

CHAPTER 5

CATEGORY-SPECIFIC AND PRODUCT-SPECIFIC GUIDELINES AND PRINCIPLES

1. INTRODUCTION

The development and use of information technology is advancing at a fast pace, and increasingly governments world-wide are launching websites in the public domain. As with any other resource or government operation or activity, a government website has to be strategically managed and must conform to specific standards set up by the government or government institution.

This chapter provides guidelines for the development or evaluation of government websites. The first section provides guidelines for government web publishing as reflected in resources on government web publishing in countries other than South Africa. Some of these resources refer to specific policy documents, while others discuss government web publishing in general or assess specific government websites. The author is of the opinion that guidelines as reflected in these sources are relevant for government websites in general, and therefore also for the evaluation of the *SA Government Online* and other government websites. In the second section, the South African government's requirements for electronic dissemination of information and for web publishing in particular are discussed. It is worth noting that, whereas the previous chapter describes guidelines in general terms, only guidelines pertaining government websites are discussed in this chapter. The general principles already mentioned in chapter four are not repeated.

2. GUIDELINES FOR GOVERNMENT WEBSITES AND GOVERNMENT PORTAL/GATEWAY SITES

2.1 Policy guidelines for the development and maintenance of government websites

Eschenfelder et al (1997) and Herson (1998) refer to different United States (US) policy documents that deal with information dissemination by government:

The USA OMB Circular A-130, *The Management of Federal Information Resources*, provides policy guidance to the US government for information dissemination. Even though it makes no explicit reference to the web, the authors consider it a comprehensive source for government-wide policy guidance to government agencies using the web as information dissemination medium. This Circular instructs government agencies, inter alia, to:

- disseminate information in an equitable and timely manner
- rely on multiple dissemination channels
- assist the public in locating information
- maintain inventories of information dissemination products
- develop search aids such as indexes and catalogues
- make certain that members of the public with disabilities have a reasonable ability to access the information
- meet the needs and requirements of the public
- avoid imposing improperly restrictive practices on subsequent uses of information by others – particularly with respect to establishing exclusive distribution arrangements, charging fees or royalties on subsequent re-dissemination of information.

The second document referred to by Eschenfelder et al (1997) and Herson (1998), the *Electronic Freedom of Information Amendments* of 1996 (USA) propose to improve public access to government information by making more information available in electronic format. The document requires agencies to, inter alia, publish electronically all information required to be published, and to make available “government material previously available only through inspection and photocopy” (Eschenfelder et al, 1997:177). While this document does not explicitly refer to the web, Eschenfelder et al (1997) and Herson (1998) state: “The direction for agencies to publish via computer telecommunications certainly appears to encourage federal agencies to use the web”.

The third document, the OMB draft policy guidelines, provides the following guidelines for use of the web as an information dissemination medium:

- Appropriate management controls should be used to ensure that information posted to a website is accurate, relevant, timely and complete.
- Websites should primarily support the public affairs function of agencies and, as such, should be developed with access of the general public in mind.
- Visitors to a website should be informed whether they can expect to receive responses to comments submitted on the website.
- Alternative means of access to information posted on a website should be provided.
- Websites should include location aids.

- Websites should be used to augment information dissemination and not to replace existing means of information dissemination.
- The appropriateness of linkages from a website to other websites should be examined (for example, linkages to other government websites would generally be considered appropriate, while linkages to commercial sites would typically be considered as inappropriate).

Hernon (1998:427) also refers to New Zealand's *Policy framework for government-held information*, approved in 1997, that provides 11 principles for the management of information. Some of these are:

- Government departments should make information available easily, widely and equitably to the people of New Zealand.
- Government departments should make the following information increasingly available on an electronic basis: all public material or material already in the public domain; all policies that could be released publicly; all information created or collected on a statutory basis (subject to commercial sensitivity and privacy considerations); all documents that the public may be required to complete; corporate documentation in which the public would be interested.
- Free dissemination of information is appropriate where dissemination to a target audience is desirable for a public policy purpose, or when a charge to recover the cost of dissemination is not feasible or cost-effective.
- Government departments are stewards of government held information, and it is their responsibility to implement good information management.
- The key quality requirements underpinning government-held information include accuracy, relevancy, timeliness, consistency and collection without bias so that the information supports the purposes for which it is collected.

Additional to above-mentioned policy guidelines and principles, recommendations that could have a bearing on the effectiveness of government sites include the following:

- Government should provide information to the public about its policies, programmes and services that is accurate, complete, timely, relevant and understandable.

- Government should also ensure that it is visible, accessible and answerable to the public (Nilsen, 1996:199).
- Government should focus on creating and developing specific databases on the Internet, geared to the most important information needs of citizens and consumers, for example extensive, up-to-date databases on all government institutions and publications. Databases should be created to enable consumers to ascertain facts or learn the arguments of the various interest groups bearing on national or local policy issues of concern to them (Beachboard et al, 1997:29).
- Information, databases and documents should be developed in such a way that it can be utilised by all potential users, irrespective of their educational background and sophistication.
- A speedy and user-friendly method of retrieving information is required. Users should, through easy-to-use interfaces, be able to access and exchange government information without having to consider where such information sources are hosted. This means that users will have access to integrated information sources running on an integrated information platform, located at various government institutions (Beachboard et al, 1997:29).
- Government should promote the use of information and communication technologies in government and society to improve the effectiveness of government service delivery (UNESCO, 1996:11,12).
- Government websites must be properly planned and designed. "Mounting cobbled together, incompletely, poorly designed material on the web is, in the long run, going to be counter-productive" (Johnson, 1996:152).
- Lack of co-ordination should be addressed. The sharing of information between different levels of government requires agreement on procedures, concepts, standards and formats (Harfoush & Wild, 1994:12).
- There should be consistency in the way similar systems are operated (Berinstein, 1995:86).

