Australia's National Transition Strategy: first stage implementation report

Justin Brown School of Computer & Security Science Edith Cowan University Perth, Western Australia j.brown@ecu.edu.au Scott hollier School of Computer & Security Science Edith Cowan University Perth, Western Australia j.hollier@ecu.edu.au Vivienne Conway School of Computer & Security Science Edith Cowan University Perth, Western Australia v.conway@ecu.edu.au

Abstract—In June 2010 the Australian government introduced the National Transition Strategy (NTS), a mandatory requirement that all government websites in Australia would adhere to WCAG 2.0 Level A by the end of 2012 and AA by the end of 2014[1]. With the first deadline now past and many government websites remaining inaccessible, the failure of the NTS to date has raised questions in regards to its interagency support, community support and appropriateness of the NTS model. This paper explores the issues around the lack of NTS uptake to date: the choice of model, its implementation, and the lessons learnt and the likelihood of ultimate success as the 2014 deadline approaches

Keywords- Australia, government policy, web accessibility, WCAG 2.0, conformance

I. INTRODUCTION

The introduction of the World Wide Web Consortium (W3C) Web Content Accessibility Guidelines (WCAG) 1.0 in 1999 was widely acknowledged as a significant step forward in the provision of online information to people with disabilities. While many countries adopted the guidelines into their policy and legislative frameworks, Australia took a more ad-hoc approach. With the release of WCAG 2.0 in December 2008 [2], Australia initially appeared to miss the importance of the web standard, with no significant changes to its web accessibility processes. However this changed significantly in 2010 when the Australian Government Information Management Office (AGIMO) released its National Transition Strategy, promising to make all Federal government websites WCAG 2.0 Level A compliant by the end of 2012, and Level AA by the end of 2014. State governments and territories within Australia also made similar commitments.

While the announcement was met with praise for the government's approach to establishing a mandatory requirement on accessibility, the shift towards a uniform availability of accessible government information remained elusive. With the first deadline now past, it is important to reflect on the true impact of the NTS. In order to do so, it is first necessary to address the historical context of accessibility in Australia, the promise of the NTS, it's approach compared with that of other countries and evaluate high usage government websites to determine the likelihood of the second NTS milestone being achieved.

This paper reports in part on an ongoing research project which is following the NTS through its implementation phase, the issues that led to the perception of failure thus far, the methods used in testing various websites to confirm WCAG compliance and key insights as to how web accessibility in Australia can be progressed despite the concerns over the current approach..

II. THE PATH TO A NATIONAL APPROACH

The primary catalyst for web accessibility being viewed as an important issue was the applicability of the Australian Disability Discrimination Act (DDA) [3] of 1992 as highlighted in the Maguire v Sydney Organising Committee for the Olympic Games (SOCOG) case. The case revolved around a legally blind man named Bruce Maguire who required ticketing and race information for the Sydney 2000 Olympic Games. Part of his complaint was that the information available on the official Olympic Games website was inaccessible, primarily due to the use of images without After taking all the arguments into text descriptions. consideration, the Australian Human Rights Commission (HREOC) came to the conclusion that SOCOG had "...engaged in conduct that is unlawful under section 24 of the DDA...". [4].

As a result of the Maguire v SOCOG ruling, government policy began to acknowledge and incorporate the WCAG standard with brief references to the accessibility of online information requirements in the Federal Government Commonwealth Disability Strategy [5], but with most web accessibility policies being state-based, ad-hoc and largely implemented in a reactionary manner when issues in a particular website were raised [6]. However, the incremental acknowledgement of the importance around web accessibility and the release of WCAG 2.0 raised the possibility a specific strategy may be launched, with a number of speakers discussing the merits of a WCAG 2.0 strategy at the 2009 Gov 2.0 Roundtable on Accessibility for People with Disabilities [7]. The strategy was foreshadowed in an announcement in a media release by the Hon Lindsay Tanner MP in February 2010 that "Australians with disabilities will soon find it easier to access government information online" [8] with WCAG 2.0 selected as the policy requirements and that all government websites would be completed by 2015 [8].

