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PARLIAMENT OF TASMANIA

AUDITOR-GENERAL SPECIAL REPORT NO. 47

PUBLIC SECTOR WEB SITES

August 2003

Presented to both Houses of Parliament in accordance with the provisions of Section 57 of the Financial Management and Audit Act 1990

By Authority:

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4 August 2003

President
Legislative Council
HOBART

Speaker
House of Assembly
HOBART

Dear Mr President
Dear Mr Speaker

PERFORMANCE AUDIT NO. 47
PUBLIC SECTOR WEB SITES

This report has been prepared consequent to examinations conducted under section 44 of the *Financial Management and Audit Act 1990*, for submission to Parliament under the provisions of section 57 of the Act.

Performance audits seek to provide Parliament with assessments of the effectiveness and efficiency of public sector programs and activities, thereby identifying opportunities for improved performance.

The information provided through this approach will, I am sure, assist Parliament in better evaluating agency performance and enhance Parliamentary decision making to the benefit of all Tasmanians.

Yours sincerely

A J McHugh
AUDITOR-GENERAL

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EXECUTIVE SUMMARY

INTRODUCTION

Like other Australian states and territories, Tasmania is committed to rolling out e-government – an initiative that has the potential to deliver faster, cheaper and better services. However, the success of these services hinges on their usability and accessibility.

OBJECTIVE

The objective of this performance audit was to evaluate the effectiveness of a broad range of public sector web sites using criteria developed from accepted best practice and *Tasmanian Government Web Publishing Standards.*

Audit testing was conducted with the general user or 'man in the street' in mind, placing emphasis on usability and accessibility.

SCOPE

To obtain a broad view, we reviewed web sites across six public sector areas, viz.

- o Government departments;
- o Local government councils;
- o Government business enterprises;
- o State-owned corporations;
- o Port corporations; and
- o A statutory body.

AUDIT OPINION

Essentials

Public sector web sites did contain essential components.

Information

Information available on sites was likely to satisfy general users.

Potential problems avoided?

In the main, sites avoided design features that could undermine their usability.

Relevance and appropriateness

Web sites were relevant for users and were appropriate to the nature of the entities.

Introduction
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INTRODUCTION

Background

Worldwide, substantial resources are being committed to developing and rolling out e-Government services. The success of these programs, which have the potential to deliver faster, cheaper and better services, can be directly linked to their take up by the public. However, users will be discouraged if they find that government web sites are difficult to access, contain inaccurate or stale information or if they are difficult to navigate.

Tasmanian government web publishing principles

In February 2000, the then Premier wrote to agencies requiring that priority be given to providing all public information on the Web first and in other media thereafter. As a result, in May 2000 the Department of Premier and Cabinet, which is responsible for development of policy in relation to electronic service delivery across government, issued the *Tasmanian Government Internet Publishing Standards*. The standards enshrined principles originally spelled out in the Premier's policy directive. Subsequently, the *Tasmanian Government Web Publishing Standards* (TGWPS), published as a draft in December 2002, replaced the earlier document.

The five principles that underpin TGWPS are:

1 - Use of web publishing

Public information is to be published first on the Web.

2 - Discovery of non-web content

Public information that is not published on the Web must be discoverable on the Web.

3 - Legal requirements

Web publishing must comply with all laws.

4 - Equity of access and maximum usability

Access and usability are targeted as widely as possible.

5 - Quality and functionality

Agencies are responsible for the content and quality of their web publishing.

Web site accessibility and usability

With the tremendous impact of the Internet, much material has been produced about the accessibility and usability of web sites. Academic journals, trade publications, books and web sites themselves have increasingly addressed these topics.

For this audit, we embraced the usability principles espoused in the TGWPS that state:

> 'Web usability is the capacity of your users to effectively perform the tasks that they should reasonably expect to accomplish on your web site. This means that those tasks can be done easily, consistently, and quickly, and without prior knowledge or detailed training.
>
> Web publishing within government should be built from this one simple principle: the capacity of the site to delivery outcomes for the intended user audience.'[1]

In web design circles, the term 'accessibility' has connotations of making web content available to people with disabilities. The standard reference for accessibility is the American '*W3C Web Content Accessibility Guidelines*'. Elements of this document have been incorporated in TGWPS.

Mandate for the audit

Under the provisions of section 44(b) of the *Financial Management and Audit Act 1990* the Auditor-General may:

> 'Carry out examinations of the economy, efficiency and effectiveness of Government departments, public bodies or parts of Government departments or public bodies'.

Audit procedures were restricted to a review of web sites, as they were between April and May 2003, by the use of our evaluative methodology.

OBJECTIVE

The objective of this performance audit was to evaluate the effectiveness of a broad range of public sector web sites using criteria developed from accepted best practice and *Tasmanian Government Web Publishing Standards.*

Audit testing was from the perspective of the general user or 'man in the street' with emphasis placed on usability and accessibility.

SCOPE

Web sites from six public sector areas were reviewed, viz.

