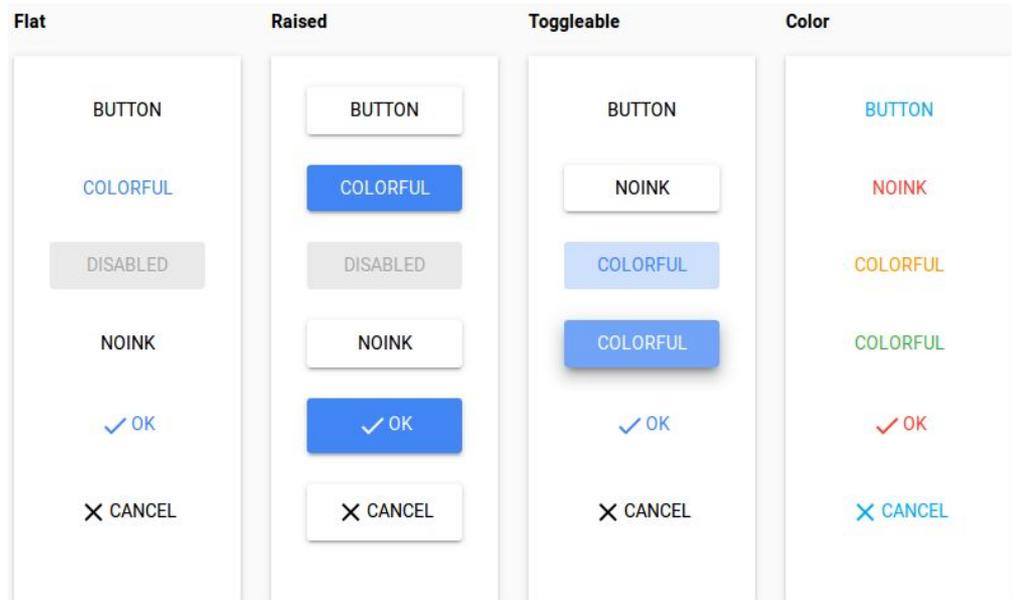
The image shows a screenshot of the Polymer Catalog website. At the top left, there is a logo consisting of three interlocking shapes in blue, red, and purple, followed by the text "Polymer Catalog". Below this, there are seven colored cards, each representing a different web component library. Each card has a large chemical symbol, a version number in the top right corner, the library name, a horizontal line, and a brief description.

Symbol	Version	Library Name	Description
Fe	1.0.4	Iron Elements	Polymer core elements
Md	1.0.5	Paper Elements	Material design elements
Go	1.0.1	Google Web Components	Components for Google's APIs and services
Au	1.0.1	Gold Elements	Ecommerce Elements
Ne	1.0.0	Neon Elements	Animation and Special Effects
Pt	1.2.0	Platinum Elements	Offline, push, and more
Mo	1.0.0	Molecules	Wrappers for third-party libraries

# Polymer - Web components, le catalogue !

★ Librairie qui permet de faire facilement des web components :

- Responsives
- Inter-opérables
- Stylisés
- Réutilisables



# Polymer - Web components, le data-binding

```
<dom-module id="user-view">

  <template>
    First: <span>{{firstName}}</span><br>
    Last: <span>{{lastName}}</span>
  </template>

  <script>
    Polymer({
      is: 'user-view',
      properties: {
        firstName: String,
        lastName: String
      }
    });
  </script>

</dom-module>
```

- ★ Utilise un système de data-binding plus rapide → simplification du code

- ★ Utilisation dans la page HTML :

