



USAID
FROM THE AMERICAN PEOPLE

TAPRII
TECHNICAL ASSISTANCE
FOR POLICY REFORM

DEVELOPMENT OF THE EISA PORTAL

SYSTEM REQUIREMENTS SPECIFICATIONS (SRS)

VERSION 2.0

September 19, 2006

This publication was produced for review by the United States Agency for International Development. It was prepared by Ismail Zidan, Alexey Brudno, and John Yates

DEVELOPMENT OF THE EISA PORTAL

SYSTEM REQUIREMENTS SPECIFICATIONS (SRS)

VERSION 2.0

TECHNICAL ASSISTANCE FOR POLICY REFORM II

CONTRACT NUMBER: 263-C-00-05-00063-00

BEARINGPOINT, INC.

USAID/EGYPT POLICY AND PRIVATE SECTOR OFFICE

SEPTEMBER 19, 2006

ISMAIL ZIDAN, ALEXEY BRUDNO, AND JOHN YATES

COMPONENT B

DISCLAIMER:

The author's views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

1. INTRODUCTION	4
1.1 Purpose	4
1.2 Scope	5
1.3 Project Objectives	5
1.4 Definitions, Acronyms and Abbreviations	5
1.5 References	6
2. GENERAL DESCRIPTION	7
2.1 Site Map	7
2.2 Portal Perspective	11
2.3 Portal Functionality	12
2.3.1 Environmental Considerations	12
2.3.2 Portal Database Driven design	12
2.3.3 Portal Search facility	12
2.3.4 Portal personalization and customization	13
2.3.5 Portal Content Management	13
3. MAIN MODULES	14
3.1 Administrative module	14
3.1.1 General functions	14
3.1.2 Maintaining Target Audience Personal Information in the database	15
3.1.3 Maintaining (controlling) the Target audience	15
3.1.4 Re-Filing of Reports	16
3.1.5 Temporary Rights	16
3.1.6 Editing profiles	16
3.1.7 Controlling Templates for the Different Audiences	16
3.1.8 Creation of Groups	16
3.1.9 Portal server to EISA local server	16
3.1.10 Customer Complaints Form	16
3.1.11 Security Requirements	16
3.2 Reports Filing Module	18
3.2.1 Process Flow	18
3.2.2 General Validations	18
3.2.3 Username / Password	18
3.2.4 Resubmission of Reports	19
3.2.5 Security Requirements	19
3.3 Inspectors Module	20
3.3.1 General functions	20
3.3.2 Features of the Inspectors Module	20
3.3.3 Security Requirements	20
3.4 Registration Module	21
3.4.1 Features of the Registration Module	21
3.4.2 Entity Registration Fields	21
3.4.3 Publishing Entity Information	22
3.4.4 E-mail Reminder	22
3.4.5 Administration	22
3.4.6 Security Requirements	22
3.5 CONTENT MANAGEMENT MODULE	23
3.5.1 Main Features of the Content Management module	23
3.5.2 Role-based Content Management	24
3.5.3 Content Management Navigation Menu	25

3.5.4 Content Management Workflow Scenarios	28
3.5.5 Security Requirements.....	29
3.6 Complaints module	31
3.6.1 Complaint Registration Process	31
3.6.2 Registration Format as Defined by EISA.....	31
4. SPECIFIC REQUIREMENTS.....	33
4.1 Quality Characteristics	33
4.2 Other Requirements.....	33
4.3 User Interfaces.....	33
4.4 Verification and Validation Requirements.....	33
4.5 Hardware Requirements	34
4.6 Software Requirements	34
4.6.1 Application Software	34
4.6.2 Operating System	34
4.7 User Documentation	34
5. IMPLEMENTATION SPECIFICATION	35
5.1 Implementation Phases	35
5.1.1 Phase 1:.....	35
5.1.2 Phase 2:.....	35
5.1.3 Phase 3:.....	35
5.1.4 Phase 4:.....	35
5.2 Verification and Validation Requirements.....	35
5.2.1 Validation	35
5.2.2 Flexibility	36
5.2.3 Speed.....	37
5.2.4 Accessibility	37
5.2.5 Browser independence	37
5.2.6 Other checks.....	38

1. Introduction

The Egypt Insurance Supervisory Authority (EISA) acts as the government regulatory body to protect the interests of insurance policyholders, and regulate, promote and ensure orderly growth of the Insurance Industry in Egypt.

