# Highlights from the 2016 International Technology and Persons with Disabilities Conference

INTERNAL AFFAIRS
*Te Tari Taiwhenua*

New Zealand Government

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# A11y

- Numeronym

- A + 11 letters + y = Accessibility

# CSUN 2016

- Disability, accessibility and technology
- California State University Northridge (CSUN) Center on Disabilities
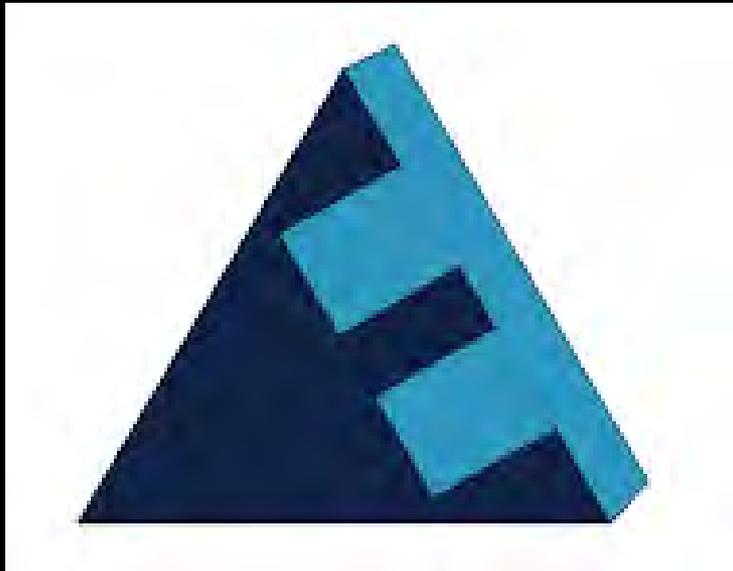- 21–26 March 2016
- ~4000 people

# Mobile A11y Testing & Development

- Paul J. Adam, **deque**

- iOS and VoiceOver with QuickTime and Safari Web Inspector

- Android and TalkBack with vysor.io (supports keyboard and mouse)

- Native Android a11y guidelines

- Native iOS a11y guidelines

# Equidox™ from Onix

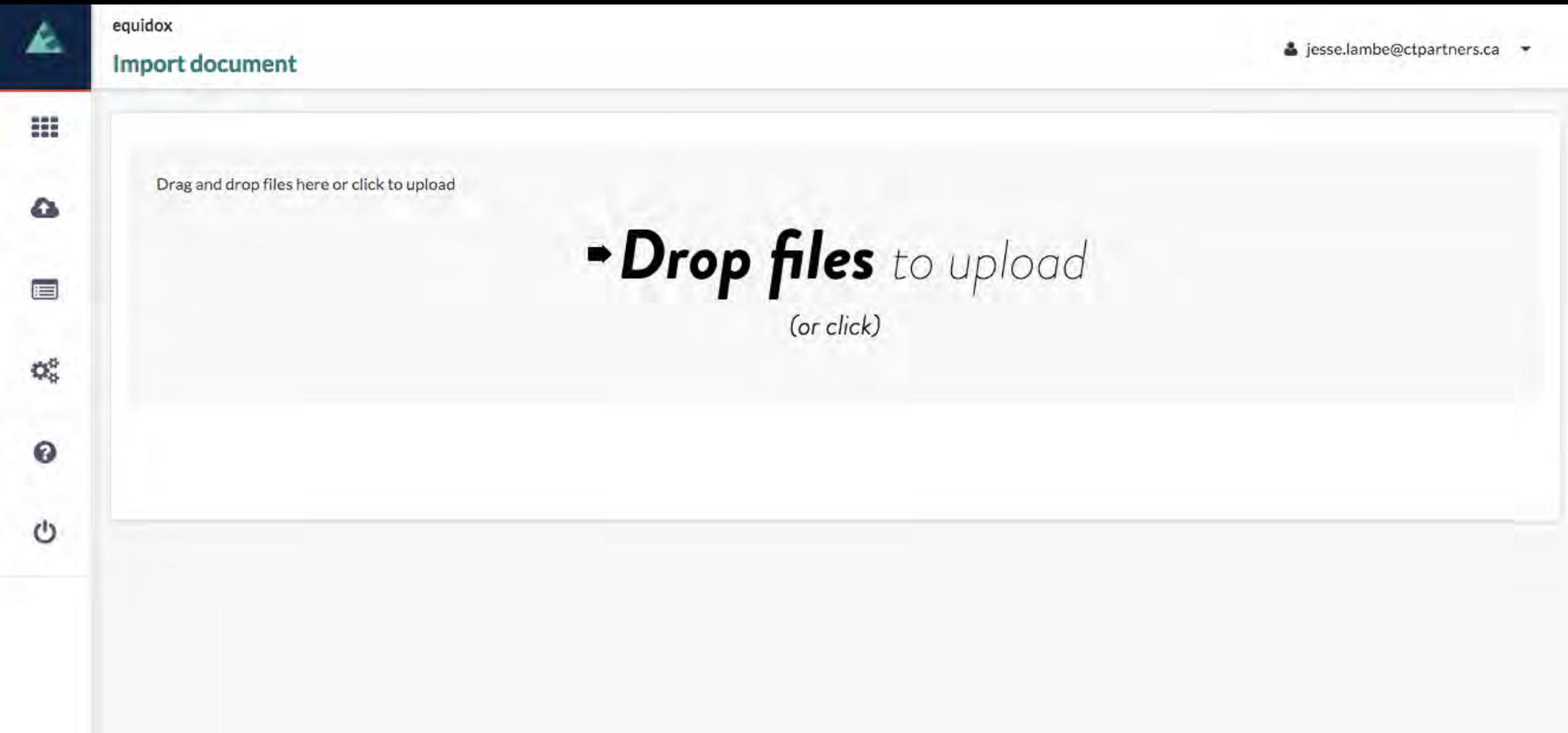- Automated conversion of PDF to WCAG 2.0 AA compliant HTML