- o   Government departments;

    Economic Development
    Education
    Health and Human Services
    Infrastructure, Energy and Resources

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[1] *Tasmanian Government Web Publishing Standards*, Version 0.P, 2002, Part Two

Justice and Industrial Relations
Police and Public Safety
Premier and Cabinet
Primary Industries, Water and Environment
Tourism, Parks, Heritage and the Arts
Treasury and Finance

- o Local government councils;

  Central Coast
  Clarence
  Devonport
  Glenorchy
  Hobart
  Kingborough
  Launceston
  West Tamar
- o Government business enterprises;

  Forestry Tasmania
  Hydro Tasmania
  Motor Accidents Insurance Board
  Port Arthur Historic Site Management Authority
  Printing Authority of Tasmania
  Public Trustee
- o State-owned corporations;

  Aurora Energy
  Metro
  Tote
  Transend Networks
  TT-Line
- o Port corporations; and

  Burnie
  Devonport
  Hobart
  Launceston
- o A statutory body.

  State Fire Commission (included here with the
  government business enterprises).

CRITERIA

The objective of this performance audit was to evaluate the effectiveness of a broad range of public sector web sites using criteria developed from accepted best practice and *Tasmanian Government Web Publishing Standards.*

Four weighted criteria were applied, viz:

1. The web site contained essential features (e.g. organisational details, navigational aids, downloadability) [30%];

2. Content: availability and suitability [30%];

3. Potential problems had been avoided (e.g. dysfunctional fonts/colours, novel or gimmicky features, design elements that would disadvantage users with older technologies) [10%]; and

4. The web site was relevant and appropriate to the entity's core business [30%].

The weighting of criteria was based on the premise that deficiencies in criteria 1, 2 or 4 could make a site unworkable from the point of view of users. On the other hand, shortcomings under criteria 3 would most likely compromise the site's user-friendliness without actually preventing it from being used at all.

Standards applied

This audit has been performed in accordance with Australian Auditing Standard AUS 806 ('*Performance Auditing*'), which states that:

> 'The objective of a performance audit is to enable the auditor to express an opinion whether, in all material respects, all or part of an entity's activities have been carried out economically, and/or efficiently and/or effectively.'

Audit methodology

Currently, the auditing of web sites is topical and the range of resources available is expanding. Usability heuristics (i.e. rules used to describe common properties of usable interfaces) and automatic tools are two such options employed but no one method covers all of the potential difficulties that web users may encounter. In developing the audit methodology, we were necessarily constrained by the scope but included criteria from a number of sources.

Data was gathered by means of a test instrument that allowed the audit criteria to be applied consistently to auditee's web sites. In total, 53 criteria were used in the audit. Of these, 21 were measured on a five-point rating scale where:

- o 0 = absent/unacceptable
- o 1 = fair/barely acceptable performance on the criterion
- o 2 = satisfactory
- o 3 = good – more than satisfactory
- o 4 = very good – criterion met at a high level

The remaining 32 criteria were in a 'Yes' / 'No' format.

Audit Office ratings were based on an assessment against the above criteria but also included a degree of relativity between sites within the one sector.

Reporting

Reporting on this audit has been prepared at two levels: for the organisations themselves and the Parliament. The former reports contained a scorecard showing individual performance against each of the audit criteria (with the mean score for the relevant sector) and specific feedback on areas identified for potential improvement.

The parliamentary report, at the second tier, is a summary of the findings reported to auditees.

Timing

Planning for the performance audit commenced in December 2002. Field-testing commenced in April 2003 and was completed in May 2003 with the report being finalised in July 2003.

Resources

The total cost of the audit excluding report production costs was $50 000.

Acknowledgement

I would like to acknowledge preliminary work on the audit that was done by Ms Kiona Reyenga and Mr Kim Khor. These final-year university students worked in the Audit Office under a CPA work experience scheme in December 2002.

1   Essentials

FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

This section of the report deals with our findings and conclusions made in relation to the audit criteria. A copy of the audit criteria is given in Appendix 1.

1 ESSENTIALS

We sought to confirm whether public sector web sites contained essential components and sound design elements.

1.1 HOME PAGES

Mean = 2.8   (Min 2 / Max 4)

Users should not have to possess prior knowledge of a public sector entity to be able to find it on the Internet. For example, someone should not need to know that the Business Affairs Office is part of the Department of Justice and Industrial Relations to be able to access its site. However, we found that home pages were easily discoverable. Nonetheless, two government departments had divisions or business units (that were likely to be a perceived by the public as stand-alone organisational units) that were not back-linked to the parent entity.

We also reviewed home pages to ascertain the extent to which they contained instructional information on using the site. Smaller sites (such as those of state-owned corporations) usually had no instructional information. However, their scale or limited complexity made them relatively easy to understand. Departmental and local government sites performed well on this criterion by having information to help users access their more complicated web sites.

One irritating feature that was noted at a small number of sites was a pseudo home page that contained nothing but 'blurb'. Users have to click on a link to enter the site proper and then access lower level pages. It is hard to understand what benefit these pages are meant to deliver.

1.2 SITEMAP OR EQUIVALENT

Mean = 3   (Min 2 / Max 4)

Sitemaps or other equivalent information were available at all sites allowing users to quickly identify the content of a site.

1.3   SEARCHING

Mean = 2.3   **(Min 0 / Max 4)**

Search facilities commonly existed on local government and departmental sites. They were also found to a lesser extent on state-owned corporations and port corporations. On the other hand, government business enterprises did not have search facilities. While this may not be a problem for smaller sites, larger ones are more complex and users would have to hunt through various pages to find the information that they sought.

1.4   ORGANISATIONAL / MANAGEMENT DETAILS

Mean = 3.8   **(Min 3 / Max 4)**

A strong point of the sites we reviewed was the amount of organisational detail that was available to users. It was possible to get a clear overview of an entity, its organisational mission and services, activities, collections etc. Organisation charts or equivalents also enabled users to understand the inter-relation of divisions, branches or business units.