The present EISA web site (www.eisa.com.eg) has limited functional capabilities and limited information for potential users of the system. EISA has decided to enhance the features of the existing web site using the latest portal technology, increasing the functional capabilities and modernizing its interface.

The new portal to be developed for EISA will disseminate timely and accurate information through simple and easy navigation and covering all the required activities of EISA.

EISA currently has a website hosted by a local telecom company. It provides minimal services to its clients. The website will be moved in-house and substantially enhanced so that it can provide better services to its various clients.

The aim of the portal is to disseminate timely and accurate information (in both Arabic and English languages) about the activities of EISA to the broader Egyptian public and business community.

1.1 Purpose

The purpose of this document is to provide the System Requirement Specifications (SRS) of the EISA portal development project. The development of the portal is bilingual (Arabic and English versions).

This SRS document for the EISA portal project has been prepared in order to provide the following:

- A mutual understanding between EISA stakeholders, customers and project teams about the requirements of the software
- Agreed-upon and approved SRS by EISA Management
- A smooth flow into the system design activities
- Increased functionality, integrity and performance of the EISA portal
- Improved testing, interfaces and maintainability
- Improved overall project management
- Improved customer satisfaction and overall quality

1.2 Scope

The scope of this document covers the system requirements that go into building of the EISA portal. The document will henceforth will be referred to as the SRS.

1.3 Project Objectives

- To revamp the existing EISA website (www.eisa.com.eg) in an order to have a modern, database-driven, user-friendly and interactive EISA portal
- To keep the general public in Egypt informed, on the latest developments in the Insurance Sector in a contextual and user-friendly manner by making use of modern web technology
- To make available a repository of Acts, Regulations, Circulars, Decrees, Guidelines, Notices and other business information for insurers and intermediaries
- To provide a mechanism to various customers for receiving periodical e-mail notifications regarding various updates on their topics of interest
- To provide personalization and customization for customers
- To publish business and other statistics of insurers
- To have built-in search facility to locate information related to the topic desired
- To facilitate Insurers and Pension Funds to file their reports electronically and generate the required statistical information for the use of EISA, the insurance community and general public.
- To publish details of Insurers, Funds and other agencies approved by EISA
- To provide policyholders and the public a simple complaint mechanism.
- To provide a mechanism for the general public to express their views on various developments in the insurance industry
- Allow EISA inspectors to upload and download files from their laptop computers to/from the website.

1.4 Definitions, Acronyms and Abbreviations

EISA:	Egypt Insurance Supervisory Authority
HTML:	Hyper Text Markup Language
PR:	Progress Reports
PDF:	Portable Document Format

XML: eXtensible Markup Language document
FR: File Report
AR: Annual Reports
MIS: Management Information System
SRS: System Requirement Specifications
URL: Uniform Resource Locator

1.5 References

Several meetings and interviews have been conducted with managers of departments, EISA IT department and BearingPoint local IT staff.

The current EISA website has been used as a guide for identifying the new portal basic structure.

2. General Description

The EISA portal will have menu and sub-menu functionality including but not limited to the following structure (as on April 10, 2006):

2.1 Site Map

General information

- About EISA
- Insurance Sector Guide
- Organizational Chart
- Re-Insurers' List
- News
- Contact us

Services

Registration

Online Registration & Inquiry

New Registration

- Insurance Brokers
- Surveyors & Loss Adjusters
- Actuaries
- Consultants
- Insurance Company Auditors
- Inquiries about Previous Registration Requests

Inquiries about Registered Natural Persons

- Insurance Brokers
- Surveyors & Loss Adjusters
- Consultants
- Actuaries
- Insurance Company Auditors

Inquiries about Registered Juridical Persons

- Inspection & Risk Assessment Experts
- Consultants

- Representative Offices
- Insurance Pools
- Insurance Unions
- Insurance Private Funds
- Direct Insurance Companies & Cooperative Insurance Societies
- Re-Insurance Companies
- Insurance Governmental Funds
- Assisting Bodies