# Equidox™ from Onix

- Web interface: upload and convert

this requirement. The assessment must include the path of any proposed sewer line that extends outside the Water Pollution Abatement Plan (WPAP) assessed area, plus 50 feet on either side.

Answer all questions. If some items do not apply, provide a brief explanation. The comments "Not applicable" or "See Item XX above" are not acceptable. The comment "See attached...." is only valid for referencing required plans or maps. The application will be returned to your client if all items on these instructions are not adequately addressed.

## A. Procedure For Conducting A Geologic Assessment

The general procedure for conducting a geologic assessment is to perform the following steps: research information, perform a field survey, evaluate data, return to the site if necessary, make conclusions, and make a report with your feature assessments and recommendations. A geologic map, preliminary data input into the Geologic Assessment Table, notes, photographs and/or sketches should be made while in the field. These data may be used and included in your final report.

### Research information

Published reports and maps of area geology should be studied prior to performing the field survey. A literature or database search should be conducted for the presence of documented caves or other *karst features* on the property or in proximity to the property boundary. Information may be found about known *caves*, such as mapped extent, depth or elevation or orientation, on the subject property or on adjacent tracts. Some commonly used data sources for geologic maps and cave location and interpretation are included in the "Citations for Sources of Further information" in these Instructions.

Evaluate former land use practices and modifications. Interview persons knowledgeable about historical activities such as well drilling, irrigation or water control ditches or trenches, pit or structure construction, episodes of brush clearing and tree pulling, and cave filling or excavation. In ranches that have been occupied for a long time, manmade features can be degraded and overgrown and be confused with natural features. Human activities also may obscure indicators of natural processes that otherwise could be used to determine the sensitivity of a feature.

Aerial photos may be examined for the presence of structural features that should be field checked and plotted on the map.

### Perform a field survey

The entire subject site must be walked to survey the ground surface for the presence of geologic and manmade *features*. It is recommended that the site be walked systematically in spaced transects 50 feet apart or smaller, paying close attention to streambeds and structural features observed on aerial photographs. The transect pattern should be adapted to insure that the geologist is able to see features and will vary with topography and vegetation on the site. Streambeds, including dry drainages, are significant because runoff is focused to them. Not only are features in streambeds likely to receive large volumes of recharge, but they are likely to

# Equidox™ from Onix

- Manually adjust:

  - tables

  - image descriptions (alt-text and long descriptions)

  - document metadata

- Supports OCR for scanned PDFs

# Equidox™ from Onix

- **2013 Government of Canada PDF Conversion Project**
  - Average Equidox WCAG 2.0 score was equal to or greater than manual conversion
  - Average 70% time savings, and this was before they added the table editor, and OCR support