- Cooper (1998:144) states that users will become frustrated if they encounter fee-based databases.
- Content should be the primary concern for a government website (Johnson, 1996:151). Interfaces should not be system-driven, but rather user-driven. Websites should therefore be driven by people who know about delivering information, not by people who know how to deliver information technology. A properly designed information service requires the efforts of a team of skilled professionals including graphic designers, instructional designers, indexers and writers (Johnson, 1996:151).

2.2 The concept of government gateways/portals

2.2.1 Gateway/portal sites

A portal site offers a single point of access for all the goods, services and information that a company provides. According to Blount (2000), portal users “view the enterprise as a unified whole.” A portal is thus a “single, web-based interface into what would otherwise be disconnected and incompatible information spread across numerous separate applications” (IBM eCMS website, n.d.). Rather than forcing users to traverse through multiple sites, portal users need to be able to get all their needs met through single access points.

According to the IBM eCMS website (n.d), portals provide

- one-stop shopping that provides access to content, applications and collaborative or community building facilities
- the functionality of customisation of the user experience for their unique privileges, preferences and history on the site, i.e. personalised views that provide this access in the context of an individual’s preferences and business rules
- flexible navigation, including both predefined roadmaps and powerful free-form search.

Portals are valuable to users when they simplify complex information, are context-specific, provide useful services and foster collaboration and community-building.

2.2.2 Government gateways/portal sites

It is important for governments to provide support tools to enable users to quickly and easily navigate the vast information resources provided on the Internet. One of these tools may be a one-stop gateway or single entry point. Hernon (1998:432) reasons that

governments should pursue the concept of “one-stop shopping” to eliminate or reduce the number of sites that one needs to visit.

Johnson (1996:149) defines “whole of government pages” as “pages, usually mounted by a central agency, which seek to provide links to all other pages produced by agencies within that particular government. They are intended to form the ‘ante-room’ or ‘veranda’ through which the public can access the information resources of the various agencies”. Most ‘whole of government’ home pages seek to provide a single access point to other pages maintained by various agencies within a government.

Nielsen (1999b) refers to this concept as “content-integration, which brings separately-sourced content together in integrated designs”. He mentions the example of a country that creates a unified interface to all online government information, including the many ministries and departments of the national government as well as local jurisdictions. He considers this practice as a possibility to improve the web.

Caldow (1999:7) defines a portal as a window to an array of web-based content. According to her, portals are typically multifunctional and offer a variety of capabilities aggregated in one place. “In other words, if you didn’t have the portal, you’d have to go to a lot of different places on or off the web. In government, the portal is most likely the main government website.” Caldow uses the example of a user who selects a category such as “Online Citizen Services” to access a list of all online transaction services, regardless of the department, after which a form is presented that enables a transaction.

Copping & Lewis (1999) refer to the United Kingdom (UK) government’s intention to develop government portals as a “potential, single, integrated means of access to government information and services”. According to them this will allow information from different sources within government to be brought together at one point, allowing the creation of new “joined-up” services with a standardised presentation. A key element of the proposed portal is to “integrate services across government departments to deliver seamless or joined-up government as a one-stop service for citizens and businesses” (Copping & Lewis, 1999). The intention is to provide access to central government, departmental, and ultimately local government services or information. This will also include direct access into the department or agency which owns the service, access through links from other parts of the department or other departments which offer associated services, and access from similar portals, which could for example be focused on another or the same “event” (Copping & Lewis, 1999).

In line with the general definition of a portal site, Mazereeuw (2000:33) includes in his concept of a portal the functionality to allow users to create own personalised windows into the information of all levels of government.

2.3 Content and scope guidelines

2.3.1 Orientation to the website

Hernon (1998:435,436) comments positively on the variation in the types of information provided on New Zealand government websites. However, he criticises sites that list publications without indicating the completeness thereof. He also states that it is not clear what types of information resources departments and agencies maintain and that this causes some of the information on the sites to be difficult to locate. He suggests the inclusion of "a tool" that describes the content and location of the information that agencies produce (Hernon, 1998:435). He requires furthermore that users be informed how to acquire the Acrobat Reader when documents are in PDF format (Hernon, 1998:431).

Berinstein (1995:86) and Cooper (1998:144) support the inclusion of clear scope notes. Comments about limitations of data and the provision of disclaimers are regarded as good and helpful user support. Berinstein (1995:86) recommends that it be made clear whether information is free or not, as "the mix of what's free and what is not is constantly changing".

2.3.2 Reliability and integrity of information

Eschenfelder et al (1997:180) consider it as important for governments to develop various levels of administrative procedures and technical safeguards to guarantee the integrity of information on websites. This should be done to prevent risks associated with destruction or unauthorised modification of posted information.

2.3.3 Comprehensiveness

From the literature studied, it became clear that extensive information coverage is expected on government websites and government gateways. In this paragraph, an overview is provided of content indicated as important for inclusion on government websites and for gateways to provide access to. The author realises that this list is not necessarily complete. The reason for presenting this list is, however, to convey the importance thereof that

governments using the Internet for the publication and dissemination of information keep citizens informed on all aspects of government, so that users of websites would not have to go to various information sources to be provided with the full spectrum of government information.