In many of the sites that we examined, the above data was contained in the annual report. Frequently, these large documents were in PDF format and were slow to load and navigate (see section 3.8). Originally produced for print media, annual reports often contained graphics that slowed loading times and made page scrolling tedious. An alternative solution (and one that was embraced by some auditees) is to provide the report with a table of contents, broken into smaller chapters and in HTML.

Information regarding contact details (telephone, fax, address, or an e-mail link) was also readily available from all the web sites.

1.5   LINKS

Mean = 3.3   **(Min 1 / Max 4)**

Links to resources and other repositories on the Internet were available from web sites. Mostly, these appeared to be relevant to the site's business and were likely to align with the expectations of users. However, we did find an exception with one of the port corporations where its links were mainly to businesses in the region while ignoring links to other port corporations in the state that users may have found more useful.

1.6   INFORMATION FROM USERS

Mean = 3.2   (Min 2 / Max 4)

Half (17) of the sites had some facility for transacting business with users, frequently via a link to Service Tasmania. On departmental sites, however, we noted some problems: one instance where an online application for a concession did not work and another that (paradoxically) had a complaint screen that was potentially frustrating.

1.7   PRINTING

Under this criterion we tested whether pages (especially forms) could be satisfactorily printed from web sites. No problems were encountered with this test.

1.8   CONCLUSION

We found that public sector web sites did contain essential components and sound design elements. Although we noted variation in performance between public sector areas, it was not great (maxima and minima were within an 8 point range) as illustrated in Figure 1.

Figure 1: Essential Features by Sector
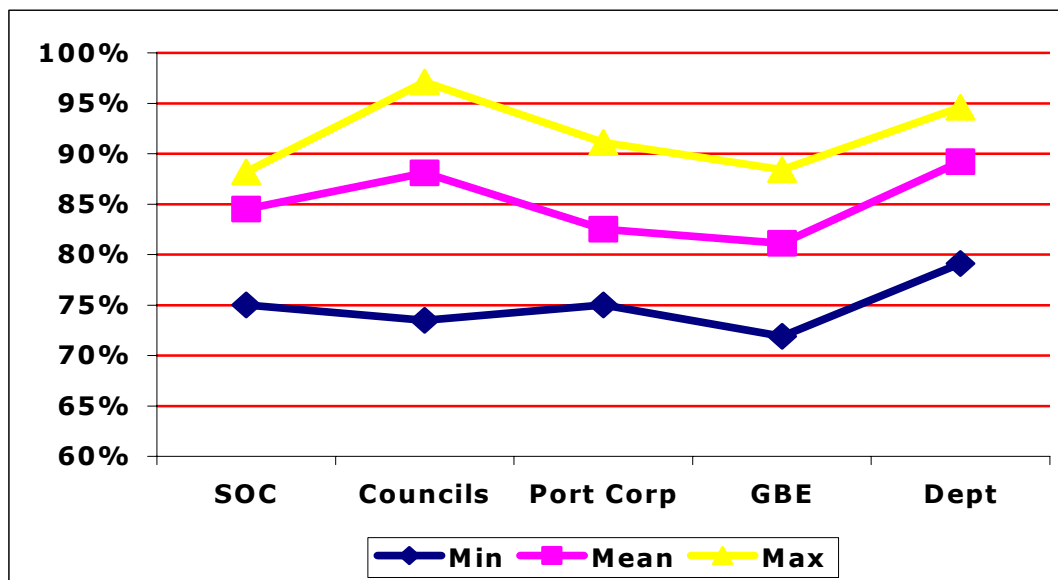
The narrow range of scores indicated that under-performance was not widespread. Government business enterprises received lower ratings on this criterion because of the lack of search facilities on their sites. For local government, the lowest individual score (73.5%) was an outlier as the next lowest which rating assigned in that group was at 83.8%.

2 Information

2 INFORMATION

We examined sites to determine whether the information available was likely to satisfy general users.

2.1 CONTENT

As a relatively new medium, users approach web content in a different way to that traditionally employed with information offered by other media. Users scan text quickly and will give up if a site is focussed on presentation rather than functionality. Thus, web designers should present pages that match this behaviour. It may also be necessary to rewrite content to make it simple and easy to scan.

Concise and objective

Mean = 3.2   (Min 1 / Max 4)

Text on most sites was concise and objective as reflected in the high mean score. At the bottom of our rankings were a state-owned corporation and a council where it was apparent that documents on their sites betrayed a lack of understanding of the usability principles referred to above.

Content can be downloaded

Mean = 3.4   (Min 2 / Max 4)

Although it was possible to download material from all web sites some were easier to use than others. For most, downloading was a straightforward matter. Amongst the situations that may create problems for users we found examples of the following, where text was:

- o Embedded in a graphic object;
- o Only available from a PDF document; and
- o Presented as part of a table.

Each of these situations requires the user to manipulate the downloaded material and introduces possible pitfalls.

Community languages

Mean = 0.4   (Min 0 / Max 3)

Our review did find some examples of sites with material available in languages other than English, viz.

- o Entities with an international focus (e.g. export or seeking overseas economic investment) there was some evidence of foreign language material

(e.g. Forestry Tasmania, Department of Tourism, Parks, Heritage and the Arts);

o Three departments had sites that mentioned the TIS-Translating and Interpreting Service; and

o The Department of Infrastructure, Energy and Resources had an online research tool, 'IRIS' that was available in five European languages.