# Equidox™ from Onix

- USD$12K/year for 12 concurrent users

- 14 day free trial available

- Includes free online training via GoToMeeting

- Train using your difficult PDFs

- Contact me jason.kiss@dia.govt.nz:
Room for 5-6 interested users

# Creating Accessible Social Media Content

- [Govt of Minnesota Social Media Guidelines](#)



- 2014 executive orders:
  - plain language in executive branch
  - increased state employment of PWDs

- Office of A11y:
  - legislative allocation
  - policies, standards, best practices
  - coordinate training and resources

Department of Internal Affairs

# Creating Accessible Social Media Content

- Social media services: "proprietary containers" – can't change their code

- Want to reach community, and need to be accessible – *but can't just not use the channel*

- So…

# Creating Accessible Social Media Content

- Apply some best practices and basic a11y as much as possible:
  - Always provide web + physical addresses
  - Add structure when possible, e.g. headings, etc.
  - Use CamelCase, e.g. #PlainEnglish
  - Put hyperlinks and extra hashtags at end
  - Use brief hyperlinks when possible

# Creating Accessible Social Media Content

- A11y "hacks" needed when proprietary container doesn't permit a11y out of the box

  - e.g, use YouTube, but post video + transcript on website – same goes for posts to other social media

- Archiving requirements mean you can't just take down a bad post:  Test your posts with a fake account first

# Karaoke!

- https://twitter.com/aardrian/status/712929958189002752

# How to Implement Accessible Purchasing



- Lucy Greco, UC Berkeley

- RFP process: pick your team

  - someone who knows about the thing being purchased

  - one or more users

  - the 'others' e.g. finance, legal, etc.

  - *Most importantly, an a11y professional*

# How to Implement Accessible Purchasing

- What do users really need? List the criteria.

- What kind of accessibility will be needed?

- Rank the a11y of the thing *vs*. other concerns

- Require suppliers:
  - to provide info about a11y of the thing
  - to demo a11y of the thing, perhaps with PWD

# How to Implement Accessible Purchasing

- After purchase, get a11y professional to review the thing with supplier...test, test, test

- Establish procedures:
  - to test updates for a11y
  - for submitting complaints
  - for remediation

# How to Implement Accessible Purchasing

- Have standard a11y questions in every RFP

- Consider defining and including a set of 'non-negotiable violations'

# W3C Cognitive and Learning Disabilities Accessibility (COGA) Task Force

- Richard Schwerdtfeger, IBM, W3C

- Cognitive a11y benefits all users

- Lots of overlap with elderly

- Huge revenue opportunity given ageing market ($7.3 trillion in US)

# W3C Cognitive and Learning Disabilities Accessibility (COGA) Task Force

- **Security implications:** remembering passwords

- **Personalisation implications:** when I log in, set up the desktop how I like it

- WCAG has requirements to avoid jargon, provide minimum readability

- Extend WCAG for COGA with prescriptive and testable techniques

# W3C Cognitive and Learning Disabilities Accessibility (COGA) Task Force

- **New attributes, e.g.**

```
<button coga-simplification="high">
    Send email
</button>


<button coga-simplification="low">
    Archive email
</button>
```

# Case Study: New Zealand Government Web Accessibility Self-Assessments

# Case Study: New Zealand Government Web Accessibility Self-Assessments

- Search for "self-assessments" at ict.govt.nz

# The Digital Accessibility Maturity Model: Enabling Accessibility Operations

- Bill Curtis-Davidson, SSB BART Group

- **Maturity model:** capabilities of an agency in addressing specific set of business challenges

- **Benefits of increased maturity:**

  – fewer defects and greater quality

  – better on-time delivery

  – closer to meeting budget

# The Digital Accessibility Maturity Model: Enabling Accessibility Operations

- [SSB BART's DAMM](#) has 5 Maturity levels:

  - describe how well behaviours, practices, and processes reliably produce required outcomes

  - indicate processes, establish goals and expected artifacts

# The Digital Accessibility Maturity Model: Enabling Accessibility Operations

- Aligned with work from:

  - Carnegie Mellon University's Software Engineering Institute

  - National Association of State Chief Information Officers Policy-Driven Adoption for A11y

  - UK Business Disability Forum's MM

- *Will be used to inform NZ GCIO's maturity model for Web Standards*

# Web Accessibility Evaluation of China Government Websites in 2014

- **Dec 2015:**
  - 688 million Internet users, more than half of population
  - 86 million disabled
- **2014:** ~212 million 60 and over (~15.5%)
- **July 7 2015:** 85,890 government websites