2.3.3.1 *Information on national, provincial and local government levels*

Hernon, 1998:431 and Maxwell, 1995:26 stress the importance of convenient access to information from all levels of government. Maxwell (1995:26) refers to the *Council of State Governments* website that provides separate gateways to: (1) state and local government servers, linking to servers operated by state; (2) legislative servers, linking to sites that offer legislative information; and (3) other state servers, linking to non-governmental sites operated in each state. Colleges, universities and corporations operate these sites. He views these as “very helpful if you’re trying to get an overview of a state” (Maxwell 1995:26).

2.3.3.2 *Government documents and publications*

Documents such as constitutions, statutes, regulations, policy documents, reports, discussion papers, administrative rules and codes are mentioned. The importance of detailed legislative information, including full text of Bills with amendments, Bills introduced in the legislature and of all Bills pending is stressed. Websites also contain the full content of online publications, descriptions of content of publications, announcements of upcoming publications, and information about hardcopy publications to order. Annual reports of government departments are also posted on websites.

Maxwell (1995:30) considers the following information on the California State Server's website as a “goldmine”: a chronological list of legislative activity for each Bill, information about a Bill's current status and pending action, records of votes in committees and on the floor, and the text of veto messages by the governor. Summaries of new laws and weekly magazines from the House and Senate, as found on the Minnesota House and Senate Legislative site, are also considered as valuable.

2.3.3.3 *Policy information*

The provision of policy information and enhancing policy discussions is also considered as an important area of government web content. In this regard Stowers (1999:117) mentions

the posting of budgetary information, discussion forums and San Diego's "speak out" page (<http://www.dep.state.fl.us/law/clean-marina/forum.html>), which provides comment forms through which citizens may select a policy area and provide input. The EUROPA site (<http://europa.eu.int>), which is the main information point for the European Union, also provides fact sheets on policies (Sheehy, 1997:133).

2.3.3.4 Government systems, structures, functions, officials and contact information

Maxwell (1995:30) and Hernon (1998:435) mention the following information types available on government sites:

- background information on departments
- information about departments and sections within departments
- telephone and e-mail directories for government offices
- announcements related to departments
- lists of appointments to boards and commissions.

The Minnesota House and Senate Legislative site provides information on the permanent rules of the House and Senate, daily order of business, information about members, committee information and meeting schedules. Hernon (1998:431) requires that source material emanating from regional offices also be well represented on government websites, with enough links to provide the necessary connections to ensure that information is easily found.

An example of a gateway site providing access to this type of information is the New Zealand Government Online website. It lists government agencies and offers an index of services, functions and responsibilities for central government agencies (Hernon, 1998:433). A *Citizen's Guide to the Government* contains an overview of the government, its structure and processes, and *related links* covers complementary indexes and organisations. *Browse services* is arranged by 14 topics and provides a starting point for someone wanting to approach government for the answer to basic questions. This access does not extend to information resources held and available other than through the web.

Another example is the EUROPA site, which provides access to a wide range of background information on EU institutions, as well as links to other EU institutional servers (Sheehy, 1997:133). It also provides general background information on European Community history and organisational structures, and access to newsletters and daily news

summaries. Most of the information related to institutional activities is full text. Some of this material is multilingual.

2.3.3.5 *Government activities, programmes, events and news*

According to Hernon (1998:433) and Sheehy (1997:133), websites are used to promote government activities, announce upcoming events, conferences, conventions, or new products. Recent news about departments (for example newsletters), departmental programmes and employment opportunities are also posted on sites. Materials specifically aimed at the general audience include a wide variety of topical fact sheets on specific issues such as health, government activities and policies, and FAQs on various topics (Hernon, 1998:433; Sheehy, 1997:133). Election information (for example campaign finance, voting information and election results) also features prominently.

Sergerie (1997a) provides an overview of the Canadian Government's On-line project, a joint initiative of the Canadian government, the Territories and local governments, who developed an electronic catalogue of current or upcoming online services provided by the various levels of government. The catalogue combines information about these services with best practices notes that are relevant to both Canadian business and foreign organisations. A major focus of the catalogue is to provide governments across Canada with a reference guide to the various online programmes offered across the country. The aim is to avoid duplication of services and to enable Canadian governments to identify new areas and projects where different levels of government can work together. The catalogue also functions as a gateway to the various online services and information networks that Canadian governments offer.

2.3.3.6 *Government services*

Information about benefits that are available from government and how to apply for them, as well as the delivery of actual services, are considered as important for all government websites, including gateway sites. Johnson (1996:153) believes that "our energies may be better spent in working towards these services than in duplicating, often badly, information services which are already being delivered effectively in other ways".

The *Canada site*, the Canadian government's primary Internet site (<http://www.gc.ca>) provides Internet users with a single electronic access point to a wide variety of government information and services. According to Mazereeuw (2000:34), the government

strives to provide information and services that affect their lives, from getting funding for a community environmental project to applying for unemployment benefits. "Users can do anything from looking up a postal code to starting to do business, from registering a trademark to filing his taxes". The Canadian government has set itself the goal to be "more than just piling print documents online – the government is striving to change the way we shop for services and information" (Mazereeuw, 2000:34).

2.3.3.7 *Press releases, speeches and statements*

This is regarded as an important information category. Maxwell (1995:26) considers it as important to include the governor's State of the Nation and inaugural addresses on government gateways. In addition to text information, Hernon (1998:430) also mentions the availability of radio addresses and oral delivery of selected speeches by presidents on government websites.

