

## CHAPTER 10

# GUIDELINES FOR GOVERNMENT WEBSITES IN SOUTH AFRICA: A PROPOSED MODEL

## 1. INTRODUCTION

With the evaluation of the *SA Government Online* website it became evident that many online survey respondents and some user test respondents did not distinguish between the *SA Government Online* website, serving as an entry point to government information, and the respective government sites that it linked to. They expected to find all government information from on the Government Online site, and incompleteness, lack of currency and poor organisation of information on the other government websites also reflected negatively on this website. For example, it is worth noting that 21,1% of motivations provided by respondents in the online survey in relation to the currency of information on *SA Government Online* related to the frequency of updating of the websites of other government departments. In addition, the second largest number of suggestions on how the website could be improved related to government web publishing in the broader sense of the word and not to the *SA Government Online* website as such (see chapter six, paragraph 5.8.2 and table 17). While the *SA Government Online* website thus demonstrated a laudable effort to augment the accessibility of online government information, the perceptions of and the quality of other government websites had a negative effect on the success of *SA Government Online*.

Also, the results of the government website audit (South Africa, CGIS, 2001) made it clear that South African websites did not comply with a broad spectrum of general usability criteria and government website requirements, and that there was no standardised approach for the content, architecture, navigation, and look and feel of South African government websites at the time the audit was conducted.

Furthermore, the South African government had committed itself to a vision for e-government (South Africa, DPSA, 2001:16). An area that should conform to e-government principles is that of government website publishing. Korsten (2001:152) states that a key goal of e-government should be simplifying citizen's access to government, while providing choices and options for interaction. Recommendations to achieve this include expanding the diversity of resources available through websites, ensuring that information on

government websites is more even with regard to the breadth and depth thereof and improving currency. In addition, it is recommended that government develop a whole-of-government approach to ensure consistency, cost-effectiveness, interoperability and transparency within government, amongst which should be standards for ensuring a minimum, common set of content, metadata, electronic publishing and government services.

These findings and recommendations confirm Johnson (1996), Nielsen (1999b) and other authors' view that the usability of government websites suffers if there is not some sort of integration or common approach to web page publishing in the whole of government. According to the Australian strategic framework for the information economy (Australia, NOIE, 1999), a whole-of-government approach will ensure consistency, cost-effectiveness, interoperability and transparency within government. It will also lead to improved quality and accessibility of online government information, help to ensure that online government information and services are provided to a consistently high standard, and that users develop confidence in government websites (Korsten, 2001:173).

The purpose of this chapter is to present a model for South African government website guidelines and standards. The model is based on criteria used for the evaluation of SA *Government Online*, lessons learned during the evaluation thereof, and results of the government website audit performed in 2001. In addition, guidelines developed for other governments were consulted and then modified for the South African situation. The following sources were consulted: *Online information service obligations* (Australia, DCITA, 2001); *Guidelines for Commonwealth information published in electronic formats* (Australia, DFA, 2000); *Australian Government locator service user manual* (Australia, National Archives, 2000); *Better practice in online service delivery* (Australia, NOIE, 2000); *Guide to minimum website standards* (Australia, NOIE, 2001); *Common look and feel for the Internet* (Canada, Treasury Board, 2002a); *Government of Canada Internet guide* (Canada, Treasury Board, 2002b); *Guidelines for designing a government website* (India, MIT, 2000); *Guidelines for the use, management and design of New Zealand public sector websites* (New Zealand, SSC, 2001); *NHS identity guidelines: websites* (United Kingdom, NHS, 2001) and *Guidelines for UK government websites* (United Kingdom, Office of the e-Envoy, 2001).

## 2. APPROACH FOLLOWED FOR THE PROPOSED MODEL

After studying the government guideline documents (see previous paragraph), the author came to the conclusion that governments approach the extent to which certain issues are prescribed in different ways. For example, the Indian government (India, MIT, 2000), provides a brief document containing government website goals, content requirements (prescribed) with design and scanning advice, as well as advice on the maintenance of the website. The New Zealand guideline document (New Zealand, SSC, 2001) is more comprehensive and includes management issues, minimum content requirements, basic HTML implementation requirements and a mixture of requirements and good practice advice on content, navigation, display of information, and accessibility (text, fonts, tables, graphics). It also contains principles for e-government and advice on purchasing web hosting and design. The Canadian web guidelines (Canada, Treasury Board, 2002b) are the most prescriptive and set specific standards that have to be adhered to. A separate document that provides guidelines and best practices for government websites is also available.

It is the author's belief that, while it is important for each government website to be reflective of the character of its department, South African government web publishing will benefit from a more standardised approach. This will mean that all government websites will have some elements in common in order to create a corporate image for the government and will assist users in navigating government websites and finding information quickly and easily. The approach taken for the proposed guidelines was thus to work towards a balance between government-wide and organisational branding, in order to maintain an appropriate degree of consistency while giving government institutions freedom to develop websites that serve a variety of line-specific functions.

Guidelines and principles that relate directly to government website publishing, and not the broader spectrum of e-government (for example frameworks for gateways, digital TV, smart cards, corporate IT strategy, digital signatures, security, privacy, authentication, etc.) are included in the model. Furthermore, as in the case of the evaluation of the *SA Government Online* website and the government website audit, the guidelines concentrate on content, site architecture and navigation, and overall design aspects, and not on detailed page design or technical accessibility aspects. In addition, management aspects relating to the maintenance of government websites are also included. To put the proposed guidelines within a broader framework of a comprehensive document that should eventually be

developed, additional issues not covered in the model are briefly mentioned in paragraph four.

### **3. MODEL FOR SOUTH AFRICAN GOVERNMENT WEBSITE GUIDELINES AND STANDARDS**

#### **3.1 Planning the website**

##### **3.1.1 Introduction**

Before a website can be developed, proper planning is vital. Basic aspects that should be considered are discussed in the following paragraphs.

##### **3.1.2 Purpose or aim of the website**

A government institution should have a clear purpose for its web initiative to ensure the project's success. The following is necessary to achieve this:

- A clear understanding of how this initiative will fit into the priorities of the South African government in general.
- The website ought to be situated within the context of the government institution. The institutional mandate, mission statement, annual reports and direction statements may be reviewed to do this.
- The expected benefits of the web initiative ought to be stated, e.g. why should the government institution have a website, what will its objectives be, and what value will the web initiative add to the overall institutional framework?

##### **3.1.3 Audience identification**

A government institution should know who the core and non-core audiences for its website are. In planning a website, market research should be done and potential audiences consulted.

An understanding of the target audience is important and will determine how the website will be designed and developed. For example:

- The aim of the website will influence the approach of the website, e.g. is the information intended for a younger or older audience?

- The audience's language skills will have a bearing on how the information is structured and on the level content is presented.
- Will the audience comprises mostly one-time users, or mostly repeat visitors? This information will be important in planning both the site structure and the information interface.
- Will users be browsing or will they already know what they want and expect to find it quickly? An efficient user interface should cater both for those who browse and those who want rapid access.
- The audience will determine the likely technical capability of their computers, e.g. what modem speed and browsers they are likely to have.
- Presentation will be influenced by a consideration such as whether the audience will have plug-ins to download information.
- Will the site be enhanced or hindered by the use of presentational graphics? If the audience is primarily concerned with rapid information retrieval, the objective may be better achieved with a well-structured text-only site.
- The design of the website will be affected by all of the above factors.

#### **3.1.4 Identification of content**

Suitable content should be identified and created before the website is developed.

The normal procedures for an information audit should be performed to identify information and communication products available in the government institution, e.g. brochures, reports, fact sheets, etc. Literature outside the institution (i.e. relevant material found in other departmental publications and libraries), as well as websites relevant to the institution's web content may also be identified to see what other information is available for possible inclusion.

Each identified information item should be carefully considered with regard to its appropriateness for inclusion on the site. Questions should be asked on the aim of the information and on what the document should achieve – information selected should support the purpose of the website and be useful and effective for the intended audience. Each potential client group has specific expectations that should be considered when selecting information and services for the website. When choosing content, material that both satisfies a clear service objective and is accessible to the intended client groups ought to be considered.

### 3.1.5 Type of website

Until recently most websites comprised a series of 'static' pages within an HTML structure. While useful for presenting information, this type of site allows for little interactivity and can be slow and expensive to update or restructure. This is especially relevant for sites with large amounts of information, or information that changes frequently.

A more flexible approach is the 'dynamic' site where part, or all of the content, resides in a database. The website itself consists of one or more design templates that define the site's look, along with some programming that describes which categories of information from the database are to be included and where they will appear. When the site is used, the pages that appear in users' browsers are in fact assembled 'on the fly', or in real time, from the templates and relevant information from the database.

The 'dynamic' approach offers opportunities for interactivity and decentralised maintenance and can reduce the production overheads of a website. Users are served only the information that they need at the time, and different role-players can share the responsibility for the information. When considering this option, the following should be kept in mind:

- The method of dynamic publishing should create pages that are accessible to everyone.
- All browsers should be able to read the dynamic pages.
- The system should be simple to administrate and manage
- The syndication of data from specific owners will most probably be required. Content owners will have to become responsible for a particular page or group of pages.

## 3.2 Content development

### 3.2.1 Introduction

A crucial element of an effective government website is good content. Government institutions should develop websites with authoritative and up-to-date information that is comprehensive, well written, clear and concise, caters for a wide range of audiences and is easily accessible.