# Web Accessibility Evaluation of China Government Websites in 2014

- Since 2013, China Government has assessed +1500 websites

- **Technical Requirements for Web A11y:** informed by, but not 1-to-1 match with WCAG

- **Evaluation:**
  - optimised for Chinese websites
  - crawled websites based on intelligent sampling
  - machine learning algorithms to minimise cost of human inspection

# Web Accessibility Evaluation of China Government Websites in 2014

- **Results:**

  - much improvement needed

  - only ~10% achieve good a11y performance

  - 60% lack sufficient awareness in a11y

  - 30% realise importance but need further efforts

# Web Accessibility Evaluation of China Government Websites in 2014

- **Successes:**
  - Raised awareness of general public
  - 2015, President Xi proposed online cultural sharing platform with a11y as a core objective
- **Plans:**
  - to develop new national a11y standards aligned with WCAG
  - to incorporate a11y into Government Web Management Index

# Building and Promoting the French Official Web Accessibility Guidelines

- **RGAA:** Référentiel Général d'Accessibilité pour les Administrations *[General Accessibility Reference for Administrations]*

- Web content & apps must meet WCAG 2.0 AA

- National and local administrations

- Required by law since 2012

# Building and Promoting the French Official Web Accessibility Guidelines

- **RGAA** is a testing methodology:
  - Checklist with pass/fail results
  - Standardised audit process
  - Based on WCAG techniques
  - Provides conformance rate measure
  - Does not require specialist a11y expertise
- Updated in 2015 for HTML5 and ARIA

# Building and Promoting the French Official Web Accessibility Guidelines

- **Government commitment:**

  - each ministry CTO to define roadmap for addressing a11y, with clear annual plan of action

  - "RGAA e-accessible" label for websites to congratulate and publicise success, and encourage initiatives
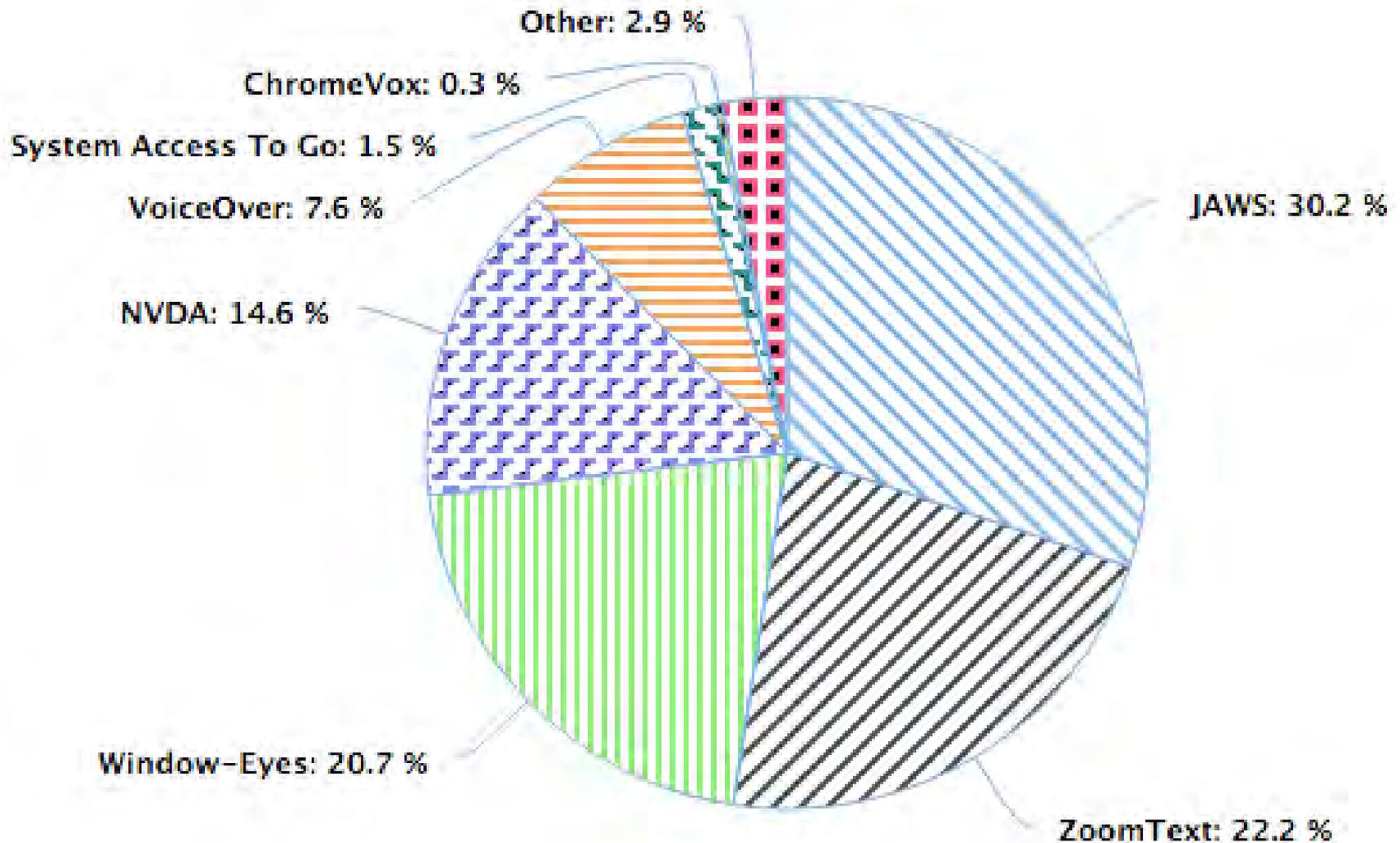
# Accessible SVG Charts Using ARIA