Registration Conditions & Procedures

Insurance & Re-Insurance Companies

- Request for Registration Form & License for Direct Insurance or Re-Insurance Companies
- Notification Form to Inform the Organization about Members of the Company's Board of Directors
- Notification Form about the Ownership from 5% to 10% of the Capital Directed to the Insurance or Re-Insurance Company
- Natural Persons (Individuals)
- Juridical Persons (Corporations)
- New Personal Insurance Companies
- Request Form for Permission to Establish a New Company
- Form for the Establishment of New Property Insurance Companies
- Form for Permission to Establish a New Company

Insurance Brokers & Experts

Actuarial Experts

- Request to be Recorded in the Register of Actuaries
- Documents Required to Record an Actuary

Consultants

- Request by an Egyptian to be Recorded in the Consultants Register
- Data Required to Record an Egyptian Person
- Request by a Foreigner to be Recorded in the Consultants Register
- Data Required to Record a Foreign Person
- Request to Record a Juridical Person in the Consultants Register
- Data Required to Record a Juridical Person

Inspection & Risk Assessment Experts

- Request by an Egyptian to be Recorded in the Inspection Experts Register
- Data Required to Record an Egyptian Person
- Request by a Foreigner to be Recorded in the Inspection Experts Register
- Data Required to Record a Foreigner
- Documents Required to Renew the Record of an Egyptian
- Data Required to Renew the Record of an Egyptian
- Request to Resubmit the Record of an Egyptian in the Inspection Experts Register
- Data Required for the Resubmission of an Egyptian

Insurance Brokers

- Request to Record an Egyptian in the Brokers Register
- Data Required to Record an Egyptian
- Request to Renew the Record of an Egyptian in the Brokers Register
- Documents Required to Renew the Record of an Egyptian
- Request to Resubmit the Record of an Egyptian in the Brokers Register
- Data Required to Resubmit the Record of an Egyptian
- Data Required to Resubmit the Record of a Foreigner in the Brokers Register
- Data Required to Resubmit the Record of a Foreigner

Inspectors of the Insurance & Re-Insurance Companies' Accounts

- Request to be Recorded in the Accounts of the Inspectors Register
- Data Required for the Record

Complaints

- Complaints Against Insurance Companies
- Complaints Against Insurance Private Funds
- Inquiry about Previously Introduced Complaints

Insurance Legislation

- Law No.10 Issued in 1981 Relevant to the Insurance Inspection and Control in Egypt
- The Executive Regulations of Law No. 10
- Law No. 54 issued in 1975 Covering the Insurance Private Fund
- The Executive Regulations of Law No. 54

Conferences & Symposiums

- IAIS Symposium
- Solidarity Conference

Researches & Studies

- Governmental Insurance ... Compulsory Insurance
- Free Trade in the Fields of Insurance & Re-Insurance

Publications

Annual Reports

- Annual Report 2003/2004 (Arabic)
- Annual Report 2003/2004 (English)
- Annual Report 2004/2005 (Arabic)
- Annual Report 2004/2005 (English)

Monthly Bulletins 2005

- May 2005
- June 2005
- July 2005
- August 2005
- September 2005
- October 2005
- November 2005
- December 2005

Monthly Bulletins 2006

- January 2006
- February 2006

On-line Submission of the Insurance Reports

On-line Submission of the Pension Fund Reports

Related Links

Governmental Organizations

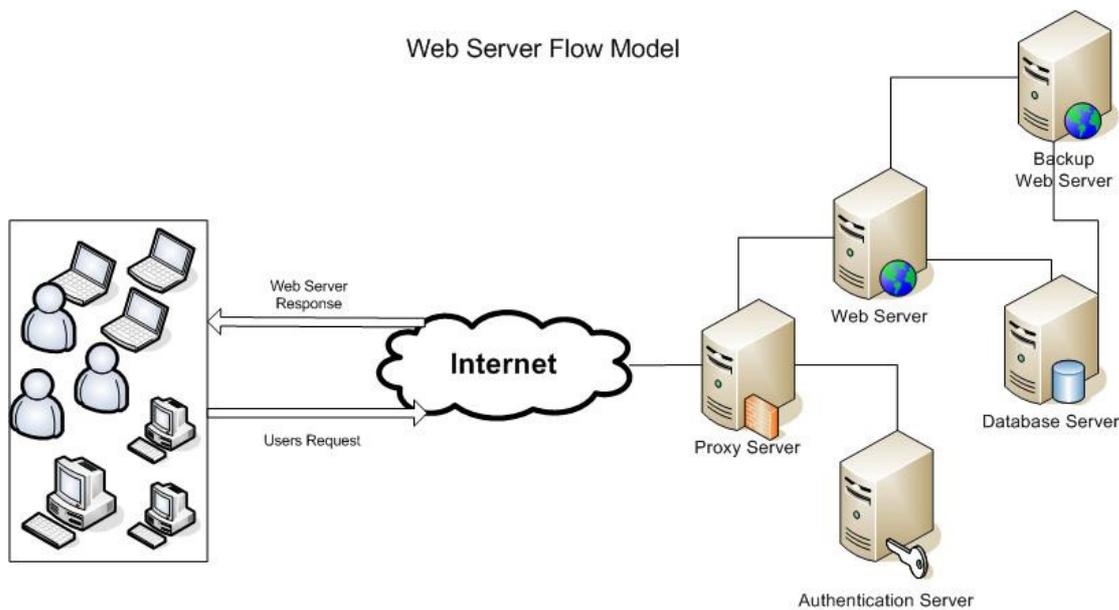
- The Ministry of Investment
- Information & decision Support Center (IDSC)
- Egyptian Government E-Gate
- State Information Service (SIS)