### 3.2.2 Ensuring a minimum, common set of content

#### 3.2.2.1 Standard

South African government websites should contain a minimum, common set of content. Within the parameters set below, it is for individual institutions to determine how to best organise content with their own audiences in mind. Individual sites may offer enhanced content.

#### 3.2.2.2 Rationale

A minimum set of content on government websites will contribute to information on government websites being more even with regard to the extent to which information is made available (e.g. the depth and breadth thereof) and will ensure that information is readily available online. It aims to establish an expectation for users of what might be found on South African government websites and to contribute to a common look and feel for government websites.

#### 3.2.2.3 Implementation requirements and guidelines

The following main information categories should be available, and the same language should be used for labelling main categories.

##### (a) Main categories and information required

- About [the institution]. This category should provide an overview or introduction to the government institution and should include the following information:
  - Minister responsible for the institution with his/her profile, responsibilities and contact information (telephone, fax, physical address, postal address, e-mail).
  - General contact information for the government institution (telephone and fax numbers, physical and postal address, and e-mail for general enquiries).
  - Head of government institution (name and title).
  - Organisational mission, vision, aims and objectives.
  - Organisation structure.
  - Responsibilities, aims and objectives of units and divisions within an institution (down to at least director level). Contact names for officials responsible for

- specific functions, if it is not the head of the division, and their contact information should be included, as well as photographs of at least the senior officials.
- Details of the government institution's budget.
  - Legislative mandate, history.
  - Recruitment policies, procedures and information, and vacancies in the institution with the necessary forms to apply for these posts.
  - Membership and terms of reference of advisory groups and statutory bodies.
- Speeches & media statements. This section should include speeches, media statements and similar public information emanating from the institution as well as the relevant Ministry. Speeches by senior officials, at least down to deputy director-general level should be included. Information in this category may comprise media statements, press notices, media alerts, institutional announcements, ministerial announcements, speeches, interviews, announcement of new government initiatives, etc.
  - Policy and legislation. Policy statements and legislation such as Acts, Bills or regulations for which the institution has the lead responsibility, or a link to a site that contains these documents in full should be included. Draft formats of these documents should also be provided, as well as Bills before Parliament.
  - Documents & publications, including
    - annual reports
    - strategic plans
    - portfolio budget statements
    - consultation documents
    - speeches by the director-general (DG) or officials, or similar documents outlining the direction of the government institution
    - research reports and statistical information
    - publications issued by the institution
    - newsletters
    - documents to be submitted to parliament.

Publications for sale need not be made available online, but their availability should be indicated.



- News & events. This section should highlight important institutional events and dates relating to the specific government institution. A co-ordinator's name and contact information for each event should be provided so that users may get more information if interested.
- Services. This category should include
  - directories of services offered for different audiences (when relevant)
  - contact information for specific services (this need not be named individuals, but could be generic)
  - forms to apply for these services and guidelines on how to complete them.
- Programmes or projects. Name of programme, purpose and description of programme and programme contact details (name, title, phone number, address, e-mail).
- Links to related sites. Links to websites publishing information related to the government institution should be available. A minimum requirement is a link to the *SA Government Online* website. For further guidelines, see paragraph 3.2.2.3b.

The general rule is that all material published for the information of the public at large should be available on government websites. This includes not only high level documents such as Acts and consultation documents, but also service-based information.

(b) Selection of links to other sites

Users will often need information that is held by other government institutions. Therefore, government websites should link to relevant information on other sites, government as well as private or voluntary sectors. A general principle is that institutions should not duplicate information on other sites for which they do not have authoring responsibilities, as they may risk the simultaneous publication of conflicting versions of the same information.

The following principles should be observed:

- Links to other government institutions (national, provincial and local levels) and other external sites should be available.
- Links to external sites should be relevant to the institution or its work.
- Links should be to specific pages on other sites, not just to the home page.
- Notice should be given when a link will take users to external sites.

- As a general rule South African government sites should not directly link to commercial sites. It may contain biased content and it would be unfair to link to one commercial site and not its competitors.

The paragraph 3.2.2 on the legal requirements for data elements

The creation of a link to a non-government site may raise legal issues depending on the way it is achieved. When another website is opened while the user remains in the government website, it may constitute an infringement of intellectual property rights. There is also a possible liability where a non-obvious link is provided to another site and the user thinks he/she is still in the government website. To avoid these situations, it is advisable to obtain advance permission from the website to which the link will be made and to open the new site in another browser window.

#### (c) Information from other sites

Where government websites include information that is the responsibility of other institutions or organisations, the text should be cleared with them, and recognition given to such institution or organisation.

### 3.2.3 Minimum home page requirements

#### 3.2.3.1 Standard

The home pages of South African government sites should contain the following minimum information or links:

- name of government institution
- SA Coat of Arms
- search facility (or a link to a search facility)
- list of new information posted on the site (or a link to a next level page containing a listing of new information)
- links to
  - the main categories of information as applicable to the specific institution
  - a *Contact Us* page
  - a site map and/or index
  - a *FAQ* page
  - the *SA Government Online* website
  - information about the site
  - a feedback facility to assist with queries/comments about the website

- o a content disclaimer
- o a copyright statement.

See paragraph 3.3.2 for the layout requirements for these elements.

### 3.2.3.2 *Rationale*

A minimum set of links or information on the home page will contribute to a common look and feel for South African government websites. As it consolidates common functions across sites, users will know what to expect.

### 3.2.3.3 *Implementation requirements and guidelines*

The following guidelines will help to standardise the elements on the home page and the types of information that should be available from the home page.

#### (a) Name of government institution

The home page should contain the full name of the government institution as well as the acronym thereof if it is generally known and recognised. It is not necessary to use the full name of the institution on the other pages of the website, but the acronym should be used in close proximity to the Coat of Arms.

#### (b) Coat of Arms

South African government websites should include the National Coat of Arms. The particular standard can be found in paragraph 3.4.2.

#### (c) Search

This button links to a search page that should enable users to search for information on any particular subject on the specific website. Alternatively, a simple search facility may be made available directly on the home page. If an advanced search is provided on the site, a link to this facility should then be provided from the home page. For guidelines on search see paragraph 3.3.5.

(d) List of new information posted on the website

The listing of new information posted on the site may be provided directly on the home page. Alternatively, a link to a page containing this listing may be provided. The latter provides for more flexibility to, for example, categorise the announcements and to keep them on the site for a longer period of time.

(e) Main categories

The home page should have links to all the main categories of information, represented by the institutional menu bar. See paragraph 3.3.3 for the standard for the institutional menu bar.

(f) Contact Us

This page provides a means for users to send electronic mail or to utilise other means of communicating with the organisation. The following interactive communication services ought to be provided to users:

- an e-mail or online form to contact the institution about the website itself
- contact information for enquiries or comments about the specific government institution, its programmes and activities (preferably telephone and fax numbers, as well as an e-mail address)
- an opportunity to request specific information to be sent regularly to users (subscription services)
- an opportunity to comment on policy documents, proposed legislation or consultative documents
- contact information for specific services rendered by the government institution.

It is best to avoid bucket e-mail addresses (one e-mail address for all enquiries), as it may be difficult to administer. Service standards should be provided to users so that they understand the process and know what to expect, e.g. response time for service delivery.

In addition, government institutions may also include discussion forums on their websites. This will allow users to make comments in a structured way. Two types of discussion groups may be considered:

- Open discussion groups. This type is open to everyone and therefore needs a high level of moderation and content control. A problem of an open discussion group is that some users may add topics that have no relevance to the discussion group, while others may add topics that can be offensive and libellous. Both of these should be removed immediately as their inclusion will reflect badly on the organisation.
- Closed discussion groups. These are closed, using a user name and password. The moderator selects the participants and has complete control of this group. One drawback is that a valuable contribution could be lost to the discussion as some users are excluded.

Guidelines on the maintenance of online communication are presented in paragraph 3.5.3.

(g) Site Map/Index

This button links to a page or pages containing a site map and/or alphabetic index of products and services on the site. These options will give users tools to understand how the information on the website is organised.

A site map should provide a visual representation of the website. Users may initially find this the quickest way of finding information, as it will orientate them to a website's structure. Site maps are particularly useful for large sites, where users may know what they are looking for, but are unable to find it. It should not only be in a graphic format, a text option should be available too.

(h) Frequently asked questions (FAQs)

This button links to a page containing frequently asked questions on the specific government institution or website.

This section should contain real questions with detailed answers. The practice should not be to add every question received from clients or users, as users may find it difficult to find the appropriate FAQ – focus should be on the frequently asked aspect. To assist users to find the information, FAQs may be grouped in categories. The search engine may also be set up to search only on the FAQ questions and answers.

(i) SA Government Online

This button provides a direct link to the SA Government Online website at <http://www.gov.za>.

(j) About the site

This button links to a page containing information on the site's purpose, intended audience and other information assisting users to use the website. This page should provide a description of the type of content available, a description of formats that are available throughout the site, a link to technical help for problems with the website or for users with problems accessing information on the website, site specific help information, as well as links to the government institution's general help page. It could contain tips on searching for information or navigating the site, a list of acronyms used on the site and other helpful information.

(k) Feedback facility to assist with questions or comments about the website

This link should provide quick access to a form and/or contact information to enable users to ask questions, report problems and to make comments on the website.