- Øystein Moseng (Highsoft)  HIGHCHARTS

- Ted Gies (Elsevier)  ELSEVIER

- **Experiment:** SVG chart library accessible to screen readers

- Current SVG 1.1 spec limited in terms of a11y

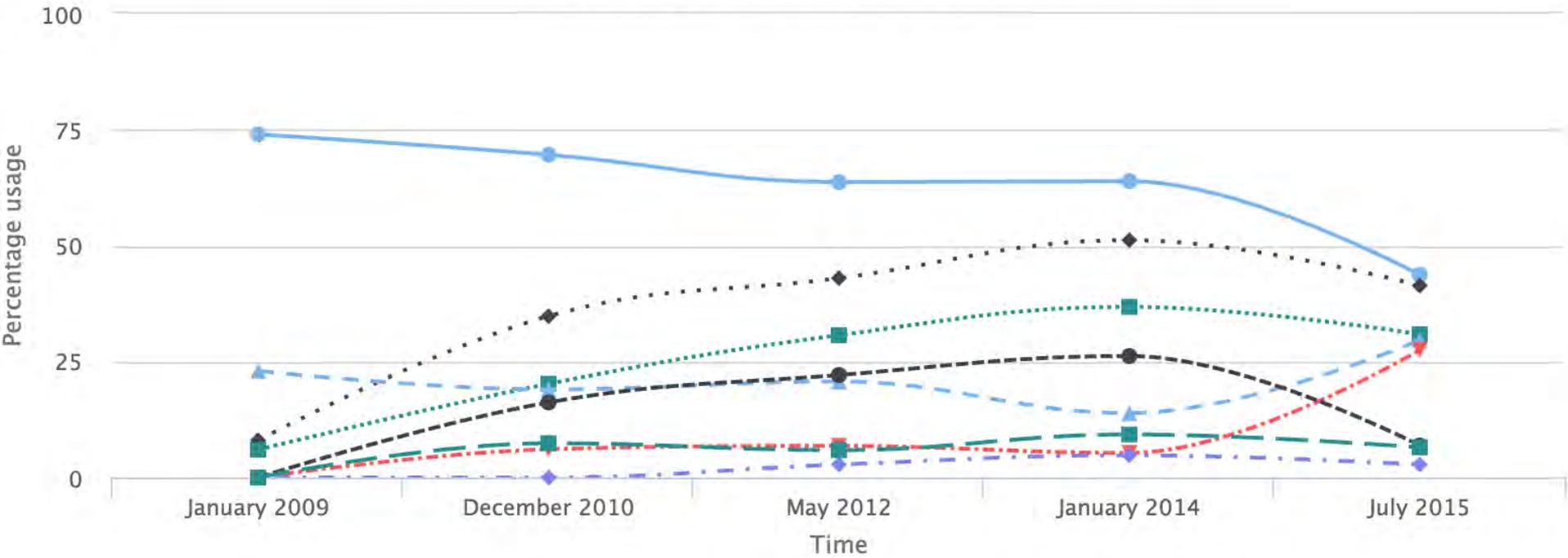- Can't wait for SVG2: ~one year off

# Desktop screen readers

Click on point to visit official website

Other: 2.9 %

ChromeVox: 0.3 %

System Access To Go: 1.5 %

VoiceOver: 7.6 %

NVDA: 14.6 %

JAWS: 30.2 %

Window-Eyes: 20.7 %

ZoomText: 22.2 %

# Desktop screen readers from 2009 to 2015

Click on point to visit official website



Legend:
- JAWS
- NVDA
- VoiceOver
- Window–Eyes
- ZoomText
- System Access To Go
- ChromeVox
- Other

