



## **GO-ITS 23.3 - Internet Web Application Interface**

**Approved Standard**

### **Foreword**

Government of Ontario Information & Technology Standards are the official publications on the standards, guidelines, technical reports and preferred practices adopted by the Information & Technology Standards Council under delegated authority of the Management Board of Cabinet. These publications support the Management Board Secretariat's responsibilities for coordinating standardization of Information and Technology in the Government of Ontario.

Publications that set new or revised standards provide policy guidance and administrative information for their implementation. In particular, they describe where the application of a standard is mandatory and specify any qualifications governing its implementation.

### **Designations**

GO-ITS 23.3 - Internet Web Application Interface

### **Title**

Internet Web Application Interface

## **Status**

Mandatory

## **Technical Contact(s)**

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## **History**

August 2002

## **Abstract**

This document defines the Technical Standards for the Government of Ontario Web applications. This standard applies to Internet, Intranet and Extranet sites.

## **Implementation Criteria**

### **1 Category**

This standard contains mandatory requirements, guidelines and preferred practices.

### **2 Purpose**

This GOITS defines directions in the areas of interface design for ministries and agencies implementing Web-based applications:

- a) Mandatory requirements for ministries and agencies;
- b) Guidelines that ministries and agencies should follow unless there are strong reasons to do otherwise;
- c) Preferred practices that ministries and agencies should consider during development.

The objectives of the standard are to:

- a) To ensure a consistent interface to Government of Ontario Web applications for members of the Ontario Public Service and members of the public;
- b) To define quality standards.

### **3 Application**

This standard applies to all Ontario Public Service ministries implementing Internet, Intranet or Extranet

accessible applications. It also applies to all agencies reclassified to regulatory/adjudicative, advisory and operational to which standards have been and are regulated (formerly schedule I and IV agencies). Kindly contact Calvin Bernard, Senior Policy Advisor, at 416-327-2038 or Calvin.Bernard@mbs.gov.on.ca for a list of agencies that these standards are applicable.

## **4 Related Documents**

*GOITS 23.1 (formerly GO-ITS 01-01) Internet Public Access Product Design* - Defines the requirements for the visual representation of the Ontario government on the Internet World Wide Web information network.

## **5 Qualifications**

This publication applies to the Ontario Public Service ministries and all agencies reclassified to regulatory/adjudicative, advisory and operational to which standards have been and are regulated (formerly schedule I and IV agencies). Kindly contact Calvin Bernard, Senior Policy Advisor, at 416-327-2038 or Calvin.Bernard@mbs.gov.on.ca for a list of agencies that these standards are applicable. This information will be useful to the broader public sector and other existing and potential partners of the government.

The effective date of these Technical Standards is December 2001.

## **6 Where To Obtain Copies**

Copies of cited standards may be obtained as follows:

<http://www.itstandards.gov.on.ca>

## **7 Copyright**

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## **Technical Specification**

### **0. INTRODUCTION**

This standard applies to Internet and Extranet Web applications. The scope of this document is not limited to the current or named technologies.

This standard is designed to help ministries and agencies with the development of their Web sites. It provides mandatory standards which must be followed, guidelines which should be followed, and preferred practices which are recommended to be followed.

The Internet's World Wide Web is a rapidly growing information network. Usage and number of Web sites are growing exponentially. Unlike some Internet services, Web services are kept up to date, are easy to use, and attract a lot of attention.

The Web is becoming an increasingly popular communications and service delivery channel and means of soliciting feedback from the public, from both the government's and the public's perspective because it:

- is easy to use,
- is cost effective, and
- provides nearly 24 hr/7 days a week access.

It has become an important information distribution channel for the government. This standard deals with how to set up your Web site so that you continue the government's corporate presence into your publications on the network, just as you would in print.

If you are using the Web, be aware of the following:

- **there are important security issues.** Consult with iSERV ONTARIO about your Internet plans and always virus check downloaded files;
- **the Web is "up to date".** If you want to provide a Web site, you must make the commitment and provide the resources to keep the information current;
- ministries must comply with the *Government Publications Directive*;
- all Ontario government information published on the Web is covered by Crown copyright. It is very difficult to enforce copyright, so do not put up material that you may wish to sell, unless you can supply it in such a way that it has little value to a commercial user in the form it is presented;
- there are **costing issues** associated with Internet services; again please speak with iSERV ONTARIO for the latest information on costs;
- all legislation which applies to print publications applies to publishing Web sites on the Internet, such as: the *French Languages Services Act*, the *Freedom of Information and Protection of Privacy Act* and the *Ontarians with Disabilities Act*;
- although we try our best to provide accurate and reliable information, we cannot guarantee it, nor can we guarantee that graphic information, when downloaded, is correct. For example map scales may be distorted depending on the software being used to view them. A suitable disclaimer may be provided; and,
- only information for the public must be placed in the publicly accessible areas of the network.