(l) Content disclaimer

Public sector websites should not generally contain disclaimers about content. There is no more reason to include a general disclaimer on a website than there will be to do so in respect of equivalent hard copy material. A government institution should keep material on its website accurate and up to date, and clearly indicate the archival nature of information when old information is present.

The increased accessibility of material published on a website might, however, in some instances more readily suggest that a disclaimer is appropriate. An assessment of whether a content disclaimer is needed can only be made on a case-by-case basis. The accuracy of the material, the source of the material and the projected use of and reliance on the material should be considered.

In cases where information originating outside of government is made available on a public sector website, it may be a good practice to include a disclaimer along the following lines:

The following information [specific document] is provided for convenience as part of the service we offer at this website. However, the [institution name] cannot accept any liability for its accuracy or content. Users who rely on this information do so at their own risk. (Adapted from the UK web guidelines, Office of the e-Envoy, 2001.)

Where a website links to non-government sites, a suitable disclaimer should also be available, e.g.: [Institution name] is not responsible for the content or reliability of linked websites and does not necessarily endorse the views expressed within them. Listing shall not be taken as endorsement of any kind. [Institution name] cannot guarantee that these links will work all of the time and has no control over the availability of the linked sites or pages. (Adapted from the New Zealand web guidelines, SSC, 2001.)

(m) Copyright statement

Information created by government institutions is subject to copyright. However, when wide dissemination is acceptable or desirable, dissemination subject to acknowledgement of source should be encouraged.

Copyright statements can be phrased in the following way: © [Institution] [Year of publication to current year, e.g. 1994-2002], linking to a statement such as: Material featured on this website is subject to copyright protection unless otherwise indicated. Material may be reproduced free of charge in any format or media without requiring permission. This is subject to the material being reproduced accurately and not in a derogatory manner or misleading context. Where the material is being published or issued to others, the sources and copyright status should be acknowledged. The permission to reproduce copyrighted material does not include material that is identified as being the copyright of a third party. Authorisation to reproduce such material should be obtained from the copyright holders concerned. (Adapted from the New Zealand web guidelines, SSC, 2001.)

### 3.2.4 Language

Websites should be prepared in such a way that all potential users, regardless of their educational background and sophistication can utilise it. The content, language and readability should be user-friendly and understandable for all people.

While English is tacitly recognised as the 'official' language of the World Wide Web, it is recommended that national identity information be provided in all official languages, and that messages to particular community groups be prepared in English, together with at least two relevant official languages.

### **3.2.5 Currency and timeliness**

#### *3.2.5.1 Standard*

South African government institutions should ensure that any information (non-commercial) released to the public in printed form is available online at the same time.

South African government web pages should have a date indicator to signify the currency of the content. Currency indicators should be displayed as yyyy-mm-dd and use one of the following labels: Date published, Date modified, or Last updated.

It will be useful to use the standard date indicator at the bottom of pages to signify that users have reached the end of any web page.

#### *3.2.5.2 Rationale*

In general, government websites contain rapidly changing information. Users are increasingly expecting that information be made available online on its release. In addition, as government websites are increasingly used to obtain accurate and up-to-date information for personal, professional and research purposes, it is important that South African government institutions provide clear indications of the currency of information on their websites.

### **3.2.6 Writing for the web**

Government communications should be clear and concise, honest and open. Web managers are advised to choose language that follows the values and principles of the South African government and the particular government institution. Particular care should be taken to avoid jargon, acronyms and over-technical language. Web content should also be easily readable. It is good practice to develop a consistent house style, covering the use of upper and lower case lettering, use of abbreviations, etc.



### 3.2.6.1 General content

The following guidelines should be observed:

#### (a) Writing style

- Each page should be able to stand on its own, as it may be viewed without reference to relevant pages. Each page should be limited to one concept or idea.
- Newspaper style should be used, starting with the most important information and then moving to the least important information (inverted pyramid style).
- Information should be chunked so that it is appropriate for screen-by-screen viewing.
- Short sentences should be used. Sentences should be limited to one key idea and should be kept short – newspaper prose written in TV and radio style works well.
- Ideas should be organised from one paragraph to the next to get a smooth and logical flow.
- Paragraphs should be limited to no more than four sentences – use half the text that would be used in a print product, then edit again.
- Bulleted or numbered lists should be used to provide a lot of information in a concise manner.
- Typographical elements such as bold, caps and italics are recommended.
- Readability levels should be appropriate for the specific users of the site.

#### (b) Grammar

- If possible, the reader should be addressed personally, e.g. words like “you” and “us”.
- Plain English should be used – simple, everyday words.
- The following should be avoided:
  - clichés and jargon
  - passive voice – active voice should rather be used
  - acronyms – if possible, terms should be written out and should acronyms be used, a glossary should be provided
  - unnecessary words of degree, e.g. “very”, “quite”, “somewhat”, etc.
  - spelling and grammar mistakes.
- It is recommended that a spell checker be used as a first step to avoid mistakes. All documents should then be professionally edited before and after it is posted online.

(c) Punctuation

For easier on-screen reading, it is recommended to

- minimise punctuation and avoid using colons and semicolons
- reduce prepositions and conjunctions
- avoid using full stops after headings.

3.2.6.2 *Microcontent*

Microcontent is the short bits of text guiding users or giving them a quick overview of a page. The following general guidelines are presented for writing microcontent:

- Self-explanatory page titles, headings and sub-headings should be used. It should have meaning out of context, and the meaning should be clear from the user's perspective.
- Microcontent should be kept short and simple. Good microcontent should simply clarify information and provide direction.

Brief guidelines for the basic categories of microcontent are as follows:

- Page titles. Title tags are tags that enable users to see the title of a page. They are valuable for internal management, user navigation and search engine positioning. It will also be the page identifier to use when a page is bookmarked by a user. As a general rule, title tags should be included on every page. Page titles should be optimised for quick scanning, but should still be long enough to convey meaning. It is therefore advisable that page titles not be longer than 60 characters and ideally not be under 30 characters. Page titles should incorporate the name of the government institution or website and should form a concise, plainly worded summary of the page contents. A set syntax describing the government institution and the page content or main message of the page, for example [Name of institution] – About – Find Us – map, should be used.
- Headings and sub-headings. These should be informative. Each document should be given a clear, concise heading at the top. This should then be followed by subheadings of different sizes and weight to help users to understand the construction of the document at a glance. Headings should be in lower case, except for the initial capitalisation of the first word. This will aid readability.

- Link titles. Meaningful words or phrases should be used for links that direct or inform users. Links should be clear, descriptive and precise. Link text should match the title of the page it links to. Link titles should be kept short and should ideally not exceed three words.
- Alt text. As few words as possible should be used, but it should be clear and precise.
- Captions used for photographs, images or graphics should be kept short, ideally 10 words or less.

### 3.2.6.3 Summaries

It is good practice to include a summary of a document at the beginning of the text or page, directly under the document heading. This will allow users to identify if the document is relevant and it will be used by search engines.

A summary should

- cover the purpose of the document and the main points covered by the text
- contain as many keywords as possible
- not be more than forty to fifty words.

### 3.2.6.4 Print publications and the web

Websites differ from print, and thus print material should be adapted to the format and style of the web. Ways to do this include:

#### (a) Scanning or re-keying information

If data only exists in hard copy, scanning or re-keying are the only options. While re-keying sounds more time intensive, it is worth considering as scanning often involves a lengthy quality control process. Data often needs to be styled, formatted and proof-read for scanning errors. However, re-keying is a one-step process where data is keyed directly into the required format using the preferred stylesheet.

(b) Conversion of existing data

Where data is already in electronic format, conversion to another electronic format may be necessary. This can sometimes be a tedious and time-consuming process. It is sometimes possible to convert desktop publishing packages to word processing packages, but often much of the styling and formatting can get lost, and should thus be corrected.

(c) Adapting existing text

In many cases existing text will require some adaptation for the electronic environment. The following may be considered:

- reviewing the accuracy and relevance of information in existing documents for a different audience
- repositioning existing documents for online reading by editing and rewriting it
- restructuring or chunking of information
- adding hyperlinks to external references
- preparing a summary for the first page, also including navigation links leading to more in-depth information and a printable version
- removing page numbers.

The text of government documents such as reports to ministers, legislation or case studies usually cannot be reworked. For successful usage of the material online, the emphasis will thus be on structure, organisation and inclusion of navigation aids.

(d) Adapting graphics for the web

Graphics from electronic files created originally for print publications may need adaptation to be usable on web pages. The image resolution will probably need to be minimised, the file sizes made smaller and the images converted in order to be read by web browsers.

### **3.2.7 Advertising on government websites**

#### *3.2.7.1 Standard*

There should not be endorsement or advertising of commercial products on South African government websites. The exception is when a commercial product is required to view or

listen to an item on the website. It is then acceptable to use the product image with a hypertext link to more information on it.

When government institutions have significant input into a commercial event, this event may be promoted and a link provided to a commercial website where the user can get more information or register.

### 3.2.7.2 *Rationale*

Care should be taken to avoid any implication of endorsement of products or services, unless reporting on a formal, transparent process.

## 3.2.8 Structuring information

How content is structured and displayed is as important as the content itself. Without a solid and logical organisational backbone, a website will not function well, even if the content is accurate and well written.

A website should have a logical organisational structure or architecture for presenting information. The purpose of this architecture is to help users to use sites by functioning as a 'map'. A good architecture will provide order and help users to find information. This section provides advice on how to organise content effectively.