Aside from these examples, offerings on public sector web sites in community languages (for people who do not speak English very well) were very narrow. This situation may well exclude Internet access to many residents of the State and was ironic given that one of the council sites had population data regarding the ethnicity of its residents.

Ratings assigned by area were:

o Government departments   1.3

o Local government councils   0.0

o Government business enterprises 0.1

o State-owned corporations   0.0

o Port corporations   0.0

Up-to-date content

Generally, material on sites that we reviewed was current although exceptions were noted. There were cases where general information about an entity's products and services was outdated. Also, one government business enterprise had a listing of events that had not been updated since May 2002.

Communications available

All sites incorporated e-mail links to enable users to provide feedback or submit questions.

2.2   SUMMARIES

Mean = 3.3   (Min 2 / Max 4)

As mentioned in section 2.1, users tend to scan rather than read web pages. Accordingly, the most important information in a text-heavy page should be presented at the very top since on-screen reading is tedious and users may not otherwise be tempted to go beyond the top of a page.

As indicated by the scores assigned, users should be able to quickly determine whether the page they are viewing has the material that they are seeking.

2.3 INFORMATION ABOUT PRODUCTS AND SERVICES

Mean = 3.8   **(Min 2 / Max 4)**

In most instances, users would be very likely to understand the products and services that a particular entity would deliver, regardless of the sector within which it functioned.

The lowest ratings were given to some council web sites because it seemed that they were designed with the presumption that a user needed some prior knowledge of local government. On their web sites, these particular entities laid emphasis on the benefits of the geographic areas that they serviced ('happy talk') without clearly stating the council's *raison d'être.*

2.4 PUBLICATIONS

Mean = 3.7   **(Min 0 / Max 4)**

Further to the points made in section 1.4, users could access the current annual report at all the sites (with the exception of one government business enterprise) and usually the report from the previous year as well. As expected, the range of other available publications mirrored the business operations of the entity. However, general documents such as media releases, corporate plans, public policies and accountability documents (such as customer service charters) were frequently offered online too.

Entitlements to government assistance

Mean = 3.4   **(Min 3 / Max 4)**

In the context of publications, we examined the extent to which users could find information about entitlements to government assistance. Although this issue did not affect 15 out of the 34 entities, we found that those sites to which this criterion did apply had met the requirement well.

Copyright and disclaimer notices

Public sector web sites should carry copyright and disclaimer notices. Copyright notices give visitors to Government websites a limited licence to use the material published. Disclaimer notices advise that the Crown and its employees and agents are not liable for losses resulting from the use of information on a site.

Official web versions of the whole-of-government copyright and disclaimer were prepared by the Office of the Solicitor-General for application to all web publishing by the Crown.

With respect to copyright notices, the web sites of 13 entities (38%) did not have one. With disclaimer notices the situation was better in that 8 (24%) sites did not have one.

2.5   CONCLUSION

We found that sites did contain information that was likely to satisfy general users.

However, the 'Information' criteria yielded a wider range of scores than those recorded for 'Essentials'. This was probably because there was a greater consensus in what was regarded as essential, whereas entities felt that they had more leeway in deciding the content for their websites.

Figure 2: Information by Sector
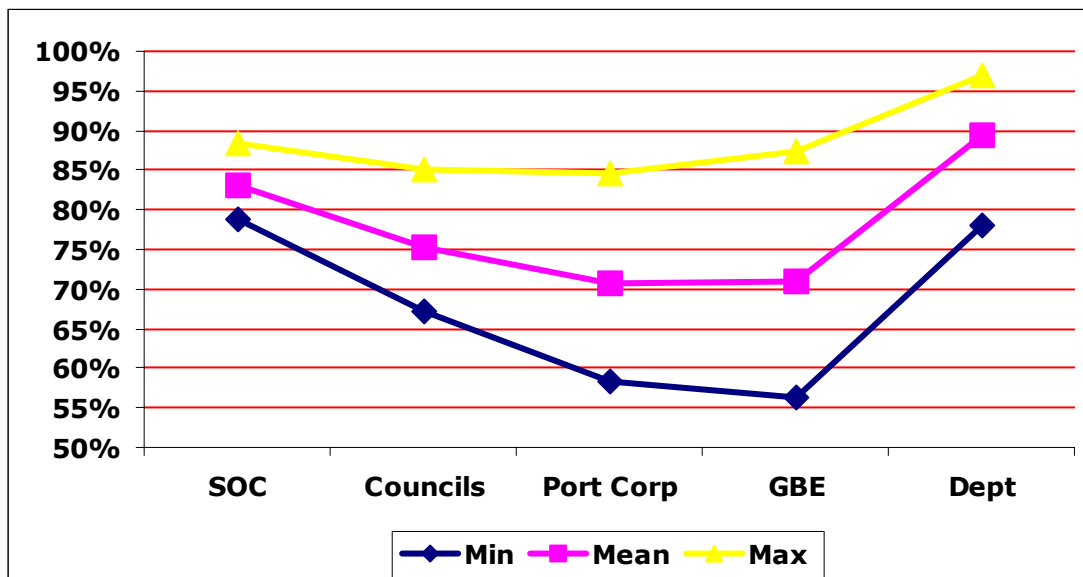
As can be seen in Figure 2, the lowest scores noted were for government business enterprises, port corporations and local government. Reasons for which these entities received lower ratings included:

- o   No annual report;

- o   No copyright or disclaimer notice;

- o   Out of date content;

- o   Downloading problems; and

- o   Proliferation of PDF documents - often without any kind of descriptive or introductory text.