Insurance Resources

- Egyptian Insurance & Re-Insurance Companies
- IAIS
- African Insurance Organization
- FAIR
- NAIC

2.2 Portal Perspective

The EISA proposed portal shall provide the functions and features to authenticate and identify the users and provide them with an easy, intuitive, personalized and user-customizable web-interface for facilitating access to information and services that are of primary relevance and interest to the users.



From the EISA perspective the portal will provide versatile functions to catalogue, organize collections of multiple sources of information and service resources for dissemination to many users according to their specific privileges and needs.

2.3 Portal Functionality

2.3.1 Environmental Considerations

EISA New web portal should provides a source of information to the following targeted audience:

- Insurers
 - Insurers (Insurance companies and Private funds)
 - Re-insurers

- Insurance specialist
 - Surveyors
 - Brokers
 - Actuaries
 - Insurance Consultants
 - Insurance Auditors

- General Public
- Press
- Research Scholars
- Other Government Agencies in Egypt
- Other Approved Entities

EISA needs to procure additional infrastructure to replace old equipment, procure PCs and laptops to allow more users to access the system, and to procure servers and other hardware to allow for an expansion of secure e-services.

2.3.2 Portal Database Driven design

The EISA portal will be database driven, using MS SQL 2000 database for information manipulation and retrieval.

The relational database design should observe the database normalization standard to eliminates redundancy, organizes data efficiently, and reduces the potential for anomalies during data operations and improves data consistency.

2.3.3 Portal Search facility

The search facility will provide full support in Arabic and English. Multiple Searches will be comprised of keyword search, exact and partial match.

A search facility will be provided that will function according to the access rights given to end-users by the Portal Administrator.

2.3.4 Portal personalization and customization

The personalization and customization for end users envisages that the user will receive a “welcome greeting” on login to the portal. The user registration number (for Insurers and Funds) and user-id will also be displayed as a part of the personalized service. The users will be classified into two broad categories namely users having periodic business interaction with the EISA, such as Insurers, Surveyors, Brokers, etc. and the general public who can also become registered members.

Automatically generated e-mails will be routed to the registered users periodically by the portal. These e-mails will communicate updates to the portal to registered users.

Support for Event-triggered Notification

Event triggered notification is similar to auto-notification. The difference is that this service will be activated when a specific event occurs. The details of event-triggered mails will be based on event definitions.

Help Module

There will also be an additional Help module that will assist the user if he or she experiences any difficulty using the portal.

Ability to communicate with users/groups of users via e-mail

The portal will include the ability to send email to individual subscribers based on their profile or group mailing facility, for example, Brokers, Insurers, Surveyors, Funds, etc.