### 3.2.8.1 *Planning an information architecture*

#### (a) Information audit

Before content can be organised, an inventory should be made of the information and communication products. This is discussed in paragraph 3.1.4.

#### (b) Dividing information into logical units

After information is identified, the first step is to divide the information into logical units. Short, uniformly organised blocks of information are particularly suited to electronic presentation, because few web users spend time reading long passages of information on web pages. Blocks of information lend itself to hypertext links and concise blocks of information are better suited to the computer screen. It is therefore recommended that

information be broken down into logical and digestible parts and to organise it in chunks that share a consistent organisational scheme.

However, subdividing information too much may fragment information too much and will frustrate users who wish to read or print the complete text. A useful rule of thumb is a maximum of five A4 pages for a block of electronic information.

The creation of text blocks should remain flexible and consistent with common sense, logical organisation, and the convenience of the user. The nature of the content should suggest the best way to sub-divide and organise information. There will be times when it is better to provide long documents as integrated units of information. Although blocks of information in online documents should usually be kept short, it makes little sense to arbitrarily divide a long document. This is particularly relevant when users should be able to print or save the document in one step.

Information should be grouped into clearly defined areas. It is preferable to duplicate links to information rather than to confuse users with similar information in more than one area of the site.

### (c) Establishing a hierarchy of importance

To develop a site structure, the potential content that was identified during the inventory phase should be prioritised by identifying what information the public will request most often, what information supports the government institution's programmes, and what information is largely static and archival.

Once a logical set of priorities is determined, the main information categories should be identified. Thereafter an outline per section can be developed. This outline will look like an organisation chart. The hierarchy should be built from the most important or most general concepts, down to the most specific or optional topics. Ways to make the most useful information easily and quickly accessible should be considered. The main navigation menu (institutional menu) should be designed to perform 'larger' navigation functions than the lower level menus. Mixing these functions will confuse users. The website should be viewed as an inverted tree – the higher upwards, the larger the branches.

Decisions will have to be taken on the number of levels the website should have. The normal best practice is to provide information in the fewest possible steps. However, with

larger sites containing larger volumes of content, more than one level of navigation will probably have to be included. A balance between the two possible approaches will have to be found: a flat approach where many navigation choices provide access to information in few steps, or a deep approach where fewer choices at the outset provide access to information in more steps and with an increasingly narrowing focus. The first option provides quick access to specific content but may present a confusing number of choices. The second option requires more 'clicks' and allows users to make increasingly informed decisions based on narrowing options. A useful rule of thumb is to ensure that users get to the information they require with no more than three clicks from the home page.

It should be kept in mind that the structure does not have to fit a hierarchy as dictated by the subjects covered by the website, but should be user focussed. For example, if users are interested in particular information that logically fits within the information hierarchy a few steps below the home page, the hierarchy may be flattened to ensure that this information is available at a higher level.

(d) Determining relationships

Relationships between information blocks should be determined and decisions taken on what blocks should be interlinked.

3.2.8.2 Principles

A key principle is to organise information in commonly recognised ways. Because online information is complex, it should be determined which conventions will make sense to the users of the site. The web architecture should give users a familiar or intuitive way to browse the site. It should not force the user to interpret the plan, but should be obvious and transparent.

A logical site organisation will allow users to make successful predictions about where to find things. Consistent ways of grouping, ordering, labelling and graphically arranging information allow users to apply their knowledge of pages already visited to pages that they are not familiar with.

Users should be provided with various options to discover the site's structure and resources and to find their way around the website. In practice, this may mean that the

website offers users the ability to search and browse the site, and that it provides a site map and/or tables of content.

### **3.3 Navigation and search**

#### **3.3.1 Introduction**

A logical and consistent navigation system is key to improved access. Users will not continue to use a site if it is not easy to navigate. The navigation scheme of a website should give users a coherent means of finding information, remind users where they are within the site's structure, and help users who arrive at the site without having gone through the home page.

To bring about a more coherent approach to websites and to make government sites more easily accessible, South African government websites should follow similar formats and layout with regard to main navigation functions.

This section provides standards and guidelines to be considered when planning and developing the navigation format and layout of South African government website pages, as well as navigation guidelines that government developers could follow in order to facilitate easy movement within a site. As with the other sections, there are specific requirements that ought to be observed. However, there is enough flexibility within these requirements to allow for a website that is distinct, yet which maintains its visual identity with other South African government websites.

#### **3.3.2 Core navigation elements**

##### **3.3.2.1 Standard**

Government websites should include common navigation options, placed at the top of every web page, to facilitate navigation through and between South African government websites. These navigation options should be available as text navigation. The menu options should include Home (on all pages but the home page), Contact Us, Site Map and/or Index, FAQs, Search, and SA Government Online (except for the *SA Government Online* website) and should appear in this order. These navigation options should appear on all HTML pages. In the case of downloadable versions of documents that are non-



HTML, such as doc, rtf, PDF, txt and wpd, the implementation of the menu bar is not required.

Every document should include footer information that displays links to facilitate navigation. The following elements are recommended: About the site, a content disclaimer, a copyright statement and an e-mail address and/or form for assistance with enquiries or comments about the website. Furthermore, at least the main pages of the website should contain the URL of the website. In addition to the standard elements, publication information on the website should include the date of publishing and the document's version number where relevant. The footer details may be separated from other information by being placed in a frame or by some other visual method.

The core navigation elements are discussed in paragraph 3.2.3.3

#### *3.3.2.2 Rationale*

Consistent use of core navigation elements will facilitate navigation and will consolidate common functions across South African government websites.

### **3.3.3 Institutional menu bar**

#### *3.3.3.1 Standard*

All South African government websites should have an institutional menu. The institutional menu should be consistently placed on sites. Institutions are free to choose the colour, number of buttons and content of their menu bar, but the design and size should match that of the common menu and be placed directly below it.

#### *3.3.3.2 Rationale*

A standard format and location for the primary institutional menu will facilitate common look and feel navigation objectives.

#### *3.3.3.3 Implementation requirements and guidelines*

The number of buttons and choice of terminology should provide for the particular government institution's specific situation. Each website will need to adopt terminology that

reflects its specific programmes and services, yet some degree of standardisation should be applied, as there is some similarity in content of government institutions. It is therefore suggested that the following elements be included where relevant: What's New (on home page), Home (on pages other than the home page), About [name of institution], Speeches & media statements, Policy & legislation, Documents & publications, News & events, Services, Projects and Links.

Terminology used on menu buttons should ensure that it is clear to users that may not be familiar with the terminology used internally to reflect programmes and services of the particular government institution.

Additional secondary menu systems may be developed as required, e.g. when institutions have many websites or many levels of content. The secondary menu will typically contain links that are more content specific, such as institutional sub-sites, programme and service areas, or lengthy content files. Such a menu should be displayed in the left column of content pages. A more graphic or visual approach than that of the main navigation may be used, but it should visually complement the overall web page layout.

### **3.3.4 Navigation practices**

Information and services on websites will only be useful if users can find it. The navigation on government websites should thus be clear and easy to use. Guidelines and best practices for navigation on South African government websites are presented in the following paragraphs.

#### *3.3.4.1 General linking practices*

The following guidelines are relevant for government websites:

- Every page on the website should have a link to the home page.
- The main navigation menu (common menu) and institutional menu should be available from the home page.
- The main sections of the website should be accessible within one click from the home page.
- The National Coat of Arms should be included on each page and should always link to the home page.
- A link to the general liability disclaimer should be available on all pages, since it is possible that the site may otherwise be accessed without viewing the disclaimer.

- Links to download third party add-ins (e.g. Adobe Acrobat) should be provided.
- Navigation tools should be clear and large enough to be easily read and selected.
- 'Under construction' should rather not be used on government websites. It may be annoying for users to follow a link only to find this message. An incomplete section should not be on the site. Navigation that may lead to this incomplete section should be disabled until the section has been completed.
- There should be no broken links on the site. Links should be checked regularly. It is recommended that a mechanism be included on the site for users to report broken links.
- The site should offer constant visual and functional confirmation of the user's whereabouts in the site.
- There should be no dead-end pages (pages without links) on the website. Every web page should contain at least one link to the highest level. This is because web pages often appear with no preamble. Users follow links directly to sub-section pages deep within the hierarchy of websites and thus may never see the home page or other introductory information in the site. If pages do not contain links back up in the hierarchy to the home page or to main pages, users are essentially locked out of access to the rest of the website.

#### 3.3.4.2 *Linking to other websites*

Links should be relevant to the business of the government institution and may be sorted into categories to allow users to easily choose the link they want. When linking to a non-government website it should be made clear that the information provided is the responsibility of the external source and not that of the referring site. When linking to other sites, text around the link should make it clear that the user is about to leave the specific website. The new site should also be opened in another browser window.

#### 3.3.4.3 *Graphic navigation*

The following are guidelines for implementation:

- When the website uses graphic buttons for navigation the site should be easy to use when these graphics are not viewed. They should have clear labels or embedded text as well as alt tags.

- When graphic buttons are used, specific values to both the 'width' and 'height' attributes within the image tag should be used. This will help the browser to display the page correctly on the screen.
- It is important that graphic navigation buttons are not too large – the largest area possible should be given to display the document – and file sizes of graphics should be minimised.
- Avoid hyperlinking elements such as icons, photographs, images, image maps or other graphic devices, unless their purpose is clear and they are critical to the site. The Coat of Arms displayed on all pages is excluded from this requirement, as it should link to the home page.
- Images should not be used for bullet points. It is recommended that the bullet styles available in HTML rather be used.
- Graphic navigation may distract users from their purpose and from the site-wide navigation system. Using a text navigation area at the very top of the page will complement graphic navigation. Simple text gives more precise information and ultimately serves as a better navigation aid.