III. THE NATIONAL TRANSITION STRATEGY (NTS)

The NTS was formally released on 30 June 2010 and declared to be a mandatory requirement and a formal endorsement of the Web Content Accessibility Guidelines (WCAG) version 2.0 for all government websites, superseding any policy that was previously based on WCAG 1.0. The formal release clarified the target dates by stating that all government websites must "...meet WCAG 2.0 Level A by December 2012..." and that all agencies were required to "...conform to WCAG 2.0 Level AA standard by December 2014" [9].

The introduction of the NTS heralded a significant shift in the implementation of web accessibility in Australia. The Government's Chief Information Officer, Ann Steward stated that the NTS "...sets a course for improved web services, paving the way for a more accessible and usable web environment that will more fully engage with, and allow participation from, all people within our society" [10]. The primary reasons as to why it was believed the NTS would make such a significant improvement to participation for people with disabilities was due to the NTS being the first time in Australia that a specific deadline had been set to implement web accessibility at a national level, that a formal strategy had been created and that WCAG 2.0 was acknowledged as the official Australian web accessibility standard.

The work plan for the NTS implementation was based on a three-phased approach:

- Phase 1: Preparation July 2010 to December 2010
- Phase 2: Transition January 2011 to December 2011
- Phase 3: Implementation Complete by December 2012 and December 2014

The first phase was for government agencies to take stock of their own websites, perform a conformance check, assess the website infrastructure, and assess their ability and risk in creating an accessible website. Phase 2 was designed to focus on accessibility training, procurement reviews and was the infrastructure upgrades, while Phase 3 implementation phase for accessible websites. The effectiveness of this approach hinged largely on the federal government agencies being subject to the Financial Management and Accountability Act [11], AGIMO will provide a reporting system, while agencies (those subject to Commonwealth Authorities and Companies Act) opting-in to the strategy are encouraged to report. The primary resource commitment given under the NTS is through the Web Guide [12] website with other resources to be created over time with the support of states and territories [1].

IV. IMPLEMENTATION PHASE OUTCOMES THUS FAR

Phase three of the NTS required implementation of the strategy in two parts, the first being the attainment of WCAG 2.0 Level A by the end of 2012 and then Level AA by the end of 2014. The initial research detailed in this paper indicates that the first stage of Phase three has not seen the NTS meet all of its accessibility goals.

The testing methodology included manual expert evaluation together with the use of three automated assessment tools, SortSite by PowerMapper [13], the Web Accessibility Toolbar (WAT) by the Paciello Group [14], and the WAVE extension for Mozilla Firefox by WebAIM [7]. SortSite was used to sample 2000 pages per site, while both the WAT and WAVE tools were used in conjunction with the manual expert assessments. The manual evaluation included 5 pages per site, typically being the homepage, contact us page, media pages and any pages featuring primary site information. It should be noted that there is some discrepancy between the manual testing and the automated testing results. The manual testing involved the 5 pages as stated and evaluated these pages against all WCAG 2.0 criteria. The automated testing while scheduled to check 2000 pages is unable, due to the nature and limitations of automated testing, to test more than about 35% of the guidelines effectively [5]. The automated tools were also used to test the 5 pages tested manually to verify and crosscheck results.

Table 1 lists the largest of Australia's federal government websites and their level of conformance to the first stage of the NTS implementation phase (as of end 2012).

TABLE 1: WCAG 2 LEVEL A CONFORMANCE FOR AUSTRALIAN FEDERAL		
GOVERNMENT AGENCY WEBSITES		

Organization	WCAG 2.0 Level A Pass
Prime Minister's home page	No
Australian Government entry page	No
Department of Health & Aging	No
Australian Government Information Management Office (AGIMO)	Yes
Centrelink (now in Human Services)	No
Department of Education, Employment and Workplace Relations	yes (borderline)
Department of Immigration and Citizenship	no
Department of Infrastructure and Transport	Yes (borderline)
Australian Human Rights Commission	No
Australian Taxation Office	No
Employment services	No
Australian Job Search	No (borderline)
ABC Television (principally funded by federal government)	No
SBS Television (principally funded by federal government)	No