2.3.5 Portal Content Management

The EISA Portal will provide the following features:

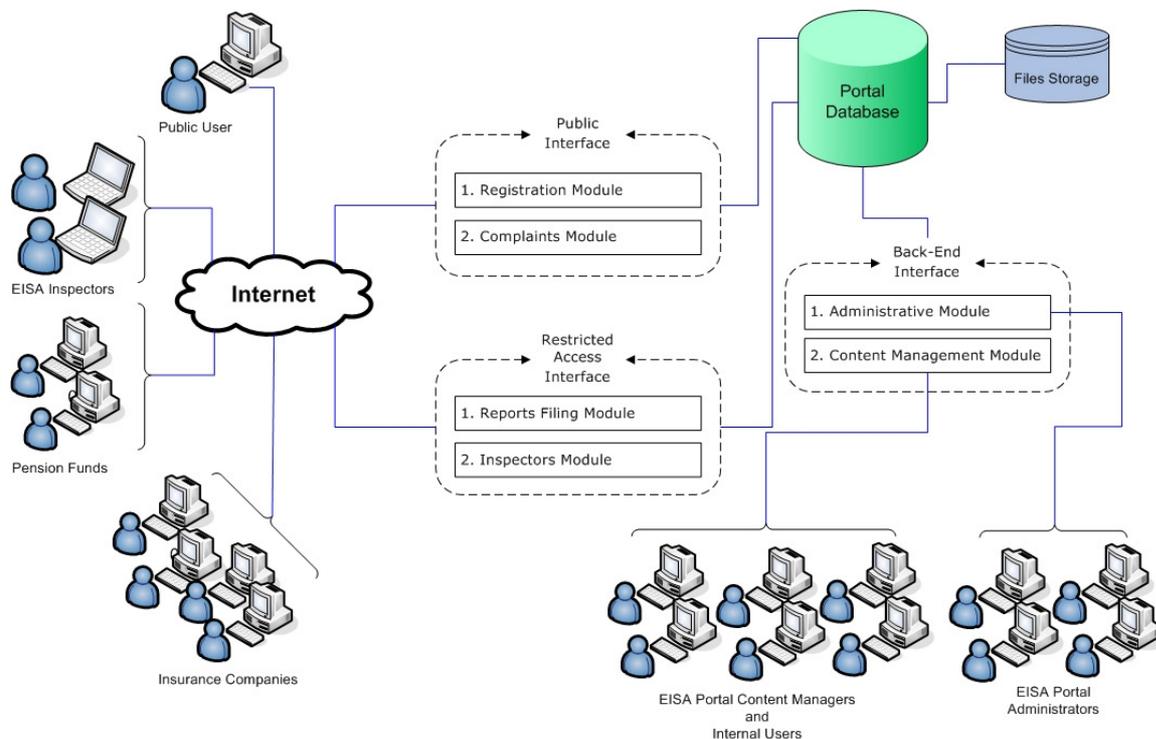
- Content can be loaded manually
- Ability for Creating, editing, and publishing the content for use on the portal
- Content of different formats, such as PDF, Word, Excel and XML, can be presented in a downloadable format
- The ability to create role-based content management
- Information stored in a relational database to allow the portal to be updated dynamically
- Ability to change Information layout
- Built-in Search facility
- Scheduler for database backups
- Full support for Arabic and English

3. Main Modules

The portal consists of six modules that are:

- Administrative module
- Reports' Filing Module
- Inspectors Module
- Registration Module
- Content Management Module
- Complaints module

The diagram below illustrates the structure, the relation between the above mention modules and how they are reacting with each other to facilitate the use of information:



3.1 Administrative module

3.1.1 General functions

The Portal's Administration module determines and maintains administration of the portal and its activities.

The Main features of the administration module:

- Access policies maintenance – create, update, removal

- Access policies can be associated with groups of users
- Policies can be created for a group of users with the exception of individual users

Access Policies Creation

The access policies shall provide for create or post, modify, delete and view. The Rights/Policies thereof are Hierarchy based and will be determined by departmental heads. The Administrator of the Portal shall have global rights for create, modify, delete and view.

Association of Groups of users for Access Policies

Groups of users can be assigned privileges by the administrator.

Administration Policies

The Portal Administrator has control over user policies. The following key policies are identified:

1. User may be granted or revoked rights to view pages on the portal.
2. The generation of information, such as file returns/compilation of statistics, analysis reports and graphs, will be given access permission for the Internal EISA users only.
3. Services, such as File Reports, are restricted to Insurance companies and Pension Funds.

3.1.2 Maintaining Target Audience Personal Information in the database

EISA has decided to maintain target audience Personal information in the database. Following are the classifications of the target audience.

1. General Public
2. Insurers and Pension funds
3. Insurance Professionals (Brokers, Agents, Surveyors, etc)
4. EISA Internal Users
5. Content Manager

These target audiences are given selective access to particular information.