Part of this standard is the requirement to use shared resources. Management Board Secretariat (MBS) maintains the resource libraries of government wide resources for others to use. You can add your materials to these libraries, by sending them to the GO Web Committee Webmaster, so they may be shared with others.

If you set up a Web site, please contact the GO Web Committee co-ordinators and notify them of your Uniform Resource Locator (URL). This will ensure you are linked to the Ontario government "central Web site".

The GO Web Committee will deal with cross government Web-related issues on an on-going basis. The Committee maintains a [Web site](http://webmaster.gov.on.ca) [http://webmaster.gov.on.ca] which includes material supporting this standard and information as to whom to contact with questions about this standard and other Web-related matters. In preparing French translations for Web sites, use of the [ONTERM Web site](http://www.onterm.gov.on.ca/default_e.asp) [http://www.onterm.gov.on.ca/default\_e.asp] will allow consistent translation of terminology.

## 1. MANDATORY

### 1.1 Common

- 1.1.1. On any data entry interface, mandatory fields must be indicated with a red asterisk(\*).
- 1.1.2. All data entry fields must indicate units where applicable (e.g. hours, \$).
- 1.1.3. If there are limitations on how data may be entered into a field, the correct format (e.g. dd/mm/yyyy)

must be indicated.

1.1.4. The submit button must be located at end of data entry section. The button may be labelled as appropriate (e.g. "Apply", "Submit" or "Search").

1.1.5. If data entry validation is to be performed, incorrect entry field(s) must be identified for the user on the error message screen.

## **1.2. Quick Search**

1.2.1. Where there is a quick search entry form, the quick search entry form must be placed to be visible on the first screen of the page.

1.2.2. Where there is a quick search entry form, Visible length of search field will be dependent of the page layout, but the maximum shown will be 40 characters. The maximum field length will be 255 characters.

1.2.3. Where there is a quick search entry form, the quick search submit button will be a graphical button to the right of the search field. It will be labeled "Search" with the alt tag "Search" (French equivalent on French pages). The graphic for this button will be provided from common resource library. Where supported by browsers, users should be capable of tabbing over to the button directly from the text entry field. Data submission must work both by a mouse click on the submit button and by keyboard "Enter" in the text entry field.

1.2.4. Where there is a quick search entry form, the quick search interface must not include "help" or "tips" or "advanced search" links.

1.2.4. Where there is a quick search entry form, the quick search must use the same query syntax and wildcards as the standard search.

## **1.3. Standard Search Page**

1.3.1. Where there is a standard search page, the text entry field and search submit button must be located both at the top of the page and at the bottom, after all of the options.

1.3.2. Where there is a standard search page, the visible length of search field will be dependent of the page layout, but the maximum shown will be 40 characters. The maximum field length will be 255 characters.

1.3.3. Where there is a standard search page, the search submit button will be a graphical button to the right of the search field. It will be labeled "Search" with the alt tag "Search" (French equivalent on French pages). The graphic for this button will be provided from common resource library. Where supported by browsers, users should be capable of tabbing over to the button directly from the text entry field. Data submission must work both by a mouse click on the submit button and by keyboard "Enter" in the text entry field.

1.3.4. Where there is a standard search page, the page must provide a selection between searching the current ministry or agency and searching the entire government. On ministry or agency pages, the default must be set to the current ministry or agency. On central site pages, the default must be set to the entire government.

1.3.4. Where there is a standard search page, the search page must provide help. This will take the form of examples, as well as the basics of how to enter a search query and a "Help" link. The help link must take the form of a graphical button labeled "Help" with alt tag "Help" (French equivalent on French pages). The graphic for this button will be provided from common resource library.

## **1.4. Error Message Handling**

1.4.1. Where there are error messages, default and customized error messages must be English within English pages and French within French pages where possible, and bilingual elsewhere.

## **1.5. Discussion Forums**

1.5.1. Where there is a discussion forum, it must provide users with forum identification prominently on the first screen.

1.5.2. Where there is a discussion forum, it must provide a link to help, with both general help and information for first time users.

## **1.6. Database Searches**

1.6.1. Where there is a database search, a clear identification of the database being searched must be provided to the user including information about the scope and the contents of the database.

## **1.7. Log-in Screens**

1.7.1. Where they exist, log-in screens for Internet applications must identify to the user what is being logged into.

## **1.8. Help**

1.8.1. Site level help, where it exists (cf. section 3.7.1) must be accessed through a "Help" button included as part of the site-wide navigation.

1.8.2. Page level help, where it exists (cf. section 3.7.1) must be accessed from a text link reading "Help with this page" or "Help with this form" (or the equivalent in French on French pages or forms) located at the top and bottom of the page or form.