#### 3.3.4.4 *Hyperlinked text*

The excessive use of links embedded within body text should be avoided, as it may be distracting and may reduce the legibility of the document. Rather organise necessary links in one area of the document and provide some context to their function. Links in text should also not duplicate the function of the menu. Furthermore, presenting hyperlinks in different visual styles should be avoided – rather use colour and underlining. Other typographical methods, e.g. italics, bold, caps or a different font will reduce legibility and should thus also be avoided.

#### 3.3.4.5 *Language for navigation*

It is recommended that short, common terms for navigation menus be used and that acronyms and abbreviations that may be unknown to the users be avoided. The language used should be clear, direct, plain and unambiguous.

#### 3.3.4.6 Long documents

It is not practical to put a long document on the web as one HTML file, as long documents requiring scrolling are difficult to read. Furthermore, a user visiting the website may not have accessed the document from the first page, since a link from another site or a search engine may have brought him to e.g. page six of a 20-page document. The maximum web page length recommended is the equivalent of five A4 printed pages.

If long HTML documents are to be presented, an alternative to breaking it up in many small files is to divide it into a small number of large files. The length of the document and its internal structure will determine the number of files. It should then be given an internal navigation structure. This normally involves creating a table of contents at the beginning, hyperlinked to each main section heading or to important subsection headings.

The following practices are relevant:

- Each section of a document should be accessible from another section.
- It should always be possible to access the contents page of the document.
- Each of the sections contained within the document should include a 'back to top' link to enable users to quickly return to the top of the displayed page.
- A link should be provided to take the user to the next or previous part of the document to enable the user to navigate through the document in sequence. The following methods are commonly used on the Internet:
  - an arrow, icon or miniature document or an open door with an arrow pointing to it
  - the word 'next' or the numeral of the following part in hyperlinked text
  - a button that reads 'next page', 'continue' or 'more'.

The preferred way for South African government websites is one of the last two options, but with the wording 'continue to [name of chapter/section]', or 'back to [name of chapter/section]'.

- A parallel link should be provided to a separate file that contains the full-length document. The document could be in PDF format. This will allow users to print the file in its entirety or download it to their hard drives in just one step.

In general, shorter web pages are preferred for

- home pages
- menu or navigation pages
- documents to be browsed online

- pages with large or multiple graphics.

#### 3.3.4.7 *Consistent navigation system*

Consistency should be achieved throughout the website. The primary navigation system should simplify the website as much of possible. Inconsistency distracts from the functioning of the system. By providing a consistent and predictable set of navigation options, the user is given a sense of the information structure, and the logic and order of the content is made visually explicit. It will also reinforce the user's sense of context within the site.

The development of a primary site with sub-sites may be considered to solve organisational difficulties, but different structures on different sub-sites may still distract or confuse users.

### 3.3.5 Search

The search functionality should be effective. The main criteria for a search function are that it must be easy to use, provide accurate and concise results, and clearly explain the search parameters used by the search engine.

Consideration should be given to providing quick (simple) as well as advanced search facilities. A simple search will allow users to quickly enter search terms and should allow the search to be further refined after users have seen the results. An advanced search will allow users to define their initial search against specific search criteria, normally including searches on metadata fields. It should allow users to further refine the search after they have seen the results.

Detailed help should be provided on how to search the information on the website with examples of how to conduct a simple and an advanced search. Links may also be provided to general search engines.

Good practices for the display of results include:

- Providing information about the total successful results.
- Displaying 10 results per page as a default, and providing users with the option of viewing more or fewer results.

- Displaying enough descriptive information for the user to understand if the result is worth pursuing. This may mean displaying the URL, the title of the document, a short description, or the search terms in context.
- Allowing the user to toggle between a short and longer description.
- Displaying relevant search parameters.
- Allowing the user to do another search (simple or advanced), by providing both options (usually at the bottom of the search page).
- Providing the option to refine search results by running an additional search on the results of the first.
- Removing any duplicate results prior to displaying thereof.
- Implementing a relevance system that indicates the relevance of the document to the search terms.
- Indicating to the user when no results are obtained, and providing further options to pursue.

### **3.4 Design and layout**

#### **3.4.1 Introduction**

This section discusses the visual appearance of South African government websites. The visual elements of the website should assist users to understand the function and purpose of the website. Design should not be used to entertain, but to make the website more informative and professional. It should not distract users from the content.

#### **3.4.2 Visual identity – use of the Coat of Arms**

##### *3.4.2.1 Standard*

In line with government standards on corporate identity South African government websites should display the National Coat of Arms, using high quality reproductions in terms of accuracy, colour and resolution. The following are guidelines in this regard:

- The Coat of Arms should appear in the upper left display of content pages and be accompanied by the name of the government institution.
- The Coat of Arms should be displayed in its correct proportions. Disfigurement thereof is not permitted.

- Only colour, black-and-white or grey scale renditions of the Coat of Arms should be used. When used in colour, an attempt should be made to match the original colours as closely as possible.

#### 3.4.2.2 *Rationale*

The display of the Coat of Arms establishes a corporate identity and consistent branding for South African government websites. It will ensure that any page of any site will be easily identified as belonging to the government and will indicate that a South African government institution has provided the information. Visual identity will also give greater coherence to the government's presence on the Internet.

### 3.4.3 **Design guidelines and principles**

#### 3.4.3.1 *Common look and feel*

The graphic design should support the navigation scheme and not confuse users or create a new identity. The visual theme should complement the South African government identity. Web developers should take care not to dilute this identity by stylising the institution's name or other design elements, as this will distract from the common look and feel for South African government websites.

#### 3.4.3.2 *Consistency*

The design should be simple and consistent. Consistency should include visual themes, layout, graphic elements, typographic style, the use of symbols and measurement specification. It is recommended that templates providing for the common look and feel be developed.

#### 3.4.3.3 *Balance between graphic elements and text*

Design elements should be carefully chosen to add meaning, clarification or context. The types of graphic elements on the site should be limited – a few well-chosen graphics placed strategically will help users focus on the content. Limiting graphics will also reduce download time. Animation, scrolling text and meaningless graphics, logos, symbols and icons should be avoided – they may make websites busy and distract from the content.



However, vast expanses of text will also be difficult for users to negotiate. Web pages should therefore be designed with visual elements to help users read and navigate the site. Strategically placed lines or graphic elements may for example be used to break a long document into manageable portions.

#### 3.4.3.4 *White space*

While many consider white space as wasted space, it is an important part of web design and should be used to create a professional presentation.

#### 3.4.3.5 *Design for print*

A website should be designed to allow users to both read documents online and to print them. Pages should be designed and built so that they can be legibly printed out on standard printers. Long documents, divided for online reading, should also be made available, e.g. in PDF format for printing purposes.

#### 3.4.3.6 *Online forms*

Forms are a simple way in which structured feedback by users can be facilitated. They may vary from a simple suggestion to complex user feedback forms.

While all forms for public use should be provided online, they can be provided in a number of ways, including

- forms that can be printed, completed by hand and then posted to the government institution
- forms that can be completed online, printed and posted
- forms that can be completed online and submitted electronically.

Cost, the complexity of the form, the nature and size of the user group, authentication and security may influence decisions about the most appropriate online formats. Any one form may also be presented in multiple formats.

There may be circumstances where it will be inappropriate to provide a form online or to provide it as a download. When it is not possible to provide online access, information on alternative ways of obtaining and completing the form should be provided.

General guidelines for the design of online forms are as follows:

- Forms should be designed so that only necessary information is collected. Care should be taken not to require information where there is no operational need for this information. At the same time it is important to collect sufficient information. It is suggested that the forms used online include both a required area where information must be entered and an optional area where other information may be entered.
- Where possible, forms should resemble the design of the paper-based form.
- It is recommended legal forms be presented in PDF format.
- Form design should be consistent throughout the government institution's website.
- Online forms should be easy to understand and use. Layout of controls and entry fields should be simple.
- Forms should contain clear, meaningful explanations or labels associated with fields and controls.
- Drop-down lists should be provided to help users enter information in pre-defined fields. An option should be provided for entering values that are not in these drop-down lists.
- Clear instructions should be provided on how to complete and submit forms.
- Telephone or e-mail contact details should be provided for users who may have difficulty completing a form.
- Users should be provided with the option to save and print completed forms.
- Users should be prompted when essential information was not entered into forms.
- It should be clear to users that forms have been sent successfully.
- It should be clear whether a response would be provided. If a response is to be provided an indication should be given as to when the response may be forthcoming.
- Alternative methods of contact should be provided.
- Appropriate measures should be in place to ensure that information provided in forms is secure. Security levels should be adequate to protect user privacy.
- Clear statements about procedures for handling personal data should be available.
- There should be server-side verification and validation of data entry.

#### 3.4.3.7 Site covers

##### (a) Standard

Site covers or splash pages should not be used on South African government websites.

(b) Rationale

Although this technique may be appealing it has limited use and creates difficulties for search engine registration, usually because these websites tend to contain little text. Furthermore, where they do not automatically redirect, they waste users' time, as they have to make an additional click to be able to view the content options available to them.