3.1.3 Maintaining (controlling) the Target audience

The Portal Administrator controls the target audience's access to web pages/documents (for example, News).

The target audience will also be given the privilege to change/update passwords.

3.1.4 Re-Filing of Reports

The Portal administrator has control over the target audience in regard to their Report filings. The target audience is expected to submit their returns only once after proper scrutiny.

3.1.5 Temporary Rights

The Portal Administrator is given the privilege to delegate his rights to someone temporarily.

3.1.6 Editing profiles

The edit profile option will allow the target audience to modify/update their personal profile only when the Portal Administrator gives the privilege to the target audience.

3.1.7 Controlling Templates for the Different Audiences

The portal administrator shall provide a predefined template (Screens) for certain groups of users. All the information for that portal shall be updated/modified through predefined templates.

3.1.8 Creation of Groups

Individual members or audiences can be included in or excluded from a group.

3.1.9 Portal server to EISA local server

1. Certain important information like File Reports need to be downloaded from the portal server to the local server periodically.
2. All updated content on the portal server needs to be downloaded to the local server, such as profiles and passwords.
3. The portal's updates need to be replicated on the local portal server.

3.1.10 Customer Complaints Form

A customer complaints form must be incorporated into the portal. Target audiences will be able to submit the complaints form to the address provided by EISA through different media: mail, phone, fax, email and the portal online complaints form.

3.1.11 Security Requirements

1. Portal administrators can create users with individual passwords that are encrypted in the database to prevent theft or fraudulent activity. The login page for accessing the system can also be configured to use a Secure Socket Layer (SSL) to transfer the username and password, for advanced security. Users are

then validated with a combination of cookie and database driven information, ensuring only acceptable users may log into the Portal.

2. User can change the password at any time but he can't change the username.
3. The system is to track the user's actions during his login session.
4. The Administration Module should be secured using the SSL (Secure Sockets Layer) Protocol.
5. The Administration Module is to implement the AAA (Authentication, Authorization and Accounting) Protocol.
6. Login Screen should have two types of validations; Client Side and Server Side;
 - Client Side:
The Module engine should not submit the login form unless the user enters his username and password in the correct format (using a specific range of characters), otherwise the login form shouldn't be submitted.
 - Server Side:
The Module engine should omit any special codes that might be embedded in the username or password. Moreover, it checks if this user is already logged in, and accordingly the login request will be rejected and the action will be recorded as well.

The Module should check if the username exists or not. In case, it doesn't exist, the user should receive an error message that is justifying the failure of the login process. On the other hand, if the username exists, then the module should proceed to the next step that is verifying the submitted password.

In case the submitted password doesn't match with the stored one, then the module should record this failure of access, and asks for re-entering the password subsequently.

If the user makes three failure access attempts, then his account should be disabled, urging the user to contact his portal administrator to re-activate his account. Concurrently an alert should be sent to the portal administrator; reporting this technical issue to him.

7. When writing the user's password, the characters should appear as asterisks.
8. The Administration Module should check for the logged- in users' identities in each page. This is to make sure that this user didn't jump over the login screen without providing a valid username and password.
9. The Session should expire if the user doesn't make any action for 20 minutes.

3.2 Reports Filing Module

The main functionality of this module is to support report filings.

There are more than 100 reports that are sent to EISA from Insurance companies at the present time in electronic form using CD, email attachments or the Wide-Area Network (WAN). These reports, mostly coming on a quarterly basis, mostly indicate the performance of the entities in terms of compliance with regulatory policies and requirements.

3.2.1 Process Flow

EISA requires the reports to be posted on the portal by the targeted users.

Step 1. Entity should login into the EISA portal for report submission.

Step 2. The properly defined and identified data (in zip format) should be uploaded to the EISA Portal.

Step 3. The user will be notified about successful data submission immediately by an automatically generated e-mail.

Step 4. The user will be notified on the acceptance of the submitted data after comprehensive verification procedures.

Step 5. In case the reports sent are incomplete or have errors, EISA will remind the Insurers/Fund to resend the Reports. The complete Reports must be re-submitted.

3.2.2 General Validations

- It is mandatory for all Insurance companies to submit all Reports quarterly.
- The Pension Funds are supposed to send their Reports on an annual basis.
- Insurers/Funds cannot submit more than *one* Report at a time.
- The portal should allow submission of reports after specified deadlines.
- The EISA Portal must keep copies of the original reports, if they are re-submitted.
- The portal needs to be able to extract information from the database for any specified quarter/year and export this data to Excel.