1.8.3. Field level help, where it exists (cf. section 3.7.1) must be accessible from a graphical button depicting a question mark ("?") available in the common resource library.

## **2. GUIDELINES**

### **2.1. Common**

2.1.1. If possible all data entry should be visible on one screen.

2.1.2. Tabbing between fields should move horizontally across the page.

2.1.3. All data for one transaction should be entered before beginning the next transaction. Layout and movement between fields should reflect this.

2.1.4. The application should offer feedback whenever interaction occurs and should always confirm users actions on submit level when the action is critical.

2.1.5. The DD/MM/YYYY date format should be used for date input fields, where the date can be converted to the standard YYYY/MM/DD format for date storage (cf. [GO-ITS 74.00 Date Format](#)).

2.1.6. In addition to the "Submit" button (see Section 1.1.4 above), there should be a "Clear Form" button.

### **2.2. Quick Search**

2.2.1. Where there is a quick search entry form on ministry of agency sites, the default scope of the quick search should set to the current ministry or agency site. On the central site, the default scope for the quick search should be all government of Ontario sites.

2.2.2. Where there is a quick search entry form, the language of the search results page and the search results therein should be the same as the language of the originating page containing the quick search.

### 2.3. Standard Search Page

2.3.1. Where there is a standard search page, Web sites should use one search page with a simple text entry field and options below, rather than a simple search page and an advanced search page.

2.3.2. Where there is a standard search page, the default search logic "any" (boolean OR) should be used for the simple text entry field. Users should have the option of changing this default to "all" (boolean AND), using full boolean expressions or searching for an exact phrase.

2.3.3. Where there is a standard search page, the default search should be on all document types and page elements. Users should have the option to limit their search to specific page elements (e.g. title, description, content) and, where appropriate, to specific types of documents (e.g. HTML, Acrobat PDF, word processor documents).

2.3.4. Where there is a standard search page, users should have the option to configure their search results page from the standard search page. They should be able to specify the number of results per page, the elements displayed and other order of display. The default settings for these displays will be: 10 results per page; page title, document description, metadata keywords, the first occurrence of the search term in context and URL displayed, results displayed in order of decreasing relevancy.

### 2.4. Search Results

2.4.1. Where there is a search results page, an active search box with the active search terms should be displayed at the top and the bottom of the search results page.

2.4.2. Where there is a search results page, the search results page should display a brief help message, beneath the search box at the top of the page, describing search strategies for users whose searches produce too many or too few results.

2.4.3. Where there is a search results page, above the display of search results the page should indicate the total number of results found and the number of results per page (e.g. "2587 results found - results 26-50 displayed").

2.4.4. Where there is a search results page, the search term should be **bolded** in the search results listing.

2.4.5. Where there is a search results page, the results display should not contain multiple instances of a single URL.

2.4.6. Where there is a search results page, the order of elements in the search results display should be as follows (Note: The elements displayed will depend upon the selection of the user, cf. section 2.3.4 above):

- Relevancy rating
- Page title (hyperlinked to the document)
- Description from document description metatag
- Keywords from document keywords metatag
- URL (hyperlinked to document)
- Last modified date

2.4.7. Where there is a search results page, in addition to the search box, the bottom of the page should include "Previous" (on all but the first results pages) and "Next" (on all but the last results pages) links. Between these links should be numerical links to the ten previous and ten next search results pages.

## **2.5. Error Message Handling**

2.5.1. Where there are error messages, error messages should be meaningful and written in plain language.

2.5.2. Where there are error messages, error messages should be answer the following user questions:

- "What happened?"
- "What does it mean?"
- "What can I try in order to fix the problem?"
- "Who can I contact with a technical enquiry regarding this message?"

2.5.3. Where there are error messages, different error messages should be used for different error conditions, including but not limited to:

- Data entry errors
- Server errors
- Submission fails
- Page not found
- Access restricted
- Zero results for search

2.5.4. Where there are error messages, data entry errors should return users to the incorrect field(s) or permit the re-entry of data for those fields on the error message page.

2.5.5. Where there are error messages, error message pages should meet the requirements of GO-ITS 23.1 including the use of standard headers and footers.

## **2.6. Discussion Forums**

2.6.1. Where there is a discussion forum, it should show threads and the relationships between messages. Replies should be indented below the message to which they are replying.

2.6.2. Where there is a discussion forum, users posting messages should receive confirmation of posting including: name, e-mail address, subject, body of message and date of posting. The message confirmation page should link back to the message forum.

## **2.7. "E-tail" transactional applications**

2.7.1. Where there is an "E-tail" transactional application, Key shopping functions in the application should be available at both the top and bottom of the page.

2.7.2. Where there is an "E-tail" transactional application, any legends in the catalogue (e.g. in stock, out of stock) should be displayed at the beginning and end of the page.