2.3.3.8 *Tourist and business information*

These categories are considered as valuable especially for government gateways. The aim should be to encourage economic development by promoting local business and industry and by stimulating tourist interest. Maxwell (1995:31) refers to the *State of Texas Government World Wide Web Server* which contains extensive information about doing business, for example government procurement information, international trade leads, a directory of Internet access providers and training companies, a directory of businesses owned by minorities or women, a market exchange where companies can post announcements about items they are seeking to buy or sell, and a directory of businesses.

2.3.3.9 *Information about the country/nation*

Government sites, and especially government gateways, provide information on the country and nation. Thornton (1997:17) refers to the Irish government's website where the user can read about the economics, literature, music, folklore, and sport of Ireland, or learn more about the way the country sees itself in relation to the rest of the world. He also mentions the Brazilian government's website that has extensive links to the country's ecology, education, medicine and health industry, business, culture and more (Thornton, 1997:17).

Government sites contain links to sites with information on state parks and historical sites, camping information, tourism information, maps, environmental issues, public broadcasting

stations, universities, libraries, schools, census data, county profiles, weather forecasts, lottery results, links to city and county Internet sites, chambers of commerce, statistics (for example on HIV/AIDS), and online directories.

2.3.3.10 *Links to related sites*

Specific mention is made of links to

- government sites in other states
- sites carrying information on related subjects, for example the New Zealand health department's website which links to public health sites in New Zealand and other countries (Heron, 1998:430)
- census figures and other statistics
- tourist information.

2.3.3.11 *Information in non-text formats*

Heron (1998:430) lists the following types of information resources that are offered by the US and New Zealand governments through the Internet: photograph collections, video footage, digital replicas of artefacts from the Roosevelt Library (such as artwork, photographs, radio broadcasts), digital maps, images, and datasets.

2.3.3.12 *Digital democracy*

Website interactivity is regarded as a crucial online activity. According to Stowers (1999:120), the ability to communicate with appointed and elected public officials can make the difference between passive information delivery and a site that provides dynamic service delivery. She considers the provision of contact information such as phone numbers and e-mail addresses as the most basic stage of providing public access through the website, and recommends the utilisation of online forms through which citizens can make comments to officials, solicit input, make complaints, or request services.

Caldow (1999:10) envisions a component dedicated to digital democracy, defining this as "any electronic exchange of value in the democratic process". She includes in this spectrum campaigns, elections, voter registration, voting, public opinion polling, communication among elected representatives and their constituencies, universal access to technology from public libraries and legislative processes that encourage greater citizen participation. According to her, technology strategy should include interactive capabilities that allow

ordinary citizens to take active, real-time participatory roles in government. Online hearings, submitting expert testimony online, opinion polling and open communication and information provides opportunities for real-time participation throughout the democratic process – not only disseminating information after the fact (Caldow, 1999:10).

Discussion forums and listservers are also considered as effective tools. Hull & Adams (1995:298) believe that the use of listservers can provide an effective tool for users interested in similar subjects – it can be used to announce the availability of new or updated information to interested users, while questions and comments can be raised about specific topics.

2.3.4 Content to fit the medium

Johnson (1996:149) requires that information on government websites be material that could not be presented more effectively in some other way. "People will not persist in spending time on a site if they could have acquired the same information more rapidly from another source" (Johnson, 1996:149).

Furthermore, she requires specific and in-depth information that adds value by presenting it on the website: "There are pages that present very general and shallow information to an unspecified population, and in many instances, it is difficult to see what value is added by presenting the information via the Net". She criticises the compilation of existing information resources, sometimes created primarily for internal use, "that have been 'HTMLised' and dumped on the Net with little or no guidance for potential users" (Johnson, 1996:149). She states that, although this practice may be acceptable for some client groups like other government agencies, in many instances the raw information actually needs to be redesigned if it is to be effective for public use on the Internet.

2.3.5 Currency

Once created and distributed, electronic information products should be sustained if they are to retain their value. According to McConnel (1996:218) sustaining includes maintaining the information's currency, availability, location, and integrity. As government sites contain a variety of rapidly changing information it could easily become out of date and care should be taken that the most current information is posted as soon as possible after it becomes available. McConnel (1996:218), however, states that replacing out-of-date information with

the latest version can be “a double-edged sword”, as it is not always obvious where to find the previous version.

2.3.6 Language

According to Sheehy (1997:135), language is a critical issue for a government that must produce documents in all the languages spoken if it is to reach and influence all its citizens. Factors to take into account are:

- English is one of the dominant languages on the Internet and it can be expected that this trend will continue.
- Preparing print materials in multiple languages causes significant delays in publication, and electronic information presents additional challenges.
- Multilingual needs of users must be balanced while at the same time preserving one of the Internet’s key advantages, its speed. Information that once took weeks or months to be printed and distributed now is accessible almost immediately. If a government waits until material is translated into all languages, one of the primary advantages of the Internet will be greatly diminished.

Sheehy (1997:135) argues that the issue of language is a difficult problem in a country with many official languages. She regards the inclusion of the full text of all documents in all languages as an almost impossible task. However, she believes that by providing at least the primary interfaces in all languages, much will have been done to improve at least the perception of language equity on a site.

2.4 Information architecture/organisational structure

As for any site, an important requirement for government websites is that information must be organised in such a way that users can easily find information.

Government sites often pose the problem that information is not easily accessible. Berinstein (1995:85) considers it as “bad news” that it is not always easy to find what you want on government websites. “You can get to agency level easily, but below that you may find trouble.”