### 3.4.4 Layout and screen display

#### 3.4.4.1 Cascading style sheets (CSS) and tables

(a) Standard

South African government websites should incorporate Cascading Style Sheets (CSS) or similarly sized tables to achieve consistent presentation of content.

(b) Rationale

While web technologies offer opportunities for creativity, there are benefits in the standardisation of some design elements on a site. CSS allow templates to be created, thus allowing the easy authoring of web pages by non-professional designers and consistent and professional relationships between all elements on each web page. CSS also allow designers to create pages that look the same in different screen resolutions and browsers without the need for tables, and to separate page content from document style commands.

(c) Implementation guidelines and best practices – CSS

The following style sheet techniques could be used to control layout and presentation:

- using style sheets for text formatting
- using style sheets rather than invisible or transparent images to force layout
- using style sheets instead of deprecated presentation elements and attributes that control visual presentation.

Cascading Style Sheets should be used only when the CSS techniques are known to have adequate browser support. Many CSS commands, especially for font effects, simple margins, etc., are well supported by graphical browsers from version 4 onwards.

(d) Implementation guidelines and best practices – tables

To ensure that pages remain usable, it is important to use tables correctly. The following practices are recommended:

- Tabular information should be clearly labelled and easy to follow.
- Tabular information should be displayed in a consistent way within the site.
- Avoid using tables to arrange text documents in columns.
- The number of columns should be kept to a minimum.
- Nested tables should be avoided and only used if there is no alternative.
- Tables should work across different browsers.
- When a fixed width table is used, it should not exceed 600 pixels to avoid horizontal scrolling. Table width should be set up using the '%' value rather than a fixed pixel value. The table will then scale to the user's displayable area and avoid left to right scrolling.
- Never omit 'Ending' tags.
- Avoid background images in tables. It is not supported in older browsers and may decrease readability. Background colours in tables should not detract from the legibility of the content. It may also not be supported by all browsers.
- All tables should contain summary information.

3.4.4.2 *Frames*

(a) Standard

Frames should be avoided on South African government sites and should only be used as an alternative format. If frames are used, a 'no frames' alternative should be supplied for the entire site and access to it should be clearly visible on the home page.

(b) Rationale

Frames split the page into two or more sections that are identified separately by the browser. When registering a framed page with a search engine, or bookmarking it or printing it, some browsers will recognise the frames themselves but will not display the content from all sections of the page. Frames present problems when trying to ensure that organisational identification and common look and feel elements remain attached to content when located through search engines.

There are also copyright implications for sites that open external links in a frame. It may be construed that such a site is displaying the linked content as its own when it displays the link in a frame that belongs to the referring site.

#### 3.4.4.3 *Display format*

Documents should be designed for an optimum screen display format of 800 x 600 pixels. Where the size and format of the content exceeds this size, a notice should be provided to tell users how they could adjust their screen size to accommodate non-standard formats such as tables, maps, etc.

#### 3.4.4.4 *File formats*

##### (a) Standard

The primary file format for information delivery should be HTML. Any other format may be employed as alternative. PDF on its own should be used for presenting legal documents such as Bills and the gazettes, and may also be used for presenting complete documents for printing purposes.

##### (b) Rationale

HTML is the primary source of data on the web, is the easiest to produce and is understood by all web browsers. PDF formats are preferred for legal documents, as they retain all of the formatting, type styles and illustrative images.

##### (c) Implementation

There will be occasions when HTML is not suitable, e.g. documents or publications that are large or complex, when using multiple column text, or when presenting many graphics and detailed tabular information. PDF and other formats, such as rtf, txt, doc may then be included as alternative files. When PDF is used, it should be at least version 4, since accessibility add-ons were improved with this version. Where large files are unavoidable, such as with major reports in a word processing file, compressed versions should be provided. A link to a downloadable version of a suitable decompression utility should be provided.

### 3.4.5 Text readability

#### 3.4.5.1 Text elements

Typography choices can enhance or distract from the overall visual appeal of the site. Since most information on the website will be in text format, it is imperative that text is laid out well and is clearly legible. Although user display preferences in individual browsers have ultimate control over text presentation and fonts are displayed as coded only when browsers are set to the default preference, there are benefits in consistent font presentation.

The following guidelines are relevant to achieve this:

- As a general rule, body text should be black on a white background, but the text should always be a contrasting colour to the background. Since white text may not print, it should be avoided.
- Text should be static and should not flash (this does not apply to words that are presented in a graphics format). The Marquee and Blink tags should not be used.
- Do not rely on text colour for providing meaning in text, as users can select their own colours for the display of the text.
- A simple, efficient typographic style should be adopted and then maintained throughout the website. The number of heading levels should be limited and complicated numbering systems avoided.
- Bold and italics should be used sparingly and all caps should be avoided.
- Underlined text should be avoided, as it can easily be confused with a hyperlink. Rather use bold in its place.
- The suggested font family for South African government websites is Arial/Helvetica
- To facilitate easy scanning and a mental model of the websites hierarchy and structure, font sizes should be limited to a single size for headers, and a single size for body text. To make hierarchical distinctions, other font features such as bold and italics could be used.
- As users may override specified base settings, navigation should not be dependent on viewing a particular type-face or font size.

### 3.4.5 Graphics, images and animation

#### 3.4.5.2 Use of colour

##### (a) Standard

South African government websites should only use standard 256 web-safe colours for website elements such as menu bars, hyperlinks, navigation aids, text, background and simple graphic components. Images and photographs are excluded from this requirement.

##### (b) Rationale

Web-safe colours ensure compatibility with the full range of browsers and platforms available. Applying the 256 web-safe colours will ensure a high level of display accuracy across platforms and systems.

##### (c) Implementation guidelines and best practices

Colour choices may hamper the functioning of a website. While users may control elements to suit their needs, complementary colour schemes with sufficient contrast will avoid problems for people with visual and perceptual disabilities. The following guidelines will help to achieve this goal:

- Background colours should contrast with text colour. Black text on a white or cream coloured background will always work.
- The use of red and green together should be avoided.
- The use of background graphics should not impede the legibility of the website.
- Strong background colours should be avoided, as it makes text difficult to read.

#### 3.4.5.3 Backgrounds

Background colours should be a single, solid colour from the web-safe colour palette. The use of patterns, images or textures for the background ought to be avoided. There should be a contrast between the text colour and the background colour to avoid any blurring on the screen. Should textures be used, care should be taken that easy reading of screen content is not impeded.

### 3.4.6 Graphics, images and animation

Images can give structure and colour and can be used for decorative and illustrative purposes. Their implementation should be carefully planned so that they increase the effectiveness of the website and not hinder users' access to information. The sensible use of graphics will establish the government institution's identity on the web and will help illustrate and clarify content.

The following guidelines apply:

- It is recommended that government sites minimise the use of imagery.
- Recommended image formats are gif (for images) and jpg/jpeg (for photographic images).
- Avoid using images to convey textual information. However, when text is used as part of an image, it is important to ensure that it is clear and that the font colour contrasts with the background colour. When using a small font, ensure the anti-aliasing is disabled to avoid blurred text.
- When a background texture image is used, any images overlaying the background should have a transparent surround.
- Where visual images are used, they should be as small as possible to facilitate rapid delivery via any end user technology. File sizes of single images should ideally be kept under 30KB.
- Large images should be represented by a small thumbnail, hyperlinked to the larger image.
- Where larger images are needed, warnings and file sizes should be displayed, and a thumbnail image preferably used.
- Any image conveying information or linking to other areas should have an alternative text description thereof. An alt attribute and value should thus be used.
- Large images should not be used on the home page.
- Large, complex images (e.g. pie charts or bar charts) cannot reasonably be described with the alt attribute. In these cases the image should link to an HTML page with the relevant data.
- The website should be usable with the graphics turned off.

Animation or scrolling text and images should be used sparingly. When used, it should add value to a page and not distract attention from the contents of a page. When there is any doubt about the value of an animated or scrolling text or image, it should be removed from the site. When used, it should not loop indefinitely and should be kept to as small a file size



as possible. In addition, it should not self-activate, but rather be user-controlled (thus both activation and de-activation should be dependent on specific requests from the user). Text equivalents should be provided via alt text or longdesc tags.

### **3.5 Managing the website**

#### **3.5.1 Introduction**

A common mistake by many government institutions is to focus on the development of a website and to overlook the necessity of ongoing administration and maintenance. Publishing the website is not a once-off project, as the medium is interactive. Continuous improvement is expected. The web publisher has to keep on top of fresh information, of new websites to link to, of data on usage patterns and of client preferences, and of direct client feedback. After the implementation of a new website it will be important to manage and maintain the site to ensure that standards are continuously met. This will entail issues discussed in the following paragraphs.

#### **3.5.2 Maintaining website content**

Maintaining content involves having sound management practices. Naturally, different types of sites demand different levels of maintenance. When a site contains only generic corporate information that changes rarely, the ongoing updating functions will be limited. However, a site containing rapidly changing information requires a focused and sustained effort and dedicated resources will be needed to effect ongoing changes.

##### *3.5.2.1 Adding new content*

Criteria have to be developed for new pages to be included. Before adding new content, consider questions such as:

- Is there a client group that needs the information?
- Does the content add value to the site?
- Is the information accurate, reliable, up-to-date, complete and credible?
- Is the content written for the web?
- Is the content written with a clear purpose?
- Does the content fit into the existing website architecture?
- How will the success of the new content be measured?