Medicare (now in Human Services)	No
Department of Finance (replacing AGIMO)	Yes
Department of Human Services (new site encompassing Centrelink, Medicare & Child Support)	No
Department of the Attorney-General	No
Department of Families, Housing, Community Services and Indigenous Affairs	Yes
Department of Broadband, Communications and the Digital Economy	No

Table 1 shows that only three sites actually passed the manual testing unequivocally, which is to be expected given that two of those websites belonged to the Australian Government Information Management Office, the owner of the NTS. The Department of Finance site is directly linked to AGIMO so is essentially run under the same structure. The third site which met WCAG 2.0 in the manual testing is that of the Department of Families, Housing Community Services and Indigenous Affairs which is one of the agencies in the reference group which was established to monitor progress. It is interesting to note that the Attorney-General's Department, and Department of Broadband are also in that reference group but whose websites did not pass WCAG 2.0 according to our testing. Two other departments have been defined as passing (with a borderline qualifier) as they had one or two issues which while a breach of the Level A guidelines, did not impact on site usability. One other site was a borderline fail, with some small issues that did impact on usability but would require minimal adjustments to achieve Level A. The organizations in Table 1 represent only a small selection of all the organizations which come under the mandate of the NTS on a national scale, however these are the mainline federal organizations and those which provide the most relevant test case for the NTS thus far. Mostly, they have the biggest budgets, the most staff and are the organizations that provide services and oversight to other federal and state entities.

While Table 1 provides a pass/fail evaluation for the websites examined according to WCAG 2.0, it should be kept in mind that this does not take into account the severity of the issues located, their frequency, or an analysis of the impact barrier upon people with disabilities. However, the NTS requires compliance with WCAG 2.0 to Level A by this time and does not allow for these additional criteria. Space restrictions within this paper mean the presentation of deeper analysis of automated and manual assessments is not possible here, though future publications of this research project will present such detail

V. DRIVERS FOR LEVEL A FAILURE

Looking at these representative Australian government agencies, what are some of the issues that have impacted on the lack of success of the NTS in the first part of it's implementation phase? Whilst this paper is not looking to cast a final judgment on the evolving NTS implementation, it does appear that whilst the NTS has lofty goals, it is lacking in specific details in terms of how to actually put web accessibility into practice, and how to assess it afterwards.

A. ASSIGNMENT OF RESPONSIBILITY

Perhaps one of the most glaring omissions in the NTS mandate is that of assignment of responsibility for implementation of each of the phases. The NTS documentation only ever refers to 'the Agency' or 'an Agency' but never to a specific role within these agencies, such as Chief Information Officer (CIO) or Chief Executive Officer (CEO). In comparison, the Canadian government's Standard on Web Accessibility names Senior Department Officials (SDO's) and CIO's [15] as being responsible for the implementation of their accessibility implementation. Under the U.S. Section 508, which links accessibility to government procurement, Chief Acquisition Officers and Chief Information Officers [16] are amongst those named as roles responsible for applying the requirements of the policy.

Information obtained from Australian federal government agencies in September 2011 as part of this research indicates that all of the agencies in this group have an individual who has responsibility for the accessibility of the website. However this does not explain the actual portion of a person's workload directly related to website accessibility. Survey data infers that the responsibility is often a small part of an incumbent's overall employment duties. Further information obtained in November 2012 shows that the number of agencies which have staff dedicated to the accessibility function has declined to the extent that one of the agencies identifies as not having anyone in the role and another is unsure. Whilst it might be 'everyone's' task to see that accessibility is applied at all levels of an organization, surely a senior role (ie CIO) needs to be named as being ultimately responsible [17].

One agency expressed the opinion that the website accessibility compliance is not the responsibility of just one individual but is built into the requirements, development and review process. As stated above when discussing roles, this may account for some confusion as to responsibility. If everyone is jointly responsible, then who is accountable when a website fails compliance?