## **2.8. Log-In screens**

2.8.1. Where they exist, log-in screens for Intranet and Extranet applications should identify to the user what is being logged into.

## **2.9. Help**

2.9.1. Where a question mark graphic is used for field level help (cf. section 1.8.3) the alt tag for this graphic should include the help for the field.

## **3. PREFERRED PRACTICES**

### **3.1. Common**

3.1.1. Where the application interface is longer than one screen, there should be a list of information required from the user on the first screen.

3.1.2. If a forward or back button is provided with an application it should be labeled with where it goes.

3.1.3. Radio buttons are preferred over drop-down menus for selections between up to 3 options. Drop-down menus should be short enough not to require the user to scroll, except for choices where the user will know all of the available options without seeing them (e.g. a selection of US state or Canadian province).

3.1.4. On mandatory fields, the most popular options should be default or the most logical order should be followed; for non-mandatory fields the blank option should be the default.

3.1.5. Follow Web industry practices for analogies (e.g. for e-tailing use the shopping cart analogy). Standard graphics will be created and stored in the common resource library.

### **3.2. Quick Search**

3.2.1. Where there is a quick search form, use a background colour to highlight the quick search feature.

### **3.3. Standard Search Page**

3.3.1. Where there is a standard search page, avoid the use of drop-down menus.

### **3.4. Error Message Handling**

3.4.1. Where there are error messages, if development product permits, show content of form before submission, ie. A review page summarizing the data entered along with Edit and Submit buttons.

### **3.5. Discussion Forums**

3.5.1. Where there is a discussion forum, message listing pages should indicate the total number of messages in the discussion forum at the top of the page.

3.5.2. Where there is a discussion forum, users should be able to expand or contract the display to reveal or hide replies. Where replies are hidden, the display should indicate the number of replies in a thread.

3.5.3. Where there are policies regarding the administration of the discussion forum, these policies should be visible to the users. For example, where there is a policy regarding expiration and archiving of older messages, the site should include a phrase like "Messages more than [length of time] old are archived."

### **3.6. Log-in Screens**

3.6.1. Where security concerns permit, offer an option to "save user name and password". Consult with your I&IT Cluster security experts before offering this option. This may also go into the Threat/Risk Assessment (TRA) for the application.

3.6.2. The log-in screen should provide a link to help for cases where users have forgotten their log-in ID or password. If the application permits, there should be a procedure wherein the user can trigger the provision of the forgotten information.

3.6.3. The log-in screen should provide a link to information and registration for new users.

### **3.7. Help**

3.7.1. Help should be scalable to the application and context sensitive to the location within the site and application. Ideally, there will be three levels of help:

- "Site level help" will apply to the entire site.
- "Page level help" will apply to the specific page or form being used.
- "Field level help" will apply to one specific field within the form or application. This help will be accessible from a graphical button depicting a question mark ("?") available in the common resource library.

3.7.2. Help may take a variety of forms including, but not limited to: page or form description and identification, glossary of terms, frequently asked questions and answers (FAQ), detailed instructions.

3.7.3. Help pages should include provision for users to submit questions to the application owner, either through an email link or a feedback form.

3.7.4. Field level help should lead to a pop-up window with the help and a "close" button. Where there is a lot of field level help, a single pop-up window should be used containing all of the help and in-document anchors permitting the link to go directly to the appropriate field level help within the pop-up window. This will prevent the proliferation of pop-up windows.

## **DEFINITIONS**

**Discussion Forum:** A web application allowing users to read and contribute messages.

**Home Page:** The first and main page of a Web site. It typically serves as an index or table of contents to other documents stored on the site.

**Internet:** The Internet is a world-wide collection of computer networks that are linked using a set of common communications protocols (TCP/IP, HTTP, SMTP etc.). It is used as a communication medium for all types of data and applications.

**Intranet:** A network based on Internet protocols belonging to an organization, usually a corporation, accessible only by the organization's employees. An Intranet's Web sites look and act just like other Web sites, but a "firewall" surrounding an Intranet prevents unauthorized access.

**Extranet:** An Intranet that is partially accessible to authorized outsiders. Whereas an Intranet resides behind a firewall and is accessible only to people who are members of the same organization, an Extranet provides various levels of access to outsiders. It is not available to the general public.

**Metadata:** Data about data. Metadata describes how, when and by whom a particular set of data was collected, and how the data is formatted.

**Quick Search:** A search engine query form which is included as part of a Web site content or index page.

**Standard Search Page:** A page devoted entirely to a search engine query form.

**Web Application:** An interactive application accessible via the World Wide Web.

**Web Page:** A document on the World Wide Web. Every Web page is identified by a unique URL (uniform resource locator) or address location.

**Web Site:** A location on the World Wide Web. Web sites consist of a home page and usually additional Web pages which could contain documents, files and links to other sites.



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