### 3.5.2.2 *Updating content*

Content on websites should be regularly updated and maintained. The following practices may be followed:

- Content should be reviewed and reread regularly.
- It should be determined upfront what information needs to be updated and how often it should be updated. Measures and procedures to ensure regular updates and ongoing improvements should be implemented.
- Older documents should include links to more recent documents, so that users can find information on recent developments.
- Only current information should be displayed. Obsolete content should be removed and replaced with current information. However, removing a content page should be carefully considered, as other sites may have linked to that page, or users may have bookmarked the page.
- The *What's New* section of the website should be updated regularly, as many users may go to this section first and may not return to the site if the information is outdated.
- Each entry in the *What's New* section should be dated to enable users to determine the currency thereof.
- The site map should be updated when new sections are added on the website.
- The list of acronyms (if available) should be updated when new content is added on the site.

### 3.5.2.3 *Link checking*

An important aspect of website maintenance is link checking. As one has little control over documents on other websites, it is difficult to know if a document linked to is still available. Checking and correcting links will make the site more useful and will enhance the credibility thereof. Hyperlinks should be checked regularly and outdated links should be deleted or replaced. There are a number of software packages available that can automate this task and provide a printed report for any broken links.

### 3.5.2.4 *Archiving content*

If old content is still useful, it should be kept on the website. The website should then be modified to enable users to quickly find old content through links. Old content can be valuable because it may have historical interest, provide background information and a richer texture for the website, or may be of interest even if it is not new. When old

information is carried on the website, version control should form an important aspect of content management

Old content can be integrated through

- linking new information with archived content to give background context
- maintaining current links in archived files
- putting links to recent information on older pages.

### **3.5.3 Maintaining interactivity tools and online communication**

An important part of site maintenance will be interactivity tool maintenance. Web users have come to expect quick responses to online requests for information or help, subscription for online services and online orders. It is also good practice to thank users who provide online feedback with an e-mail response. To ensure users that their messages have been received, systems can be set up to send immediate automatic replies, but it should be followed up with individual replies.

Discussion groups may be volatile and may place a government institution in the role of publisher in the case of a defamation action. Discussion groups will thus have to be managed and moderated well. The level of moderation is relevant to the quality of the service and to the requirement of ensuring that content is not unlawful.

The minimum level of moderation will entail a disclaimer distancing the host from the opinions and comments posted. It is, however, recommended to clearly state and enforce rules for posting. An 'Acceptable Use Policy' should be published alongside the discussion group, disallowing defamatory, libellous, sexist, or otherwise offensive language. Postings should be read frequently (at least once a day) and postings contravening these rules promptly deleted. The maximum level of moderation requires users to submit contributions in advance so that the website managers can read them before they are posted on the website.

In the case of permanent chat rooms, it is desirable that users become members before they may contribute. This makes it possible to bar users for contravening rules. These chat rooms should be monitored frequently. Temporary or special chat rooms may have a higher profile, since they may feature prominent officials responding to questions and comments. In these cases, it is recommended that questions be submitted to the interviewee before being published on the website.

### 3.5.4 Metadata

#### 3.5.4.1 Standard

It is recommended that government institutions create descriptions of their key online information resources and services in the form of metadata records. The Dublin Core standard is the leading international metadata standard for online resources recovery.

#### 3.5.4.2 Rationale

Web-based government information should be organised with the long-term goal of ensuring accessibility, reliability, visibility and interoperability\* (among government institutions) of content. Metadata can be used to identify, describe and locate web information and to help users find it through search engines.

Users should be able to readily locate information and services without needing to understand how government and government information is structured. Most indexed information catalogued by Internet search engines is retrieved using search programmes that explore the World Wide Web by categorising the information contained in them. It will therefore be beneficial to users if government could implement a standardised information tagging system. Systematic application of an agreed upon metadata standard on government websites will enable the development of a seamless interface to government.

#### 3.5.4.3 Implementation requirements and guidelines

South African government websites should include the following minimum metatags in document headers for description of web resources: creator, publisher, title, subject, description, date, identifier, and format.

The following descriptions are derived from the *Australian Government Locator Service User Manual* (Australia, National Archives, 2000):

- Creator is the name of the organisation or person responsible for the content of the resource. This field will be used to find resources according to the creator of those resources, for example John Smith or Department of Education. The name of a person, the name of an organisation, information on how to contact the creator (position, phone

or fax number, street or postal address) or an e-mail address for the creator should be included.

- Publisher is the name of the entity responsible for making the information available or who owns the information. This field will be used to find resources under the control of a particular government institution. The name of the government institution, information on how to contact the entity making the resource available, (e.g. position, phone and fax number, street or postal address) or an e-mail address for the institution making the resource available should be provided.
- Title is the name given to the resource. This field will be used when users know the title of the resource or words forming part of the title of the resource.
- Subject is the subject or topic of the resource that describes the content of the resource, e.g. tax, health. This field will be used to find resources related to a specific topic.
- Description is a textual description of the content and/or purpose of the document. It allows searching based on words and phrases describing the information. It will be used to display a summary of the content.
- Date is the date on which the resource was created or became available in its current form. This field allows users to search for resources created or modified on, before or after a certain date. The date format should be yyyy-mm-dd, e.g. 1999-01-15.
- Identifier is a unique identifier for the page being catalogued. It will mostly be a URL.
- Format is the data format of the resource, e.g. HTML. This element allows a search to be restricted to resources in a specific digital format. It also allows users to decide if a resource is worth accessing. This element should also be used to describe the size of an electronic resource.

When additional metadata elements are required, additional Dublin Core elements may be used as a starting point, i.e. source, coverage, audience, mandate, type, language, format, date modified. Domain specific metadata elements may then be developed.

Metadata should be added to at least the home page and main category pages. However, it is preferable that the following pages also include metadata:

- entry points to specific online services and indexes
- pages that provide actual online services to the public
- information in high demand by users
- major entry points, indexes and menus for a range of closely related topics, programmes and policies
- major formal publications (e.g. annual reports, public policy documents, corporate strategic plans)
- media statements and speeches
- information about government institutions, their services and activities.

### **3.5.5 Domain names**

#### *3.5.5.1 Standard*

Domain names should consist of a name or acronym that represents the institution's primary purpose. The following convention should be followed: <http://www.name.gov.za>, where 'name' represents the name or acronym for the institution, e.g. <http://www.gcis.gov.za>.

#### *3.5.5.2 Rationale*

The single domain name seeks to establish a similar identifier for the South African government on the Internet. Furthermore, websites are important for marketing, promotion and information delivery. A common domain name will enhance government identity, presence and visibility.

#### *3.5.5.3 Implementation guidelines*

The State Information Technology Agency (SITA) is responsible for the registration of South African government sub-domain names. Online registration can be done on its website, available at <http://www.sita.org.za>.

### 3.5.6 Evaluation of the website

Often the design strategy used to create websites becomes outdated and insufficient to support changing goals and the increasing number of resources added. In addition, developments in information technology may result in a website evolving to a point where the technology or design no longer meets requirements and developments.

Because of this evolvement, regular assessment of user needs, the website's goals and its ability to meet these goals are required. Government websites should be reviewed twice a year, or at least once a year and redesigned if necessary. Often, websites with fast developing content need to be redesigned annually.

Websites may be evaluated using a variety of methods, including the following:

- The analysis of feedback provided via phone, e-mail or the feedback form provided on the site.
- The collection and monitoring of website statistics. There is software to monitor usage patterns and what information real users are mostly interested in, i.e. paths used by users to find information, pages most often used, how long users spend in particular pages, who uses the site most, page impressions, unique visits, successful requests, unsuccessful requests, most frequently visited pages, least frequently visited pages, top entry pages, top referring sites. There is also software that identifies accessibility problems. These can provide some information on usability of a site but not nearly as much as testing with users.
- User testing. User testing of sites with individuals or groups of users can be very effective and can provide useful information upon which effective modifications can be made to the website. User testing can generally be done with minimal resources.
- Expert evaluation. This method involves an evaluation of a website by a person skilled in usability and user interface design. Experts base their evaluation on their knowledge of design principles, standards and ergonomics.
- Heuristic review. A website is evaluated by inspecting the user interface and assessing it against a set of usability criteria and principles.

- Usability walk-through. This method is used to gather early feedback about the usability of a design. It involves a facilitator leading a group of participants step by step through a design concept using screen mock-ups (either paper or electronic).

#### 4.1 Introduction

- Interviews. Structured interviews can be conducted with users.
- Survey. An online survey may be useful in providing feedback on how users perceive a site. It should assess users' views on the accuracy, reliability, accessibility, ease-of-use and content quality of the site, and get ideas for improvement. A disadvantage is that they can introduce bias.
- Focus group testing. This technique can be used to assess user needs and feelings both before the interface design and after implementation. A focus group usually comprises six to nine users, with a moderator who keeps the group focussed on issues related to the user interface.
- Design process tests. These can either be
  - low-fidelity tests, used at the beginning of the process
  - medium-fidelity tests, done before the back-end functionality is added
  - online tests, done after the front-end and most of the back-end functionalities are complete.
- Wire frame testing. This comprises simple HTML models or paper models of a proposed website. Its primary purpose is to identify the navigation scheme of the website and to verify the information layout and design blueprint. It can be used to improve taxonomy, nomenclature and location of content and navigation aids within the site.