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3   Potential problems avoided?

3   POTENTIAL PROBLEMS AVOIDED?

We examined sites to ascertain whether they incorporated design features that were likely to compromise their usability.

3.1   POTENTIAL PROBLEMS - SUB CRITERIA

A fundamental principle for web designers is to consider the needs of their users. These could be people with physical or other disabilities or who may be using old hardware or software or have text-only screens.

The *Tasmanian Government Web Publishing Standards* makes the following point about usability:[2]

> '[It] is not about whether your users are excited or impressed by your web site, but about whether your users can accomplish what they set out to do. A web site that delivers user outcomes creates a better impression and generates more return traffic than one that looks flashy.'

Because the potential problems that we were looking for either existed or were absent, the questions in this criterion were of the 'Yes' / 'No' type rather being ratings on a scale.

3.2   DISPLAYING INFORMATION

The way in which information is displayed on screen in a web page greatly influences the site's usability. If text is awkward to read, the visual elements difficult to discern or the organisational structure hard to fathom, then effectiveness of the site is compromised. Within this sub-criterion we were concerned with clutter, font problems and the use of colours.

Clutter

Isolated examples of cluttering that we found included too much information and too many choices on a page. Other problems were buttons and graphics that looked like links but were not (3 examples) and pages that lacked sufficient white space (4 examples). The only sector to avoid instances of clutter was state-owned corporations.

Fonts

The most common font problem, and one that was noted in all sectors, was the use of small point sizes. Frequently in the range of 4 – 5 points, text in this format would certainly create

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2 *Tasmanian Government Web Publishing Standards*, Version 0.P, 2002, Part Two

difficulties for users with visual disabilities. On some sites, small fonts were used sparingly (e.g. the notice at the bottom of the home page) but on others their use was widespread. The effect of small fonts was less challenging when displayed against a strongly contrasting background. However, the situation was compounded where a poor choice of colours had been made rendering some text practically illegible (such examples included white text on a pale grey background and yellow text on white background).

Only one instance of non-standard fonts (i.e. cursive) was noted, at a government business enterprise. The impact was mitigated by the font's limited use but it did appear to be an unnecessary novelty that could irritate users.

Use of colours

Problems associated with colours were not matters of aesthetics but serious obstacles to usability. For an element to be visible on a screen, it must contrast sufficiently with its background. Colour-related shortcomings that we noted included:

- o Clashing combinations;
- o Busy backgrounds; and
- o Lack of contrast.

The former two situations were isolated but lack of contrast was observed in each of the sectors. As mentioned above, the effects of poor contrast were exacerbated when combined with tiny fonts.

3.3 GRAMMATICAL OR TYPOGRAPHICAL ERRORS

These kinds of errors can undermine a user's belief in the credibility of information as well as conveying an unprofessional image of an organisation. We found examples at a government business enterprise and a department (2 cases). Surprisingly, one was a typographical error that would have been picked up by a computer spell checker.

3.4 LACK OF NAVIGABILITY

Visitors to a web site unconsciously ask themselves two questions: "Where am I?" and "Where can I go next?" Good navigation should provide answers regardless of where users are on a site or how they came to be there. One method is the use of a breadcrumb trail (e.g. *Home>About Us>Corporate Information>Organisation chart*) where a user can click on any link to return to that page.

Provided a user entered a site via the home page, the back button was a reliable way to return. Understandably, smaller sites are easier for a user to find their way around than larger ones because the range and number of sub-sectional pages is reduced. Thus, sites for state-owned corporations, councils, port corporations and government business enterprises tended to only have minor shortcomings with navigation (e.g. not having a link back to the preceding level).

Departments were more complex in their structures and activities and thus needed better aids to navigation. Two departments had instances of inconsistencies in navigation. Each had divisions with their own distinct home page that were not linked back to the parent home page.

3.5 NOVEL (I.E. FRUSTRATING) DESIGN FEATURES

Mostly, sites were free of annoying and distracting design features but two examples were noted. One was the use of 'Splash' animation (at a port corporation and a government business enterprise) where pages loaded up slowly piece-by-piece. The novelty value of such features quickly wears off and is likely to frustrate users.

To conserve space on home pages one approach is to use rollovers that 'pop up' an explanatory graphic as the cursor points at a thumbnail image. On the down side, though, the user has to seek them out, they can only be seen one at a time their transitory character makes them harder to read than text that stays put. The case that we observed was at a government business enterprise site.

3.6 NEW CONTENT

When new content is added to a web page its presence should be made obvious to users. The convention is for a 'What's new' link on the home page where it is maximally accessible. Apart from one exception (a council), new content on all sites was easily found.

3.7 ARCHIVES

With regard to archives we wanted to establish whether they could be accessed, if they held sketchy details or were only available for a short time. Only seven sites had archives and these were at state-owned corporations, councils and departments. However, with this relatively small number there were three that did not function properly. Despite being shown

as available, items either would not be load or generated unhelpful (or incomprehensible) error messages.