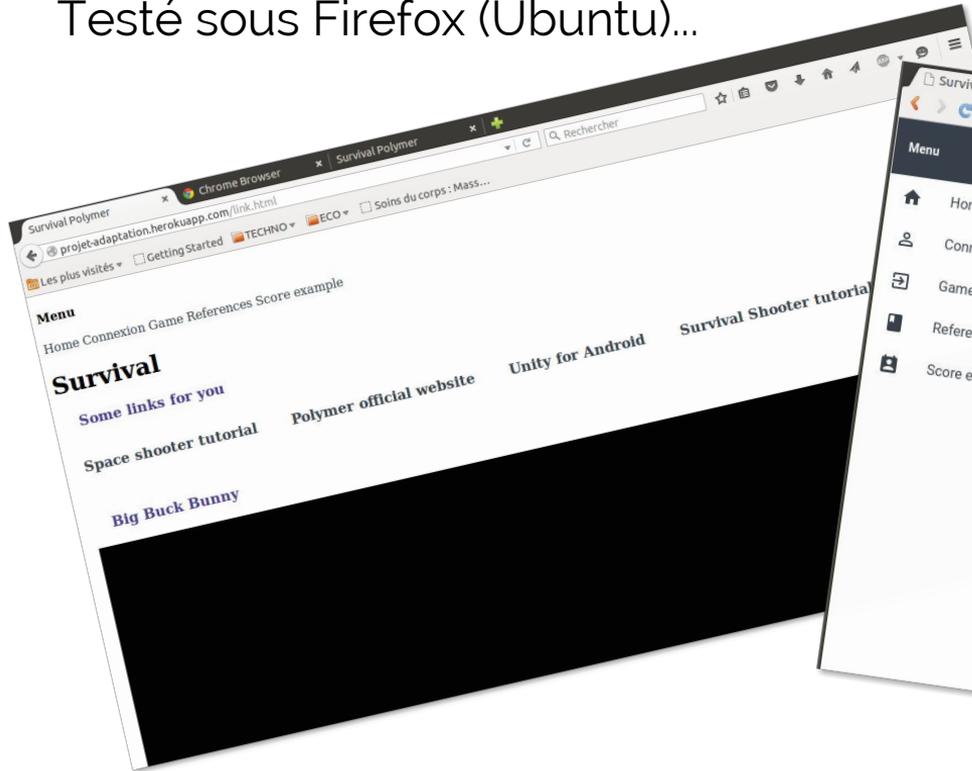
```
<user-view first-name="Samuel" last-name="Adams"></user-view>
```