#### 4.2 Content aspects

##### 3.5.7 Search engine registration

In order to be found and indexed by search engines government websites should be registered with them. This is achieved by visiting the home page of the search engine, where there will be a link to add the URL of the site (or individual page). An overview of search engines can be found at <http://howto.yahoo.com/chapters/2/1.html>. A list of major and minor search engines can be found at <http://www.yahoo.com/Business and Economy/Companies/Internet Services/Search and Navigation/>.



## **4. ADDITIONAL ASPECTS THAT SHOULD BE INCLUDED IN THE GUIDELINE DOCUMENT**

### **4.1 Introduction**

As stated in paragraph two, this model does not provide for all aspects that may be included in a final document for use by South African government institutions. Additional aspects contained in the government guideline documents consulted, and which should ideally form part of the final guideline document are briefly mentioned in the remainder of this chapter.

### **4.2 Introductory section of the guideline document**

The introductory chapter of the guideline document should include aspects such as

- the advantages of an effective web presence
- a statement on the purpose of the guideline document
- a statement on the intended audience, e.g. is the document relevant for national government departments, provincial legislatures and departments, local government statutory bodies, etc. (Canada, Treasury Board, 2002b)
- the purpose and role of the guidelines, as well as advantages of such guidelines
- the scope of the guideline document (Canada, Treasury Board, 2002b)
- implementation requirements
- authorship and maintenance of the document
- contact information for feedback on the content of the document
- the date and version of the document.

### **4.3 Content aspects**

#### **4.3.1 Implementation schedule**

This section could state how the implementation of the common information set will be phased in. For example, all new information falling into this framework may be made available from a set date. Departments can then determine the appropriateness of existing documents to be made available at a next target date.

As government may not be able to implement all services in the short term, the introduction of online services may be phased in. Advice may be provided on identifying a candidate set of government services suitable for electronic delivery that may be implemented first, and on longer-term plans.

#### **4.3.2 Interactivity tools**

A more comprehensive explanation of all interactivity tools that could be used on government websites ought to be included in the document to provide information on what technology is available, what it can do, what it can be used for, and on how to implement and manage it.

#### **4.4 Graphic design**

It may be of value to provide a link to a page with the different renditions of the Coat of Arms that are allowed on South African government websites. Similarly, a sample of the common menu bar could be provided. Government web developers can then download these without having to worry whether the quality of the images comply with the requirements for government websites.

#### **4.5 Equal access**

While the model contains some accessibility guidelines, the final or a separate document should discuss more comprehensively the issue of making information accessible to those with disabilities or with technological constraints, and the provision of information to facilitate access to the Internet (Australia, DFA, 2000; Australia, NOIE, 2001). The guidelines should be based on the *Web content accessibility guidelines* that were devised by the World Wide Web Consortium (W3C). These guidelines provide a series of checkpoints to ensure that websites are accessible. The guidelines are available at [www.w3.org/tr/wai-webcontent](http://www.w3.org/tr/wai-webcontent).

#### **4.6 Managing the website**

In addition to the issues mentioned in the model, the chapter on the management of government websites could also contain guidelines on the issues mentioned in the following section.

#### **4.6.1 Role-players in the strategic and operational management of the website**

This section should contain information on the role-players that should be involved in the strategic and operational management of the website. An outline should be provided of each group's role and responsibilities in the development as well as the maintenance of the website (Australia, DFA, 2000; United Kingdom, Office of the e-Envoy, 2001). Skills and knowledge required for the responsibilities of these role-players could be described (Canada, Treasury Board, 2002b). Information that will assist government institutions to identify the cost of human resources for the web initiative could also be provided.

#### **4.6.2 IT considerations**

One section could be devoted to helping government institutions identify and plan for possible IT resources and other IT considerations related to the web initiative. Aspects that could be covered include information formats (text and images), web capabilities and limitations, website services, hosting, programming, content management, browser plug-ins, scripting methods to add a degree of interactivity and style to a web page, hardware, software and telecommunications.

#### **4.6.3 Purchasing web hosting and design**

This section should include contracting and tender advice, advice on how to purchase web design services (design, content provision, maintenance), and advice on purchasing services from Internet service providers (ISPs).

#### **4.6.4 Evaluating the website**

The model currently mentions the need for continuous evaluation of a website, and also briefly refers to different methods to conduct this. A separate guideline document can be compiled to provide more detailed advice on these methods.

#### **4.6.5 Marketing**

Part of the management process is to help people find the website. This section could provide suggestions on how to bring traffic to the website, such as developing targeted e-mail lists, writing articles for publications, conducting marketing campaigns, buying large mailing lists or developing a listserv. Online promotion includes registering the URL of the

website on appropriate meta-index sites, registering the site with non-South African search engines, and by identifying sites that might want to create pointers to the site.

#### **4.6.6 Record-keeping and archiving**

Digital information on a government website is a government record and needs to be managed properly. Departments should have a legal obligation regarding the proper retention and disposal of web-based records (Mahoney, 1998:18). To ensure efficient, accountable and cost-effective government, the guideline document should include guidelines on how to keep full and accurate records of data, transactions and activities in a form that ensures the reliability and accessibility of those records for as long as they are required (Australia, NOIE, 2001; Australia, DFA, 2000).

#### **4.6.7 Version control**

The guideline document should contain guidelines on the management of different versions of web information and websites.

#### **4.6.8 File management**

Information should be provided on the disadvantages of large file sizes and guidelines provided on acceptable file sizes. Guidelines of file naming conventions and practices will also help government institutions with the general housekeeping of the file structure and that file store infrastructure does not hinder the development and expansion of a site (United Kingdom, Office of the e-Envoy, 2001).

#### **4.6.9 Documentation**

The need to document each element of the website construction should be highlighted and guidelines provided on what this documentation should entail (United Kingdom, Office of the e-Envoy, 2001).

#### **4.6.10 General network maintenance**

This section should focus on the general network maintenance necessary to provide a reliable online service. This includes monitoring and ensuring that the network, software and hardware that support the website are secure, reliable and efficient; developing back-

up and mirroring solutions; site availability; planning for network downtime; ensuring that content is transferred securely from client browsers to the server; efficiency of website resources; considering options for virtual hosting; web server software and extensions; monitoring server performance; and creating useful and informative error messages for the user.

#### **4.6.11 Contingency planning**

The guidelines should emphasise the need for and provide guidelines for the development of a contingency plan for a sudden increase in hits, or for times when the government institution needs to carry fast developing stories.

### **4.7 Authentication, security and privacy**

#### **4.7.1 Authentication**

Government institutions should consider whether their websites require authentication technologies. Some websites may only require simple authentication techniques such as the use of logins and passwords. For more complex services that involve data interchange or financial transactions, websites will generally use Public Key Infrastructure (PKI) technology or authentication (Australia, NOIE, 2001; Korsten, 2001:86). The final guideline document may provide guidelines in this regard.

#### **4.7.2 Privacy**

Guidelines in the handling of personal information should set out general rules for collecting, storing, using and disclosing personal information. They should also contain rules for individual access and correction of personal information (Australia, NOIE, 2001; Australia, DFA, 2000). These guidelines could be contained in a separate guideline document.

#### **4.7.3 Security**

Security guidelines should give direction to government institutions with regard to the security implications of their websites and to ensure that they are properly protected (Australia, NOIE, 2001). These guidelines should form part of security guidelines and standards for South African electronic communications.

#### **4.8 Main role-players in government web publishing**

The guideline document should provide information about the various role-players involved in website publishing in government, e.g. GCIS, SITA, and DPSSA. Roles and responsibilities of role-players and relevant names and contact information should be provided.

#### **4.9 Checklists**

Checklists could be included for use by government web authors to ensure that they comply with the guidelines set out for government websites, e.g. for website content, home pages, structuring content, writing style, formatting, navigation, search, metadata, visual identity, graphic design, readability, formats, etc.

#### **4.10 Additional material**

The guideline document could provide additional source material on web publishing (e.g. accessibility guidelines on the WWW3 Consortium's website, use of CSS, guidelines for using colour, HTML guidelines, etc. Government web developers may use these for further reference.

#### **4.11 Table of content and index**

To simplify access to the guideline document it should contain a table of contents, a glossary of terms and an alphabetical index.

### **5. SUMMARY AND CONCLUSION**

The evaluation of *SA Government Online* and the audit of South African government websites made it evident that these websites need to improve on all aspects of website design, from the comprehensiveness and currency of content, through to architecture, navigation, search and look and feel. It is the author's belief that many of these problems could have been avoided if government web developers had guidelines available to assist them in planning and developing their sites. This belief is confirmed by the fact that the need for government web guidelines and standards is recognised world-wide by leading e-government countries such as Australia, New Zealand, the UK and Canada.

CHAPTER 11

This chapter presented a model for South African government website guidelines and standards. As government websites did not conform to all spectrums of usability criteria mentioned in the previous paragraph, the guidelines encompass all these areas. The author is also of the opinion that government websites can be improved when better planning and management practices are implemented. Website management aspects are thus also included in the model.

The purpose of the guidelines is to ensure that government websites comply with basic usability principles and principles for good web design, and to ensure that South African government websites follow a more standardised approach. The ultimate objective is to assist government web developers in developing professional websites – websites that contribute to the dissemination of government information and services to the public in a comprehensive and coherent way and that make it easy to find information on them.

It is of paramount importance that concept web guidelines are consulted and negotiated with the broad spectrum of role-players involved in government web publishing. This will contribute towards them taking ownership of the final document, making the implementation thereof less problematic.