3.8   SLOW TO LOAD

The biggest problem with slow loading times concerned the use of PDF documents and this was observed across all sectors. While some sites advised users of the size of the file or estimated loading times in minutes, others had no such notice. In this latter situation, clicking on a link could open a PDF file without the user being aware beforehand. For large documents, such as annual reports or policy documents, it could take 3 – 5 minutes to load. Our testing was conducted via the Audit Office's network that has high-speed connections. For home users, or others without the benefit of high technology equipment, the delays would be considerably longer. Even when loaded it was often difficult to move around large documents, even more so when they contained plentiful graphics.

As mentioned in section 1.4, an alternative solution (and one that was embraced by some auditees) is to provide documents in HTML or to break them into smaller chapters and link them.

On one of the departmental sites all pages were slow to load (between 6 – 20 seconds per page). This made navigation tedious and would quickly exasperate users.

The use of 'Splash' animation (see section 3.5) was another source of delay in loading web pages.

3.9   CONCLUSION

We found that, in the main, sites avoided design features that could undermine their usability.

Figure 3: Avoidance of Potential Problems

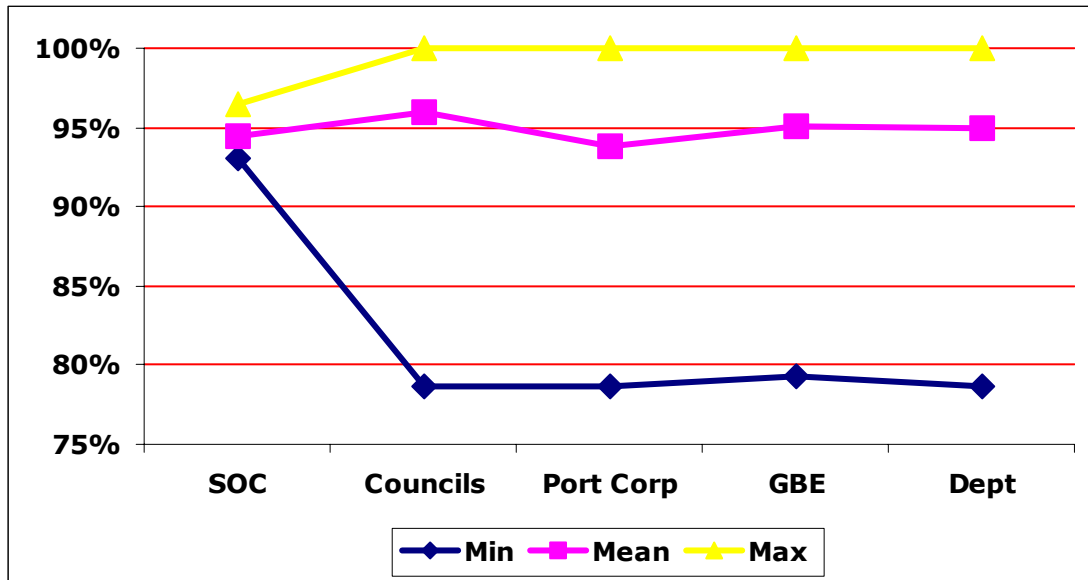Figure 3 reveals that the maxima and means were grouped closely indicating that most sites performed to a high standard against this criterion. Those with the lowest scores were in the minority although some needed considerable improvement. The most commonly encountered problems concerned:

- o Font sizes;
- o Use of colour / contrast;
- o Archival problems; and
- o Slow loading times.

4   Relevant and appropriate

4   RELEVANT AND APPROPRIATE

We reviewed web sites' relevance for users and their appropriateness to the entities' core business.

4.1   RELEVANCE

Mean = 3.3   (Min 3 / Max 4)

To make an assessment of relevance, and in keeping with the audit's 'man in the street' perspective, we examined sites to ensure that the information there would be likely to satisfy the expectations of an average user.

Of course, users' expectations would vary depending on the nature of the business environment in which the entity operated. Because of their similar roles, the sub-criteria for councils and port corporations were the same, respectively. Against this, we individually tailored the sub-criteria for state-owned corporations, government business enterprises and departments.

Across the board, we found that the choice of information presented on public sector web sites was very relevant for users. Ratings for all entities were in the range of 3 to 4 with a mean of 3.3.

4.2   APPROPRIATENESS

Mean = 2.9   (Min 1 / Max 4)

We wanted to establish that sites were fitted to their intended target audience. In doing this we were guided – in part – by the TGWPS that states:

> 'Unlike NineMSM etc, government on the web is not about entertainment, market share, or moulding opinion, but about delivering services in an equitable and accessible manner, and with content that can be understood by the average user.'[3]

The web has developed and refined its own publishing conventions. Although these greatly aid users in their understanding of site dynamics, it sometimes appears that designers are reluctant to take advantage of them. One commentator explains this phenomenon in the following way:

> 'Faced with the prospect of using a convention, there's a great temptation for designers to re-invent the wheel instead,

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3 *Tasmanian Government Web Publishing Standards*, Version 0.P, 2002, Part Two

largely because they feel (incorrectly) that they've been hired to do something different, and not the same old thing.'[4]

Overall, the mean scores were in the range of satisfactory to good. Departments and councils had mean scores of 3.1 and were closely followed by state-owned corporations at 3.0. A lower score of 2.7 was assigned to government business enterprises with port corporations coming in at 2.3.

In each of the last two sectors, a single entity's low score resulted in the reduced aggregates. One of the low scores was due to a lack of important information that users could reasonably expect to find, while the other was a result of a site that had sacrificed its usability for a novel design.

