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# Kineton's Media Entertainment Center

- Leader in HbbTV development: delivered **90% of the apps in the Italian market** and apps for the French, Spanish and UK markets
- Leader in **In vehicle infotainment apps**



**HbbTV** registered test center and official Italian certification regime lab

# Application development

Design, development and validation of interactive applications on the following platforms:

- **CTV** (HbbTV, Samsung Tizen, LG WebOS, Google Android TV, Amazon Fire TV, Apple tvOS);
- **STBs** (Roku, Sky Q, other Sky STBs...);
- **Mobile** (Apple iOS, Google Android, Huawei Harmony OS);
- **Web**;
- **Game console** (PlayStation, X-Box, ...).



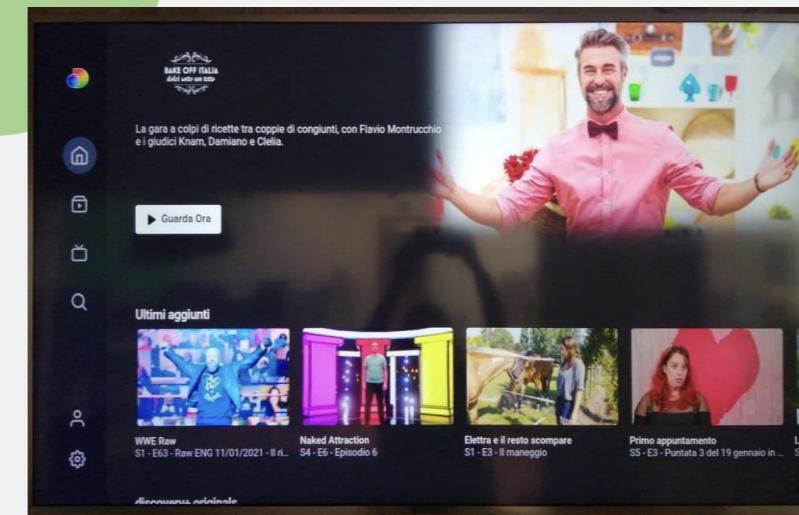
```
3 require File.expand_path('../config/environment', __FILE__)
4 # Prevent database truncation if the database needs
5 # abort("The Rails environment is running in production mode")
6 # require 'spec_helper'
7 # require 'rspec/rails'
8
9 require 'capybara/rspec'
10 require 'capybara/rails'
11
12 Capybara.javascript_driver = :webkit
13 Category.delete_all; Category.create!(name: "Category A", description: "Category A description")
14 Shoulda::Matchers.configure do |config|
15   config.integrate do |l|
16     l.test_framework :rspec
17     l.library :rails
18   end
19 end
20
21 # Add additional requires below this line
22
23 # Requires supporting files within the same directory as this file or,
24 # if further up the tree, look for a file there named config/routes.rb
25 # run as spec files by default. This means you can run
26 # in _spec.rb will both be required
27 # run twice. It is recommended that you do not name
28 # action on the routes
29
30 # Action on the routes
31
32 # No results found for 'mongoid'
```

# Application **testing** and **validation**

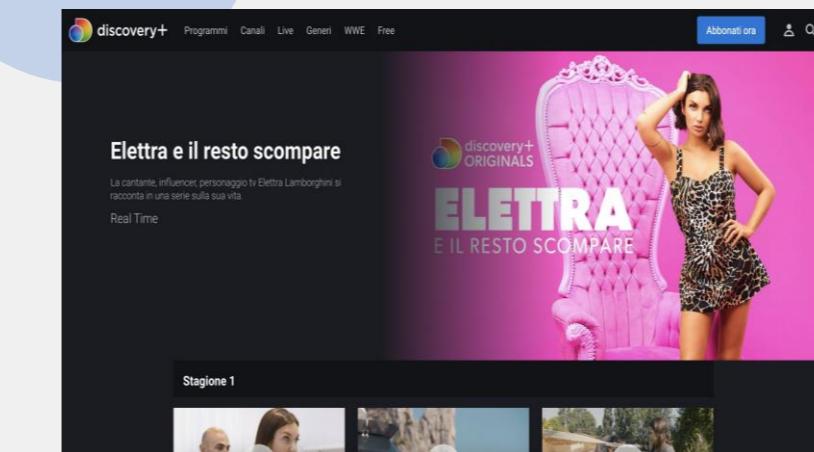
Kineton is specialized in the validation of applications that can be installed on different types of devices:

- **HbbTV** and connected TV;
- smartphones and tablets;
- browser;
- STB;
- game console.