Johnson (1996:152) criticises government sites that are designed with a top-down, inside-out paradigm. She believes that information on government websites must be complete and well designed. It must be presented in enough depth and with an adequate structure. "Much of the information is either too shallow or made up of large chunks of hastily 'HTMLised' text with inadequate structure" (Johnson, 1996:149). She also criticises the practice of 'whole of government' pages being only a set of links to various agencies that have set up pages on the web: "I am not sure that the 'whole of government' page conceived as a set of links is the best way to get people to the right information" (Johnson, 1996:149). She adds that even in those cases where all relevant agencies are represented and have put up more than a "pretty picture and their phone number", this presents a problem. She argues that users who needs a specific piece of information will not be satisfied to be presented with a list of agencies, forcing them to guess which is the relevant one. "If a user wants to know how to get a permit to install a well in his garden, he/she may neither know nor care whether this is handled by the Water Department or the Mines Department or the Department for the Environment" (Johnson, 1996:153).

Hernon (1998:431) considers it a critical problem to find information on US government websites. According to him, users have to be extremely knowledgeable about the government's structure, the scope and activities of departments and agencies, terminology referring to the legislative process and types of source material. He requires websites to reflect the expectations of the users, and not the internal structures of the government agencies producing the information.

Maxwell (1995:25) considers arranging information by subject rather than by department or government body as one way to make it easier for users to search for government information. Links can be arranged by categories such as criminal justice, economic development, education, finance, health, environmental issues and so forth. Each category will then provide links to all sites containing any information on the category.

Mazereeuw (2000:34) furthermore quotes Velanosi, who was involved in the Canadian Government Online initiative: "Part of this work is to stop organising ourselves by our traditional structure of government departments and programmes, and put the information in a way that resonates more with citizens and businesses". The Canadian website thus functions as a directory for the government's various web initiatives in three basic ways: alphabetically (by name of department or agency, by topic (such as health), and by target group (from youth to seniors).

Johnson (1996:153) regards cases where 'whole of government' pages have moved away from direct links to agencies, and where a subject approach is followed with links for education, health, transport, etc., as a move away from the straight reflection of government structure to the presumed perceptions of users. However, according to her, even then the information behind the topics often retains its agency basis. "The buttons have been rearranged but the information is the same" (Johnson, 1996:153). She suggests, therefore, the further organisation of information around geographic, household or service desk metaphors that link to information drawn from differing levels of government, as this would be more useful than the many current 'whole of government' pages "which are built from the inside out" (Johnson, 1996:154).

2.5 Navigation and search

2.5.1 Navigation aids

Ease of use is regarded as crucial as good content: "Without effective navigation systems, sufficient help features and adequate general information, websites are not user-friendly, a factor in keeping visitors from making full use thereof" (Stowers, 1999:122).

Websites should include various methods to assist users to find information on the site. Methods described are:

- Levergood (1998:149) mentions a subject A – Z index leading to a list of fairly detailed subject terms and detailed subject access for lists of publications. She commends the website of the US Department of Commerce's (<http://www.census.gov>) inclusion of a brief user manual, available from the home page, informing the user about the principles involved in compiling the subject listings. She suggests that it will also be useful to display these principles prominently on the *Subjects A – Z* page itself, with accompanying advice to use the search capability or the publications subject list to further guide the user (Levergood, 1998:149).
- Categorisation of free publications by broad subject, detailed subject and new publications. Levergood (1998:148) considers a title list to be useful, while a listing of products for sale might provide ordering information, brief subject content, other formats available, etc.
- Indexes of Bills by number and/or subject.
- Arranging information alphabetically by department or government body.
- Providing a FTP site alongside the website.
- Maxwell (1995:30) considers as "superb" the *User's Guide and Tutorial (How to Find*

Legislative Information) on the California website (<http://www.ca.gov>).

- Advanced indexing and abstracting. Berinstein (1995:86) dislikes “government sites’ rudimentary indexing and abstracting”.
- A site map may help the user easily find clusters of relevant information (Levergood, 1998:149).
- Stowers (1999:122) mentions help sections, guest books and linkages to “What’s new” on a site. In addition, she considers the availability of one page itemising all interactive services that are available online as very useful.

2.5.2 Search

Johnson (1996:153) propagates the provision of a search engine as one method to overcome the agency-based structure to allow clients to find what they need, regardless of which agency produced it. She warns, however, that it can, without knowledge of the government system and the scope of its activities, and without some skill in the search process, be a time-consuming process to locate the information required – assuming it is there in the first place. According to her, this knowledge gives users an idea of the scale of resources they are using and insight into the terminology used. She therefore requires that search interfaces give the first-time user information about the size, scope or terminology of the database being searched. Specific features mentioned as necessary for search engines are the use of keywords to search for information (Maxwell, 1995:31) and the option to search one or more document formats (HTML, PDF, ASCII) (Levergood, 1998:148).

Search engines could be implemented on different levels:

- A search facility that searches the entire website (Cooper, 1998:144; Levergood, 1998:148; Farrel, 1998:143).
- Search engines at each layer or sub-site. Farrel (1998:143) describes the USDA’s (US Department of Agriculture, <http://www.uds.gov>) design of placing search engines strategically throughout the website as “excellent”, while Maxwell (1995:30) commends the Indiana State Government Page for the fact that many areas of the server have their own search capabilities.
- According to Nielsen (1999b) a way to save time and effort while searching for government information is to have a search facility on a gateway site that can index and search all government sites.