4.3   CONCLUSION

Based on our testing, web sites were relevant for users and were appropriate to the business environment of the entities.

Figure 4: Relevance / Appropriateness of Sites
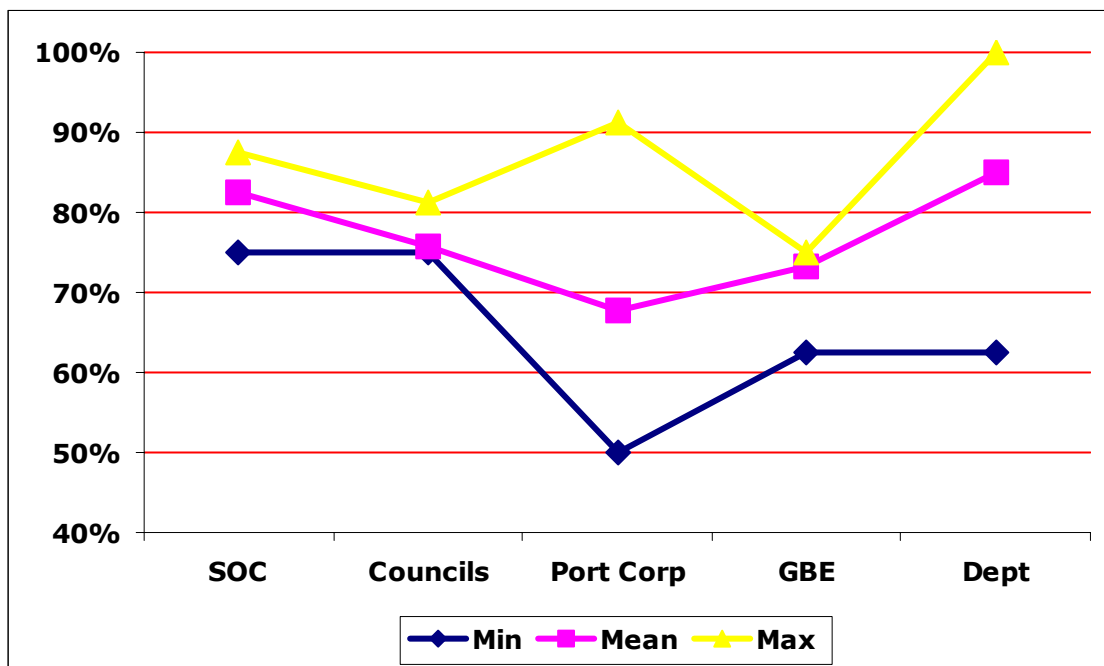
Ratings for relevance were higher than those for appropriateness and it is the latter category that largely accounts for the lower scores in Figure 4 below.

In general terms, the appropriateness of sites could be improved by ensuring that:

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[4] Krug, S. *Don't Make me Think*: A Commonsense Approach to Web Usability. Circle.com Library, 2000, Indianapolis, p34

- o Sites are designed to address user needs;

- o Legitimacy of material and consequences of its use are spelled out in disclaimer notices;

- o Text equivalents are offered for non-text elements; and

- o There are alternatives to higher-level technologies.

APPENDIX 1:   AUDIT EVALUATION SPREADSHEET

SECTION 1 - ESSENTIALS

Weighting 30%

1.1   *Homepage*

a   As the major entry point to the entity, do those distinct business units - where there is likely to be a public perception that they stand alone as an organisational unit - have their own homepage?

b   To what extent is there instructional information on using the site at the front page rather than at search engine. (Scale)

1.2   *Sitemap*

What is the quality of sitemap (i.e. an interactive table of contents, that lists items and links directly to their counterpart sections of the web site)? (Scale)

1.3   *Searching*

a   To what extent is there a search facility that works on key words to aid the user in finding sought material? (Scale)

b   Is the existence of site made known through government web directories or search engines?

1.4   *Organisation details*

a   To what extent can the user gets an overview of the entity (its services, activities, collections etc.? (Scale)

b   Is it possible to identify the inter-relation of divisions, branches etc. (i.e. organisation chart or similar)?

1.5   *Executive / management details*

a   To what extent can the user identify the staff / positions with prime responsibilities? (Scale)

b   Is there information regarding location, phone number, mail address, or an e-mail contact (the e-mail address on the site should be displayed as text; some browsers can't use a 'mail to' tag)?

1.6   *Vision or mission statement*

Does the website have a broad statement of the organisational goals or objectives?

1.7   *Links*

a   To what extent is there a listing of other web sites that are related or useful to users? (Scale)

b   Does each page indicate which section it belongs to? (Scale)

c   Are links to other pages clearly marked?

1.8   *Information from users*

a   To what extent are any pages that provide an online service to the public (such as payment, application forms) easy to use & trouble free? (Scale)

b   Are forms to be filled in arranged horizontally, from left to right then down (i.e. tab is across the screen)?

c   Are fields are long enough to contain the required information?

d   Are users provided with explicit policy on how user's privacy rights are protected?

1.9   *Printing*

Can pages be printed satisfactorily (especially forms)?

SECTION 2 - INFORMATION

Weighting 30%

2.1   *Content*

a   To what extent is the text concise and objective - would a word count for web documents be significantly less than for print publications? (Scale)

b   To what extent is jargon, technical terminology, unexplained acronyms, or other obscure or confusing phraseology avoided? (Scale)

c   To what extent are documents broken up into smaller chunks and linked? (Scale)

d   To what extent is content is downloadable? (Scale)

e   Are error messages informative and in plain English?

f   To what extent is content is in relevant community languages? (Scale)

g   Is the content up to date?

h   Are there communication options available to allow users to interact (e.g. feedback or questions)?