3.2.3 Username / Password

Each Authorized User/entity initially would require to be registered on the EISA Portal. On verification of registration by the IT department of EISA, an e-mail will go to the CEO of the company containing username and password. There should also be a facility for the User to

change the password subsequently. There will be only one username and password for each company/fund.

3.2.4 Resubmission of Reports

The resubmission of reports can be done in two modes:

1. EISA requests the company/fund to resubmit the report. (Normally this is not done unless there are errors detected after a report's submission).
2. A company/fund makes a request to EISA to resubmit a report. If the reason is valid, EISA approves this request for resubmission.

3.2.5 Security Requirements

1. Login process of the reporting module should follow the same security requirements that are stated in the administration module.
2. The Module engine should ensure that the uploaded files are not executable files, such as:
 - Executable files - .EXE
 - Command files - .COM
 - Batch files - .BAT
 - Active Server Pages files - .ASP
 - DOT NET Active Server Pages files - .ASPX
 - PHP: Hypertext Preprocessor files - .PHP
 - Perl files - .PL
 - Screen Saver files - .SCR
 - Visual Basic Script files - .VBS
 - Java Script files - .JS
 - Java Server Page files - .JSP
 - Dynamic Link Library files - .DLL
 - Common Language Specification files - .CLS
3. Uploaded file names are recommended to be in English language to avoid any conflict with the operating system –in case the operating system doesn't understand the Arabic language-
4. File name should not have any special characters.
5. The length of the file name should not exceed 250 characters.
6. When the uploading process succeeds, the system automatically records the process date and time, in addition to some other basic information such as: the file name, size, and type.

3.3 Inspectors Module

3.3.1 General functions

The inspectors could be made more productive if they have laptop computers to take with them to their onsite inspections. They could then enter their notes and start constructing their report while they are performing the inspection.

3.3.2 Features of the Inspectors Module

1. Access to this module should be restricted to EISA inspectors and internal users.
2. The Inspector should be able to download the submitted reports that enable him to get acquainted with the company/fund history.
3. The inspector should be able to upload information of insurance company/pension fund, in addition to a standard checklist or template of the key items that needs to be inspected. This is to be uploaded from the EISA databases prior to going to the inspection site.
4. The system should allow the inspector to upload preliminary inspection report that is accessible by the EISA Internal users (according to their permissions).
5. When the inspector uploads his preliminary inspection report, an alert message should be sent automatically to his supervisor notifying him of that.

3.3.3 Security Requirements

1. Login process of the inspectors module should follow the same security requirements that are stated in the administration module.
2. Username and password should be granted and maintained by the Portal Administrators.
3. Inspectors should not have permission for editing on or deleting the reports that are submitted by the insurance company or the pension fund.

3.4 Registration Module

The Registration Module will be available for the different categories of entities and individuals. The corresponding data templates are provided in the Appendix.

3.4.1 Features of the Registration Module

- **Entity Registration:**
Web Interfaces will be provided for the entity registration to submit a registration request to the Portal Administrator. After approving the request EISA accounts administrator should proceed with the registration request.
- **Publishing Information:**
A provision will be provided to display the list of valid entities as of the last update.
- **Report Filings:**
Interfaces in the restricted access will be provided for Report filings.
- **E-mail Reminder:**
A facility will be provided to send reminder emails to the entities.
- **Administration:**
The administrator of the portal can control the privileges/rights of the entities.

3.4.2 Entity Registration Fields

The following fields will be used for the registration of the entities.

- Certificate number (auto-generated sequential number)
- The Entity Name
- Address1
- Address2
- Address3
- City
- Region/province
- Phone No
- Nature of Application
- Principal Officer

- Period of License
- E-mail
- Website Address
- Status (active, suspended or cancelled)
- Validity Date (Capture validity date in case of suspension)
-
- Entity username
-
- Entity Password

3.4.3 Publishing Entity Information

The portal will display a list of valid entities, depending on selection criteria including nature of application, city, region/province and status of the entity.

3.4.4 E-mail Reminder

An auto email reminder facility will be provided by the system to remind entities that have not submitted reports by the deadline, that is, before the 15th of the month following each quarter. The auto group mailing facility allows EISA to select either all entities that have not submitted their returns or selective entities manually.