Farrel et al (1996:397) view the use of advanced indexing, search and retrieval tools as necessary to identify, describe and dynamically link users to government information. According to them, the information is of little value unless such type of finding aids are developed to find government information on the Internet. They describe the so-called "pathway services" developed by Library Programming Services as such a tool. According to them it consists of a pathway indexer combined with the categorising of government sites by subject terms. The indexer is a group of tools designed to present a web-based interface for searching government information on the Internet. The aim is to index government sites in a database, which can then be searched by a database search engine. To facilitate browsing, the second method of access, categorising government sites by subject terms, is aimed at users who want to see what is available on government Internet sites. According to Farrel et al (1996:397), this type of service will provide flexibility in searching for government information.

Furthermore, Eidelman (1999:377) refers to a search site developed as a joint venture between the National Information Service (NTIS) and Northern Light technology in 1999 (<http://govsearch.ntis.gov/>). According to them it was developed as "the first search site customised to provide one-stop access to U.S. Federal Government information" (Eidelman, 1999:377). The site provides the ability to search any combination of government sites, the NTIS archives and the Northern Lights special collection. It searches federal, state and international government sites and has a power search feature enabling the user to sort results by date or limit the search to a particular domain. Eidelman (1999:377), however, describes the results as disappointing and uneven, especially for the public. "It provides non-professional users with more search alternatives than they probably want, and searches provide irrelevant hits while missing some of the most relevant information" (Eidelman, 1999:377). According to her, even simple searches did not provide the expected results. She requires the ability to do complex searches without sacrificing relevance, along with simplicity, speed and intuitiveness.

2.5.3 Government information locator services (GILS)

Johnson (1996:154) regards the implementation of a GILS as another method to ease the finding of information on government sites. According to her the idea with a GILS is that a set of core locator records for key government information resources is created and made available on the Internet. She describes it as a distributed system where each agency maintains its own core records. Searchable terms include free text and controlled

vocabulary. Where available, users can move directly from the GILS record to the online version of the document or other information resources. GILS records also cover information resources in formats not accessible via the Internet, like print and live people (Johnson, 1996:154). According to Johnson this approach takes some of the emphasis away from the agencies and places it on the information.

Maxwell (1995:30) also refers to the value of a GILS. He mentions the New York State Library's State Government Information Locator which provides four ways to access state government information, namely a database of state government information; an alphabetical list of state government services and programmes, with details about each programme; and an alphabetical list of state agencies which provides details of each agency and links to other state government Internet sites, including a searchable database of procurement notices and legislative sites.

Christian (1994:306) requires that a GILS be comprehensive, yet user-friendly. It must answer specific questions, yet also allow for scanning a wide range of government information. It must be able to answer questions from the most inexperienced user, yet allow for in-depth research.

2.6 Consistency

The same requirements for websites than discussed in chapter five are mentioned in the literature. An additional requirement stated by Herson (1998:431) is that government sites should not change too often. He regards it a problem that "government sites disclose vast differences over relatively short periods of time" (Herson, 1998:431).

2.7 Common 'look and feel' for government websites

It is important that all the websites for a government should have some design elements in common, for example page layout, colours, placement of buttons, menu structure etc., in order to create a corporate image for the government and to assist the user to navigate. Johnson (1996:153) considers it the responsibility of the people responsible for the 'whole of government' page to encourage the other agencies to give their pages a common look and feel.

However, governments experience difficulties in this regard. Mazereeuw (2000:34) mentions for example the disjointed service delivery by the various departments in Canada.

Sheehy (1997:133) states that it appears that the EU has difficulty developing consistent policies from agency to agency. Nielsen (1999b) furthermore states that each agency wants its own information architecture and does not want another to dictate its design. He also refers to the difficulty of “getting a city or county administration to follow guidelines from the capital” (Nielsen, 1999b). In addition, he argues that when content from different sources is brought together, interface complexity increases immediately unless integration is made a priority. “The stakes go up in aiming for a unified design and it becomes harder to overcome organisational politics and petty squabbling between groups” (Nielsen, 1999b).

Despite these difficulties, Nielsen (1999b) considers it important to achieve some integration, as usability suffers when users have to perform the integration in their head. “It is hard enough to find information on websites when you can compare two things and assume that they are indeed comparable because they were designed by a single source” (Nielsen, 1999b). He considers uniform meta-content as necessary for content integration to succeed. According to him, different departments or agencies need to agree on the following standards for metadata to describe each content unit:

- Writing style for headlines so that users can scan listings and understand what each headline links to.
- Controlled keyword vocabulary (or at least guidelines specifying when to use what type of keywords, how many keywords to use, how much something should be discussed to warrant a keyword, and rules for weighted keywords).
- Conventions for linking between collections.
- Standards to support parameter-driven access (for example what the definition of a creation date is and how much something needs to change to get a different modification date).
- Classes of content in the unified interface (for example making it clear whether something is a detailed research report or a one-paragraph news item).

According to Johnson (199:153) a common look and feel should not only extend to the look, but also to the content. “There is not much point having a nicely painted front veranda with a matching colour scheme throughout if some rooms inside are empty and others stacked to the ceiling with piles of yellowing documents” (Johnson, 1996:153). Sheehy (197:132) believes that consensus should be reached among various offices and directorates regarding the type of information that it will distribute through websites (Sheehy, 1997:132).