2.2   *Summaries*

To what extent are important points placed at the start of documents so that they appear in the first screen viewed? (Scale)

2.3   *Outcomes / outputs*

To what extent does the site contain information about products or services that are to be delivered? (Scale)

2.4   *Publications*

a   To what extent can the user access documents such as annual reports, media releases, corporate plans, public policy, accountability documents, prospectuses, etc? (Scale)

b   To what extent is there information about agency powers affecting the public (are there manuals and other documents used in decision-making affecting the public)? (Scale)

c   To what extent can users find information required to understand entitlements to government assistance and/or the requirements of government that apply? (Scale)

d   To what extent is information provided to meet prescribed community/legal/service obligations by the entity? (Scale)

e   Is there a Liability statement re official status of information, liability for errors on the site, etc?

f   Are Copyright statements provided?

SECTION 3 - POTENTIAL PROBLEMS (SHOULD AVOID)

Weighting 10%

Does the site avoid?

3.1   *Aesthetic problems(Scale)*

- Clutter –

a   Too much information?

Too many choices on a page?

Too many different little buttons, lines, etc.?

Graphics that look like buttons not acting like buttons?

Not enough white space? (The pages should be balanced giving the eyes a break with empty space.)

Horizontally arranged options? (Vertically arranged options are scanned more easily than horizontally arranged ones.)

- Font problems –

b   Fonts that are too small or hard to read?

Non-standard fonts?

Inconsistent styles assigned to headings and body text?

- Colour problems –

c   Clashing combinations?

Busy backgrounds?

Lack of contrast?

Reliance on screen format (i.e. information cannot be viewed on older PCs)?

3.2   *Grammar or typographical mistakes*

A lack of thorough and careful proofreading?

3.3   *Lack of navigability*

a   Difficult and inconsistent navigation? (There should be a bar, preferably along the left side or top of the page, since these will stay in those corners regardless of screen resolution, giving the user access to other areas of the site.)

b   Lack of feedback on where you are within the site?

c   A lack of clear indication of what web site each page belongs to? (Users may access pages directly without coming via the home page.)

d   The 'Back' button not working?

e   Too many icons (instead of text to guide users)?

f   Unconventional navigation models? (E.g. menu not on L/H side or on bar.)

3.4   *Choice of Programming Language.*

Extensive use of JavaScript where HTML can do the job as well? (This may cause problems of compatibility with some browsers, especially in relation to links. A better approach, if annotation for the link is needed, is to use JavaScript only for the mouse-over comment, leaving HTML for the link, for when JavaScript is disabled.)

3.5   *Image viewing.*

Inappropriate use of 'thumbnail' images? (If there are 'thumbnails', (tiny versions of a picture) it should be possible to preview the image without having to load the entire image file.)

3.6   *Title lines.*

Useless title lines? (They should be very specific to page content or site name to aid searches or subsequent book marking, with no more than 8 words, ideally around the average of 4 words.)

3.7   *Design features.*

'Novel' design features that are frustrating, time-wasting or useless? (E.g. - Splash (loads up page slowly, piece by piece), Flash (images or text that moves around the screen), animation.)

3.8   *Headlines.*

Headlines that are too short? (Every good page deserves a full paragraph of 'link text'.)

3.9   *New Content.*

Hard-to-track new content? (Lacks a '*What's New*' page - or similar - to track changes made to the site.)

3.10   *Archives.*

Archives impossible to browse? (Sketchy details or short-term availability.)

3.11   *Loading*

Is the site slow to load? (Times taken to download.)

3.12   *Privacy issues*

Information on the website (particularly about staff) compromising privacy requirements?

SECTION 4 - RELEVANT / APPROPRIATE

Weighting 30%

4.1   *Relevance*

Is the information contained on the site all the information the average user would expect to find? (Scale)

4.2   *Appropriateness*

Is the site the most appropriate given the nature and services provided by the entity?

APPENDIX 2:   MEAN SCORES FOR CRITERIA RATED 0 - 4[5]

Criterion	N	Min	Max	Mean
Essentials				
Instructions on home page	33	2	4	2.8
Sitemap or equivalent	34	2	4	3
Search facility	31	0	4	2.3
Overview of the entity	34	3	4	3.8
Responsible staff or positions	34	0	4	2.7
Links to other web sites	34	1	4	3.3
Page – section linkage	34	2	4	3.1
Online services satisfactory	17	2	4	3.2
Content				
Text concise and objective	34	1	4	3.2
Terminology acceptable	34	3	4	3.2
Documents chunked and linked	34	2	4	3.4
Downloadable content	34	2	4	3.4
Relevant community languages	34	0	3	0.4
Summaries	34	2	4	3.3
Information about products / services	34	2	4	3.8
Reports, plans etc	34	0	4	3.7
Agency powers	21	2	4	3.2
Entitlements	19	3	4	3.4
Obligations	22	2	4	3.0
Relevant / appropriate				
Relevance	34	3	4	3.3
Appropriateness	34	1	4	2.9

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[5] 0 = absent/unacceptable; 1 = fair/barely acceptable; 2 = satisfactory; 3 = good – more than satisfactory; 4 = very good – criterion met at a high level

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