# Polymer - Web components sur navigateurs

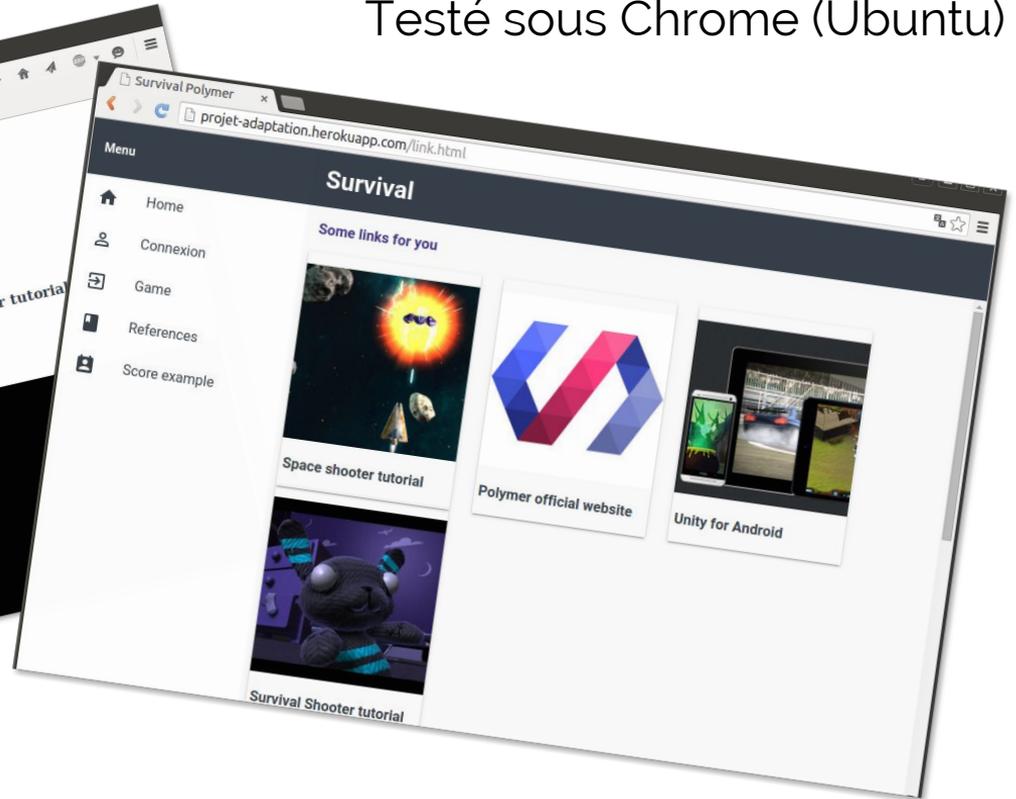


# Polymer - Web components, oui mais...

Testé sous Firefox (Ubuntu)...

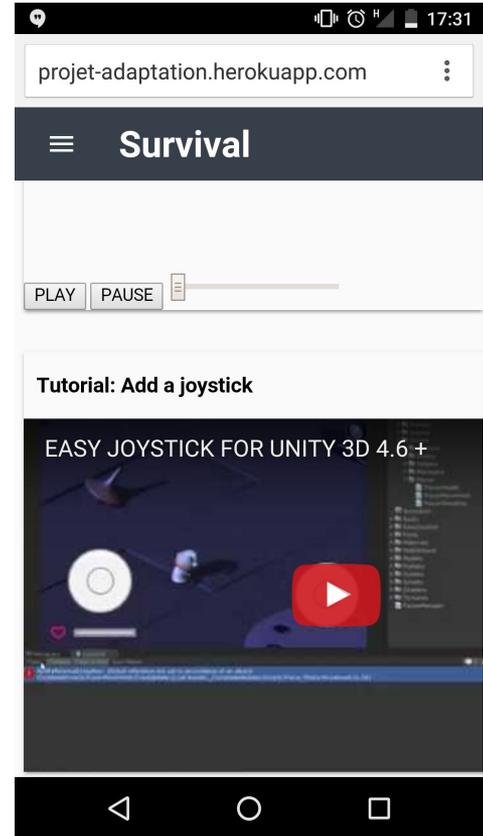
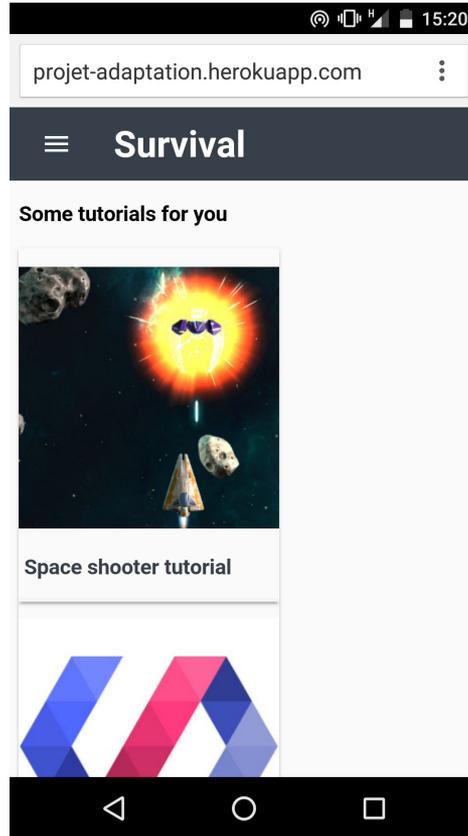


Testé sous Chrome (Ubuntu)



# Polymer - Web components, oui mais...

Testé sous Android



# Polymer - Finalement le web components



- ★ Responsive design facilité
- ★ Facile à prendre en main
- ★ Beaucoup de composants disponibles (images, vidéos, menu...)
- ★ Design intégré
- ★ Data-binding très simple

- 
- ★ Beaucoup de composants à installer
  - ★ Certains composants moins responsives
  - ★ Starter Kit non recommandé
  - ★ Différents rendus selon les navigateurs et les OS
  - ★ Pas encore stable (pas rétrocompatible)

# Merci de votre attention !

Des questions ?