Mazereeuw (2000:34) mentions that the Canadian government online initiative includes ensuring that departments maintain a coherent format and meet certain standards. This entails not only ensuring that all departments provide all information, but also that information is organised in such a way that makes sense to citizens, so that they “don’t suffer the Net equivalent of being transferred from department to department, and extension to extension” (Mazereeuw, 2000:34).

Hernon (1998:432), however, is of the opinion that for large and complex governments such as the USA, one-stop shopping for all information needs is an elusive goal. He therefore stresses the important role of public interest groups and universities to develop sites that lead to government sources on the Internet, to enable users to negotiate the maze of websites and to find key information. Bouwman & Nouwens (1999:43) believe that the integration of government information and privately owned information could have positive effects on the attractiveness of a one-stop service. According to them public-private partnerships can increase the integrity of government information, and can create a critical mass of services. As example, they mention information about environmental pollution that can be provided by both the specific government department and Greenpeace (Bouwman & Nouwens, 1999:43).

2.8 Metadata

An important aspect of standardising government websites/publishing will be the organisation of information on all government websites. Individual websites all attempt to provide some kind of subject access to their sites. According to Chowdury (1999:216) these approaches to subject access are not based on tested and acceptable tools such as the Dewey Decimal Classification, Library of Congress Decimal Classification, and so on, and therefore results will vary from one search engine to another. Chowdury (1999) points to Younger’s argument that metadata, library cataloguing objectives, record structures, persistent names and addresses for Internet accessible resources, and the management of diverse metadata schemes are important concerns in building a coherent system of bibliographic access for information seekers.

A collection of metadata will comprise descriptive information about government information and services that can be used to classify, present and search the information that it refers to (Australia, DCITA, 2000).

2.9 Purpose and audience

Johnson (1996:151 – 153) considers it important that government websites must comply with the purpose or business of the specific government body, as well as with users' needs. She provides the following principles:

- Government should not be in the business of vanity publishing or providing a stimulating leisure activity. Government presence on the web should be assessed by the same objective, performance-based criteria applied to other spheres of government activity.
- Government websites should not be viewed principally as an exploration of the medium but as a service delivery medium for specific client groups. Government websites should have the provision of a public information service as their primary goal. A professional approach should be taken to the planning, implementation and evaluation of new information services, and therefore also websites. Thought must be given to the justification, utility and evaluation of the web presence.
- Government websites should comply with users' needs and should serve a well-defined community of users. The starting point in publishing or disseminating government information should be the identification of the needs of user groups, and evaluation of the most appropriate means of meeting those needs where all alternatives are considered.
- The web has a useful role in disseminating information within and between government agencies. "But it still has a long way to go before it becomes a truly effective means of distributing information to other government clients. In particular, web publishing must be viewed as one medium among many and not as something which is qualitatively distinct from print or broadcast publishing" (Johnson, 1996:153).

3. GUIDELINES AND PRINCIPLES FOR SOUTH AFRICAN GOVERNMENT WEBSITES

In South Africa, the electronic dissemination of government information is embedded in a legislative, regulatory, policy and institutional framework. Already in 1994, the Reconstruction and Development Programme (RDP) made a pledge with regard to the availability of government information by the means of sophisticated technology: "Open

debate and transparency in government and society are crucial elements of reconstruction and development. This requires an information policy that guarantees active exchange of information and opinion among all members of society. Without the free flow of accurate and comprehensive information, the RDP will lack the mass input necessary for its success" (South Africa, Parliament, 1994). The South African Constitution (1996a) makes provision for freedom of expression and freedom of access to information, while one of the objectives of the Promotion of Access to Information Act (2000:1) is to "actively promote a society in which the people of South Africa have effective access to information to enable them to more fully exercise and protect all of their rights". Various other Bills, Acts and policy documents have been passed to put mechanisms in place to support this vision, amongst which the Legal Deposit Act (1997), the Telecommunications Act (1996b), the State Information Technology Agency Bill (1998), the White Paper on Transforming Public Service Delivery (1997), the Broadcasting Act (1999), the Report of the Presidential Review Commission (1998) and the Report by the Communication Task Group (Comtask) (1996). In addition, at the time of this research, the government was developing an IT policy for government.

Furthermore, the government's recognition of the importance of information provision is clearly demonstrated by various statements by Thabo Mbeki. At the G7 meeting on the Information Society (Brussels, February 1995) he stated: "It is, however, also clear that we need a vastly expanded and modern information and communication infrastructure to help us address these concerns, which helps to emphasise the urgency of attending to what, at first glance, might seem to be something to which we should give less priority" (Mbeki, 1995b). In his opening address to the Government Communicators Conference on 25 August 1995, he declared the following: "We must strive to ensure that each individual, whatever his or her station in life, plays a meaningful role in decision-making and in governance. One of the ways this can be done is to ensure the citizen's access to information...These [political and social stability – HK] are prerequisites for the achievement of objectives such as the creation of jobs, the building of houses, the provision of health facilities and delivery of clean water to our people. In the pursuance of these objectives, provision and access to information is pivotal" (Mbeki, 1995a). He also sees the role of government information as being to communicate government policy to the citizenry, define and help implement strategies for communication, including direct communication, and define mechanisms for the public's access to information in the hand of the state (Mbeki, 1995a). An important principle of government communication is to include the possibility for exchange of information between the government and society as a two-way process. "The principle of two-way communication between government and society is in

this [RDP – HK] context, central, so that people know what government is doing and they themselves can contribute to the formulation of policy and take an active part in this implementation. At the same time, information policy should create conditions for people to fully exercise their right to freedom of expression" (Mbeki, 1995a). At the official launch of the *SA Government Online* website, Mbeki pointed out: "We believe that it is indeed the responsibility of the government to communicate to the South African population. It is important that the people should know what the government is doing... so that the people themselves can make an impact on that process of ensuring the accessibility of government to the people" (Mbeki, 1999).