While it would appear that Federal government agencies are working on improving the accessibility of their websites, it is apparent that there is much work still remaining. Some agencies have commented that they are aware they have not met the WCAG 2.0 A compliance deadline of December 31, 2012 deadline, but have decided just to continue to work toward WCAG 2.0 AA by December 2014. Due to the proximity of that deadline, it leads to the question of what, if anything will happen if they also fail to meet that timeline.

Some agencies state they are planning re-development of their website and that this re-development will address accessibility concerns. This would reinforce the common feeling in web development circles that it is easier and more cost-effective to re-design a website keeping accessibility in mind than to retrofit an existing site.

B. AUDITING METHODS AND TOOLS

The NTS documentation seems unclear in Phase three, Implementation, as to whether all sites need to be assessed upon reaching the 2012 deadline for single A compliance and then again in 2014 for double A compliance. The NTS Work Plan site [18] would seem to indicate that final compliance reports are to be completed at the end of the 2014 period. It seems that a compliance report at the end of 2012 would have provided agencies and the government as a whole with a useful 'dry run' of the final report due in 2014, perhaps highlighting issues in audit processes, methods and tools. The issue of auditing methods and tools is also a critical one, in that the NTS does not specify any particular method or tool beyond stating that "AGIMO will investigate whole-of-government automated conformance testing tools. It must be borne in mind, however, that automated testing tools can only interpret a limited range of criteria [5], which means that human judgment will also be needed in carrying out the tests. This will require staff skilled in web accessibility who can understand and apply the guidelines" [18]. The Australian government's Web Guide is a little more specific in that it specifies that it is acceptable for most sites to test approximately 10% of their site (in terms of pages) and the sorts of items which should be tested, including home pages, contact details, feedback forms, search forms, online media and complete end-to-end process [19]. The Web Accessibility National Transition Strategy: Work Plan site appears to contradict this figure, stating that agencies "must ensure each web page meets WCAG 2.0 conformance requirements" [18]. Does this imply each page of those selected for assessment (say 10% of the site) or all pages in the site? It is this type of ambiguity, along with the somewhat loose language of the NTS and Web Guide documentation that allows for liberal interpretations of how agencies may perform their conformance reports. Terms such as 'At the very least', 'It is generally acceptable', 'Agencies may like to consider' and 'agencies are encouraged to complete' provide wriggle room for those agencies looking to take a minimalist approach to their accessibility commitments, at least in the short term. Whilst it may be expected that most agencies will do their best to implement the tenets of the NTS, the language of the documentation does not commit them to achieving the outcome but rather attempting to do so.

Survey results obtained from agencies about how they evaluate their websites provides further evidence about the confusion in evaluation and reporting. Some agencies have daily conformance checks for all new material, others state that they do not do any internal or external evaluation of the bnwebsite, with the rest falling somewhere in between.

C. INABILITY TO ENFORCE COMPLIANCE

Perhaps the most obvious issue with the NTS as it currently stands is its lack of enforceability. None of the NTS related documentation suggests any kind of penalty or censure for government web sites that do not achieve WCAG 2.0 AA compliance by the end of 2014. The Australia government's Web Guide indicates that once a federal site passes all the WCAG 2.0 AA success criteria it may use statements of conformance indicating they have met the 'five conformance statements of the WCAG 2.0'. Sites may also apply statements of 'partial conformance', such as where the site is heavily dependent on 3rd party providers who are not controlled by the agency or who do not come under the remit of the NTS. The final statement of the Web Guide in terms of conformance is that "where possible, agencies should aim to address accessibility issues as they occur" [19].

As far as available NTS documentation stands as of early 2013, the reward for an organization meeting NTS requirements is the ability to make statements of full or partial conformance against the NTS on their website. The apparent penalty for non-conformance is NOT being able to make such public statements. Whilst most federal agencies would relish the social capital and sense of achievement that would come from attaining NTS compliance, how this would be weighed against the time, money and ongoing effort such compliance would take remains to be seen [20].

