W3C Testing Work

Overview and how to integrate TV community requirements

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Web+TV IG meeting

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Ongoing Work @ W3C

- Ongoing Work
  - Test Framework, Web Testing Interest Group
  - Test the Web Forward (W3C is "partner")
  - CoreMob CG
  - Browser Testing and Tools WG
- How to integrate "TV" community requirements

How to Find Current Test Status

- Go to http://www.w3.org/Mobile/mobile-web-app-state/ (**Standards for Web Applications on Mobile: current state and roadmap**)
- **Find functionality of interest**
- **Look at "Test Suite" column – describes status**
- **Areas of interest to TV with test suites**
    - **2D Graphics API - Canvas – good coverage**
    - **2D+3D effects - CSS transforms – good coverage**
    - **Video playback – just started**
    - **Audio playback – barely started**
    - **Media capture – started**

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How To Run Tests

- Go to http://w3c-test.org/framework/app/suite (W3C Test Framework)

- Pick a test suite

- Click "run"

- Some automation via testharness.js

- Areas of interest to TV in Test Framework

  - 2D Graphics API - Canvas

  - Video playback (84 "test cases", ~200 tests)
    http://w3c-test.org/framework/app/suite/video/run

  - HTML5

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How To Check Test Results

- Go to http://w3c-test.org/framework/app/suite (W3C Test Framework)
- Pick a test suite
- Click "results"
- Idea: crowdsource testing
- Information
  - Which Runtime? (Gecko, WebKit, Presto, Trident)
  - Stats: Run how often with which result (succes/fail/cannot tell)
  - Get detailed results by clicking on stats
    - User agent string
    - IP address
    - Time
    - …

Test Framework

- Currently contains 3.5+K Tests
- Based on requirements http://www.w3.org/wiki/Testing/Requirements (mention of mobile, not of TV – issue?)
- Example Specs covered (with varying degrees)
  - CSS Selectors API
  - DAP (4): Battery Status API, Proximity Events, Vibration API, …
  - DOM: DOM3 Events, DOM4, Element Traversal, Shadow DOM
  - Geolocation, Device Orientation
  - WebApps (7): File API, IndexDB, Progress Events, …
  - HTML5: Canvas 2D Context, Editing APIs, Web Sockets
  - WebFonts/WOFF
  - …
- REST API makes it possible for third-parties to reuse/read/contribute results

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Web Testing IG

- Charter http://www.w3.org/2011/05/testing-ig-charter.html
- The purpose of the Web Testing Interest Group is:
    - to develop and deploy testing mechanisms and collateral materials for testing of Web technologies across different devices (desktops, mobile, TV, …)
    - to support the testing efforts of working groups developing Web technologies
    - to liaise with organizations outside the W3C who conduct testing and certification efforts for Web technologies

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Test The Web Forward

- Events to encourage crowd-sources contribution of test cases to W3C test harness
  - June: San Francisco
  - October: Peking, Paris
- Paris had speakers from
  - Adobe
  - Facebook
  - Google
  - Microsoft
  - Mozilla
  - Opéra
  - W3C
- Not a lot of tests produced for now

CoreMob CG

- Initiated by Facebook
- Launched at Mobile World Congress 2012 with 30 others (Samsung, HTC, Sony Mobile Communications, Nokia, Huawei, ZTE, TCL Communication, AT&T, Verizon, Vodafone, Orange, Telefónica, KDDI, SOFTBANK MOBILE Corp., Qualcomm Innovation Center, Inc., NVIDIA, ST-Ericsson, Intel Corporation, Texas Instruments, Broadcom, Mozilla, Opera, Microsoft, Adobe, Netflix, VEVO, Zynga, @WalmartLabs, Electronic Arts, Sencha and Bocoup.)
- Goals
  - Agree on core features (of Web platform) developers can depend on
  - Compile related conformance test suites.
  - …
- "High-quality, comprehensive and automated test suites are important interoperability drivers. "
- Nearly 280 participants
- Not much delivered yet (in particular, no tests)

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Browser Testing and Tools WG

- Web Driver API for browsers: automating testing by simulating user actions such as clicking links, entering text, and submitting forms.

- (Remote Debugging API)

Test Meetings @ TPAC

- Breakouts
    - Test the Web Forward Recap & Future Planning (Adobe)
    - Testing at W3C (PLH, Facbook, Opera)
- Browser Testing and Tools WG: Mo+Tue

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"TV" Requirements

- One URL as home to all the tests
  - Intent of test framework
- One click to run all tests
  - Rudimentary realisations (testharness.js can run series of tests, reftest as well?)
- Clear results summarizing top-level pass/fail results
  - Yup – usability?
- Test configuration options
  - Lots of options for selection right now ☺
- Detailed pass/fail results for individual tests
  - Yup
- Ability to download a test log of some sort
  - "easy"

Summary/Next Steps

- A lot going on in testing @ W3C
- But: slow progress
    - Lots of discussion of tooling
    - Imperfect tooling
    - Lack of actual tests
- Reasons?
    - Not a topic for consensus-driven W3C groups?
    - Too much hope on "crowdsourcing"?
        - Test cases
        - Test results
- Suggestion: Dedicated resources @ W3C team for
    - Tool building
    - Test writing

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