The government has embarked on a number of initiatives to give effect to above-mentioned policies, legislation and commitments, focussing mainly on infrastructure to enable the dissemination of information to rural communities. Amongst other initiatives, government information is increasingly being made available on the Internet, while the *Government Online* initiative was launched by GCIS in 1999. However, at the time of this research, the South African government did not have any direct policies or guidelines in relation to web publishing, thus allowing government departments to develop websites and electronic channels of communication within a very loose framework.

The most comprehensive document dealing with guidelines for government communications, including how government should utilise the Internet for effective communication and dissemination is the so-called Comtask report (Comtask, 1996), adopted by Cabinet on 8 October 1996. According to the report, most governments have a central information or service provision agency, providing or co-ordinating the provision of basic data on the country and ensuring accessibility, for example maintaining a home page on the Internet (Comtask, 1996:41). The recommendation is thus made that "South Africa needed to develop a national web-site into which all departments can provide data" (Comtask, 1996:82).

The Comtask report provides the following guidelines for the development of a government website:

- Websites should be professionally designed to provide maximum access by both information provider and information receiver (Comtask, 1996:75).
- It must have the widest possible network of users. The principle should be multi-use with the maximum supply of non-confidential information (Comtask, 1996:75).

- It should be a comprehensive network and a common vehicle for all government bodies. Existing efforts and initiatives, both government and community-based, need to be linked via the network to provide easy access. The information delivery systems developed by the open democracy structures need to be linked to the network (Comtask, 1996:75).
- Commercial and statistical information should be made available by means of government websites (Comtask, 1996:45).
- An international information service about South Africa should be available on the Internet in co-operation with the Departments of Trade and Industry (DTI) and Foreign Affairs (DFA), SA Tourism (SATOUR), and others (Comtask, 1996:82).
- There should be an obligation on all government structures to supply key information (Comtask, 1996:9). Therefore all departments and statutory bodies should be required to make all documentation printed by the Government Printer and other printers available in electronic format to this network for immediate distribution (Comtask, 1996:88).
- Efforts should be made to establish a system of cataloguing all government documentation (Comtask, 1996:9).
- The dissemination of government information should be without restriction and should not be copyrighted by commercial concerns or otherwise. It should be available to the public, "who should not have to rely on commercial concerns with proprietary rights as their only source" (Comtask, 1996:88).

Some of the general recommendations and principles contained in the Comtask report may have a direct bearing on the government website, and are therefore presented here:

- Effective co-ordination must facilitate, but not centralise information flow (Comtask, 1996:60).
- Government on all three levels should commit itself to provide information about its operations, plans and projects (Comtask, 1996:16).

- An efficient government information system should make provision for a two-way system of communication. The people should be able to express their views to government and vice versa. This interactive means of information sharing will enable the people to gain access to government (Comtask, 1996:34).
- It is essential that government must inform people of its policies, actions and motivations, not only for the exercise of rights, but also for the governing of their lives (Comtask, 1996:3). Information affecting all aspects of their general lives should be provided.
- Directories of information resources available in government on all subjects should be established, but with a special emphasis on development issues and nation building (Comtask, 1996:34).
- A corporate identity for government and consistency in government communication must be developed (Comtask, 1996:77).
- Electronic application must be developed wherever possible to enable people to make enquiries and retrieve information (Comtask, 1996:34).

4. CONCLUSION

The importance of information, and thus also of electronic information as an important government resource that demands strategic management, has been illustrated in this chapter. It became evident that governments have an obligation to make information available easily, widely and equitably, increasingly also in electronic formats. This puts an obligation on government institutions to look as a priority to the way they publish electronic information, as the standard of electronic information publications should be no less than of their hard copy counterparts.

An attempt was made in this chapter to provide an overview of expectations for electronic dissemination of information by government institutions. These also include more specific requirements for government websites as the primary medium for electronic information dissemination. As with any website, requirements for government websites encompass specific requirements for content to be available, for sites to be convenient and easy to use and to be aesthetically pleasing. In addition, an important requirement is that government

sites should take into account the different levels of experience and competence of all potential users of these sites.

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Another important aspect that emerged was the need for a 'whole-of-government' approach to any government's web publishing effort. The importance of such an approach for ultimately assisting users to access and find all available information for that government and to improve efficiency and quality of government information became evident.

At the time of the evaluation of the *SA Government Online* and other government websites, there were no official government information policies or standards for website development by the South African government. However, according to the author, the electronic dissemination of information was already embedded in a legislative, regulatory and institutional framework. In addition, government's recognition of the importance of information provision was clearly demonstrated in statements by government officials such as Thabo Mbeki. The author believes that this framework, existing documentation such as the Comtask report (1996), as well as web initiatives by leading e-government countries in the world, provide a solid platform from where one can identify valid requirements for South African government websites and for the *SA Government Online* website.

2. HEURISTIC EVALUATION – EXPERT OPINION

2.1 Introduction

Four expert evaluators were chosen to conduct this part of the heuristic evaluation. They were asked to complete a semi-structured qualitative guide based on the ten heuristic usability criteria (see chapter four) which was provided to them online. The evaluation was conducted during the period 23 August to 8 September 2000. See chapter two, paragraph 4.1 for a description of the method, and Appendix A for the evaluation guide.