

# New W3C Testing Use Cases

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## Two Caveats

### **Web & TV IG just started a Testing Task Force**

- “developing testing requirements specific to Web & TV applications”
- <http://www.w3.org/2011/webtv/wiki/Testing>
- First call next week
- So, today I just speak for myself, not the IG nor the TF

### **We deliver video apps to screens**

- TVs, PCs, phones, tablets are all screens
- So, I don't believe in separate TV & mobile profiles or requirements

## Testing Use Cases

### Today's W3C testing use case:

- Verify spec development

### New W3C testing use cases:

1. Improve consistency of web platform
  - W3C builds tests to resolve platform inconsistencies
2. Support external testing/certification organizations
  - W3C single access point for all W3C tests

## Improve consistency of web platform: Why?

### Cost of Web App support across browsers still high:

- Leading PC browsers are converging, but
- New mobile, TV and device browsers
- Cost is multiplied across companies and over time

### Three legs of API definition: Specs, docs & tests

- **Specs:** All working on common HTML5 spec
- **Docs:** All working in [webplatform.org](http://webplatform.org)
- **Tests:** Can we work together?

# Improve consistency of web platform: How?

## **Build mechanism for app community to report inconsistencies:**

- Leverage webplatform.org?
- W3C generate tests corresponding to reported issue
- Resolution could be implementation bug or spec bug

## **Review libraries (e.g. Modernizr) for platform accommodation**

- Review code, discuss with teams
- W3C generate tests corresponding to reported code

## **Outreach/Workshops with major web app developers**

- Identify pain points
- Prioritize testing work to match needs

# Support external testing/certification organizations: Why?

## HTML5 being built into external specs:

- DLNA, OIPF, DTG, ...
- Many of these organizations provide testing and/or certification

## Current reference to W3C tests by external groups problematic:

- Tests in many locations that can move
- Sometimes working or not
- No clear contact points

**NOTE: W3C *should not* do certification,  
but should provide the ruler that others use to measure.**

# Support external testing/certification organizations: How?

## Define a single page for external testing:

- **Central:** one home for all W3C tests
- **Configurable:** which specs and tests to run
- **One click:** to run all tests
- **Results:** detailed pass/fail results for each test to take away

## Best examples:

1. Khronos WebGL Conformance Test Suite  
<http://www.khronos.org/webgl/wiki/Testing/Conformance>
2. ECMA Test262  
<http://test262.ecmascript.org>

# WebGL Conformance Test Suite

WebGL Conformance Tests

WebGL Conformance Test Runner  
Version 1.0.2 (beta)

run tests

Results:

- run [conformance/canvas/texture-bindings-unaffected-on-resize.html](#) (6 of 6 passed)
- run [conformance/canvas/viewport-unchanged-upon-resize.html](#) (4 of 4 passed)
- run context
  - run [conformance/context/constants.html](#) (2 of 5 passed)  
failed: Property is defined and should not be: NUM\_COMPRESSED\_TEXTURE\_FORMATS  
failed: Property is defined and should not be: EXTENSIONS  
failed: Property is defined and should not be: SHADER\_COMPILER
  - run [conformance/context/context-attribute-preserve-drawing-buffer.html](#) (3 of 4 passed)  
failed: Did not render ok with preserveDrawingBuffer false.
  - run [conformance/context/context-attributes-alpha-depth-stencil-antialias.html](#) (94 of 98 passed)  
failed: gl.getParameter(gl.DEPTH\_BITS) == 0 should be true. Was false.  
failed: WebGL implementation provided a depth buffer when it should not have  
failed: pixel should be 0,0,0,255. Was 255,0,0,255.  
failed: pixel should be 0,0,0,255. Was 255,0,0,255.
  - run [conformance/context/context-creation-and-destruction.html](#)

Test that contexts are freed and garbage collected reasonably

On success, you will see a series of "PASS" messages, followed by "TEST COMPLETE".

```
test 1 of 500
PASS getError was expected value: NO_ERROR : Should be no errors
test 2 of 500
PASS getError was expected value: NO_ERROR : Should be no errors
test 3 of 500
PASS getError was expected value: NO_ERROR : Should be no errors
test 4 of 500
PASS getError was expected value: NO_ERROR : Should be no errors
test 5 of 500
PASS getError was expected value: NO_ERROR : Should be no errors
test 6 of 500
PASS getError was expected value: NO_ERROR : Should be no errors
test 7 of 500
PASS getError was expected value: NO_ERROR : Should be no errors
```

<http://www.khronos.org/webgl/wiki/Testing/Conformance>