Highcharts.com

Daily company fruit consumption 2015

**Plums** **Bananas** **Apples**

Highcharts.com
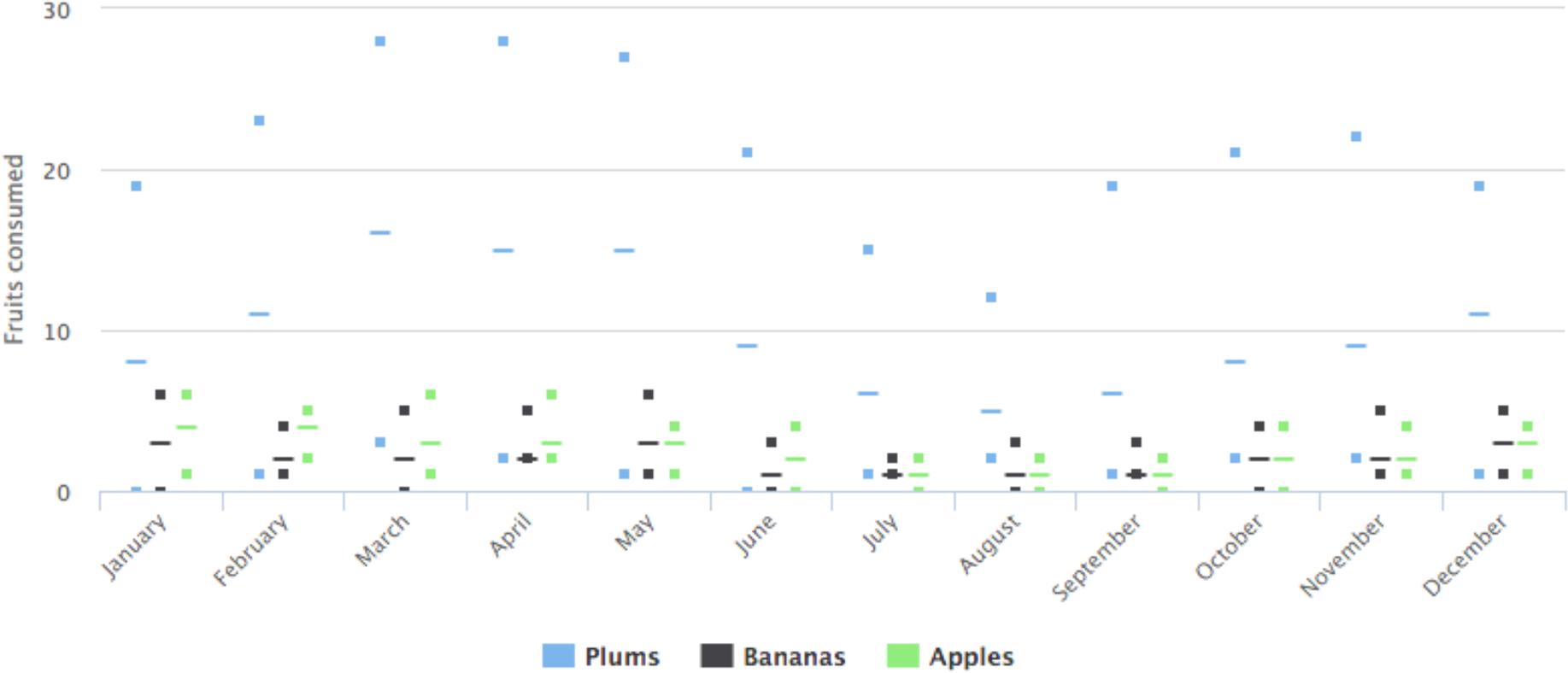
# Accessible SVG Charts Using ARIA