VI. CONCLUSION

This paper has demonstrated that there are some key issues relating to Australia's National Transition Strategy that need to be addressed in order for people with disabilities to effectively use government websites. While the NTS has completed the first of two stages in its Implementation phase, an evaluation of essential federal sites within Australia has shown that, while the NTS has had a positive impact in progressing some accessibility awareness, it has yet to gain widespread traction within the government's web space. While it is commendable that Australia has taken a national approach in making government websites accessible and set specific accessibility targets unlike some other comparable countries [21]. However, the poor results of the first stage of the NTS implementation is largely attributable to a lack of resourcing and the need for a greater focus on consistent methods and toolsets [22].

The NTS provides the Australian government and the Australian population with the opportunity to proactively deal with the issue of equality of access for all things web. If this opportunity is squandered, digital citizens will continue to pursue their right to access online content and services through litigation and human rights avenues. Hopefully, the NTS and more than a decade of technical and policy development will obviate the need for further Maguire like cases to achieve web accessibility in Australia

REFERENCES

- [1] [1] Australian Government Information Management Office (AGIMO) Australian Government web accessibility national transition strategy. City, 2010.
- [2] [2] W3C Web Content Advisory Guidelines (WCAG) 2.0. W3C, City, 2008.
- [3] [3] Australian Human Rights Commission D.D.A. guide: who does the D.D.A. protect? Australian Human Rights Commission, City.
- [4] [4] W3C Web content accessibility guidelines (WCAG) 2.0. City, 2008.
- [5] [5] Vigo, M., Brown, J. and Conway, V. Benchmarkng web accessibility evaluation tools: measuring the harm of sole reliance on automated tests. In Proceedings of the W4A 2013 colocated with 22nd International World Wide Web Conference (Rio de Janeiro, Brazil, May 13-15, 2013, 2013). ACM, [insert City of Publication],[insert 2013 of Publication].
- [6] [6] Australian Government Web Guide: Accessibility. City, 2011.
- [7] [7] WebAIM WAVE Toolbar 1.1.6. City.
- [8] [8] Tanner, L. H. M. and Shorten, B. H. M. Dealing with government online to become easier for Australians with disabilities. Minister for Finance and Deregulation and Parliamentary Secretary for Disabilities, Australian Government, City, 2010.
- [9] [9] Government, A. Web Guide : Accessibility. City, 2011.
- [10] [10] Australia, M. A. Top 12 of 2012 #3 The National Transition Strategy. Media Access Australia, City, 2012.
- [11] [11] Deregulation, D. o. F. a. Financial Management and Accountability Act 1997 (FMA Act) Agencies. Department of Finance and Deregulation, City, 2012.

- [12] [12] Government, A. Web Guide. City, 2013.
- [13] [13] Powermapper software SortSite-Professional Edition. City, 2010.
- [14] [14] Paciello Group Web Accessibility Toolbar for IE, 2012. Paciello Group, City, 2012.
- [15] [15] Secretariat, T. B. o. C. Standard on Web Accessibility. City, 2011.
- [16] [16] Administration, U. S. G. S. GSA Agency Roles and Responsibilities. City, 2012.
- [17] [17] Bakhsh, M. and Mehmood, A. Web Accessibility for Disabled: A Case Study of Government Websites in Pakistan. In Proceedings of the Frontiers of Information Technology (FIT), 2012 10th International Conference on (17-19 Dec, 2012), [insert City of Publication],[insert 2012 of Publication].
- [18] [18] Deregulation, D. o. F. a. Web Accessibility National Transition Strategy : Work Plan. City, 2010.
- [19] [19] Government, A. Accessibility Conformance Testing. City, 2010.
- [20] [20] Leitner, M. L., Hartjes, R. and Strauss, C. Web Accessibility Issues for the Distributed and Interworked Enterprise Portals. In Proceedings of the Parallel Processing Workshops, 2009. ICPPW '09. International Conference on. (Sept, 2009, 2009), [insert City of Publication],[insert 2009 of Publication].
- [21] [21] Independent Hospital Pricing Authority. City, 2012.
- [22] [22] Perrenoud, C. and Phan, K. Emergence of web technology: An implementation of web accessibility design in organizations. In Proceedings of the Technology Management for Emerging Technologies (PICMET), 2012 Proceedings of PICMET '12 (July 29 - Aug 2., 2012), [insert City of Publication],[insert 2012 of Publication].