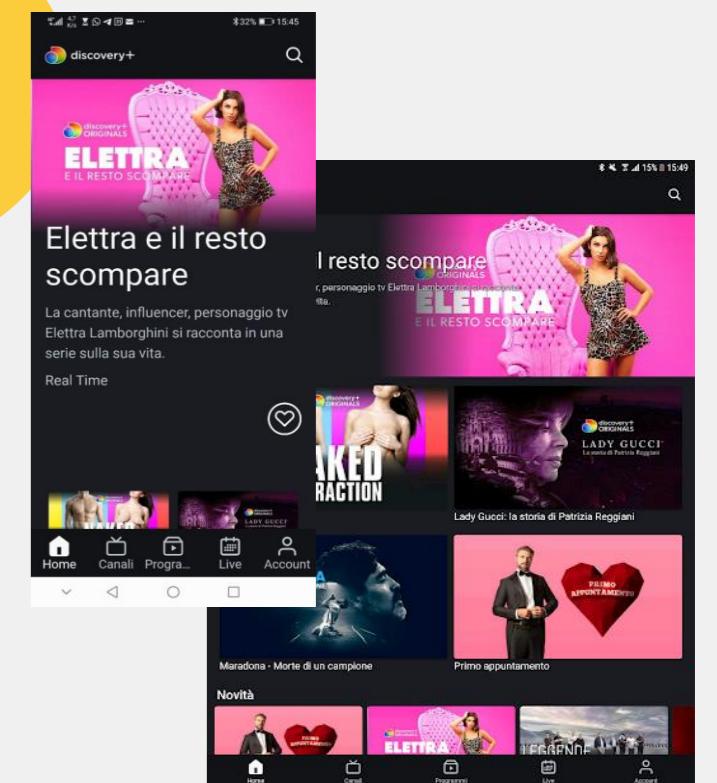
HbbTV



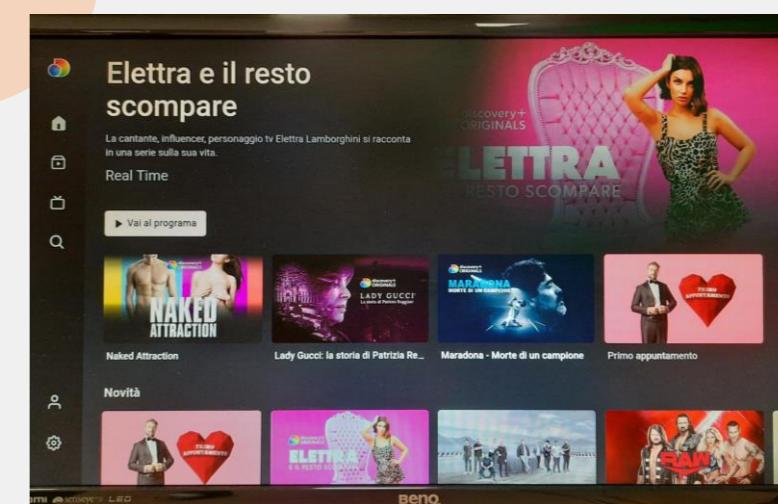
WEB



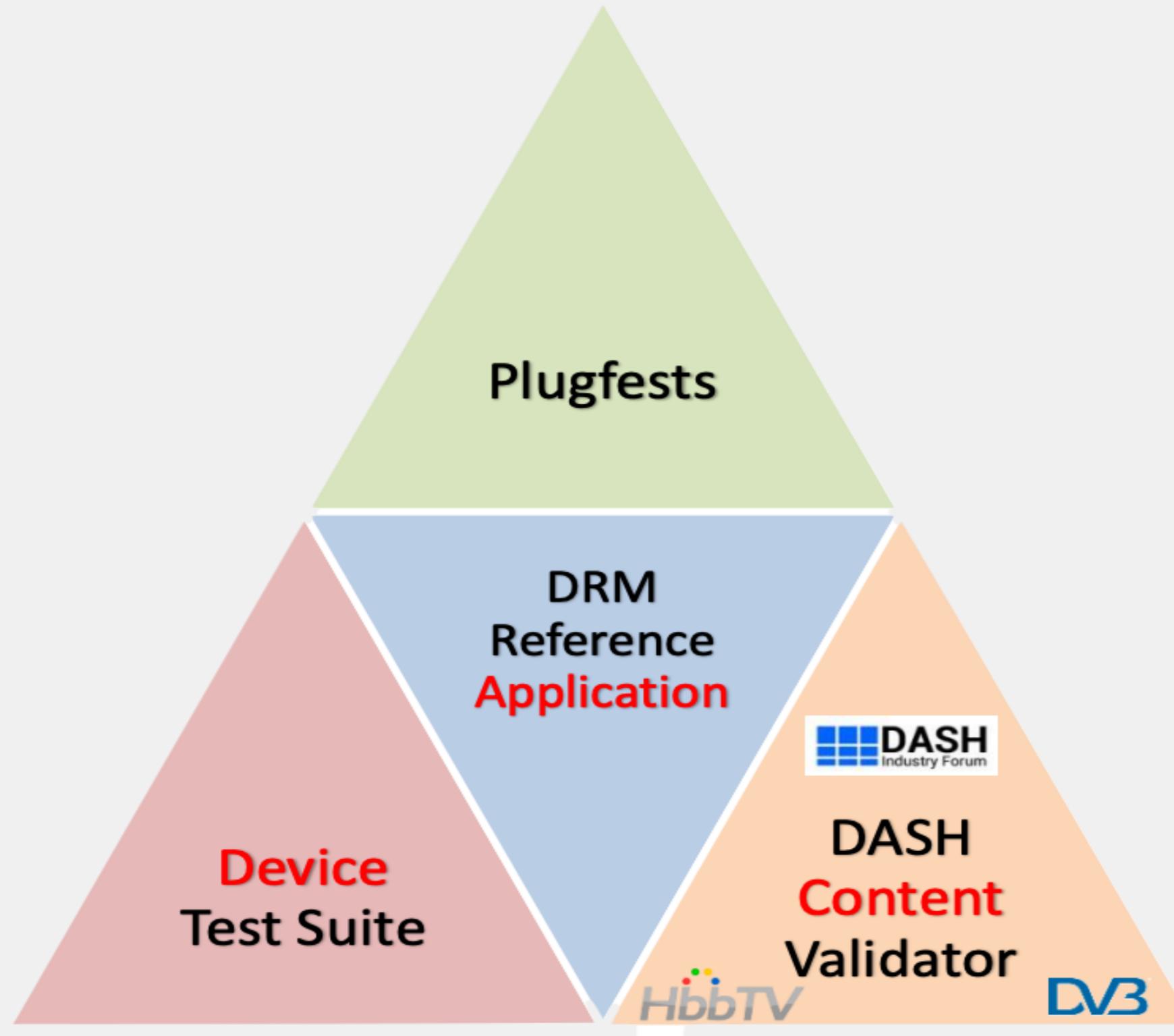
Mobile



CTV/  
STB



 HbbTV app development – there some **useful** tools **but...**



**Official HbbTV tools**



**National certification regimes**



# HbbTV application development – the **obstacles**



## Complexity

- Multiple HbbTV standards
- Multiple browser versions

01

02

03

## Market fragmentation

- Devices on the market supporting different HbbTV specification
- Devices supporting the same version, but not all the functionalities

## Lack of debugger

- Impossibility to understand quickly and easily the cause of an issue



## Kineton's approach



### Development library

- Grants homogeneity of the standard implementation

*Altair*

01

*Antares*

02

### Development framework

- Ensures support and performance
- Same video player across platforms

03

### Integration with 3<sup>rd</sup> party services

- Adv server providers
  - Data analytics platforms

04

### Interoperability testing

- Testing against a wide HbbTV device zoo



## What to do...

- **Interoperability** and **testing events** sponsored by HbbTV
- **Unique version** of Chrome browser
- Unified **testing tools**
- Shared HbbTV **development framework**



# KINETON



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