- Added hidden information with summary and long description about structure

- Added entry to table with the chart's data

- Added ARIA regions and labels

- For simple charts, users preferred table

- For complex charts, users preferred the SVG

# Accessible SVG Charts Using ARIA

- Demo: http://www.highcharts.com/a11y.html



Desktop screen readers from 2009 to 2015
Click on point to visit official website
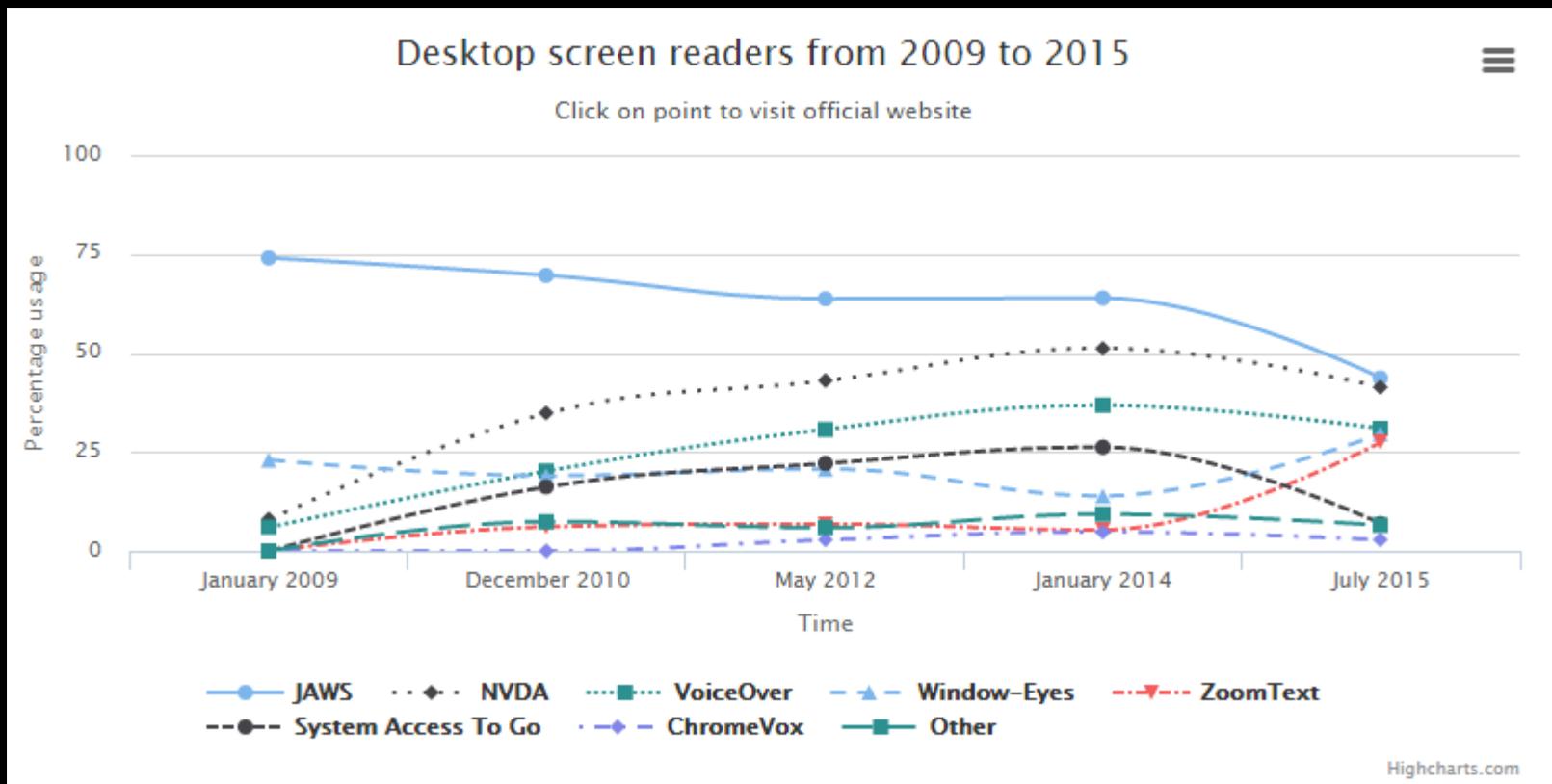
# CSUN 2016 – More information?

- Jason Kiss <jason.kiss@dia.govt.nz>
- NZ Govt Web Standards
  - webtoolkit.govt.nz
  - web.standards@dia.govt.nz