3.4.5 Administration

- EISA can suspend or renew the entities account.
- EISA regulates entities account by activating or de-activating its accounts, based upon the expiry date of their license. They can suspend the entity for a few months, if they found any malpractice with such entity.
- EISA can only update the entity information, such as change of address, phone number, nature of application, principal officer, period of license and status.

3.4.6 Security Requirements

1. All fields of the entity registration form should be filled to allow the entity to submit it to EISA administrator; otherwise the system should display an alert message that is urging the user to make sure that all the fields are correctly filled out.
2. Form destination should not be stated in the registration form or even in the page source code, to prevent any try for hacking the database.

3.5 CONTENT MANAGEMENT MODULE

The content management module controls the data displayed on the portal, without changing the basic look and feel of the web pages, dynamically and provides the facility to add and remove web pages without halting the web server.

The emphasis is on the dynamic manipulation of data directly in the database using Back-End application and displaying that data in a prescribed website format. This allows the administrators to add, delete or modify website data without the help of a Web Developer.

3.5.1 Main Features of the Content Management module

- **Reduce content management costs:** By minimizing or eliminating the technical learning curve, you can stop paying Webmasters and costly outside developers to make simple changes to your content. You realize immediate savings by empowering business users to manage content, allowing your technical staff to focus on strategic, more complex projects.
- **Speed the time-to-Web:** Allows companies to share responsibility of content development among the individuals and the departments that are directly responsible for disseminating information. The content management module should automates processes, provides the checkpoints, and expedites delivery of new and updated content to your public website, intranet, and extranet. Therefore, content owners can manage sites more efficiently, while site visitors remain satisfied with continuous fresh information, keeping them coming back.
- **Accountability & Versioning:** It should improve accountability through content tracking and logging of work history. As you know what specific content has been changed, who changed it, and when it was changed. Versioning allows you to revert to previous versions of content or review the history of specific pages as needed.
- **Workflow:** Intelligent workflow automation should be built into the content management module, enabling you to ensure content is passing through the appropriate quality gates before being published. Internal messaging and tracking facilitates the workflow process to ensure expeditious delivery. Proper review and control takes place consistently, creating a dependable paper trail.
- **Consistency:** It should maintains consistency throughout the portal such that your branding and design is controlled to the level desired (style sheets, templates, etc.), regardless of who is responsible for the actual content. Consequently, visitors immediately experience a more professional presentation and are confident that content is accurate.
- **Reuse Web content:** It should allow the creation of content once and re-use it many times. So it should eliminates costly redundancy by allowing organizations to deliver the same content to multiple locations, in multiple presentation formats (other sites, other applications, PDAs, WAP phones, etc.) and in multiple languages.

- **Self Service:** The Module should Makes it easy to keep the portal updated such that the portal users find accurate information anytime. This can greatly reduce print costs, administrative overhead due to outdated information, and the burden on your call centers and support hotlines.
- **Improve search:** Since the content management module manages all the content consistently, providing built-in search engines make finding content on the portal fast and easy. These built-in search engines will function according to the access rights given to the end-user by the administrator.
- This means that the general Internet user will not be able to view the restricted information using this search. Registered users can view information based only on his or her rights. The search facility will be based on keyword search and will be bilingual. The internal organization of content allows you to manage your site so that it is search-engine friendly, providing better visibility within the major search engines.
- **WYSIWYG (Visual editor for page content management).** You should be able to define editable areas at every page. It means that you can edit your portal's content as easy as creating documents in MS Word.
- **The ability to add and remove the web pages without halting the web server.** The facility for adding and removing the web pages/verticals without halting the web server is provided. Since all the web pages are stored in the database as records. Since this is a fully database driven portal, users or the portal administrator need not to stop the web server for adding or modifying a web page: all the changes which will be done on the database server will be reflected on the website immediately.
- **The ability to create role-based content management.** The content management facility will be based on the permissions set, which the user has on the desired page or its parent page (from where it originates). If a user has Post rights on a page link, then he or she can add links and modify data on that page or even delete that page. Further crisscrossing of permissions will not take place. For Example, a content manager who has rights to update content related to insurers can update only the insurers section and will not be able to access other sections. Portal administrators will have complete control over the portal and will grant permissions on pages.
- **Full support for Arabic and English (Bilingual).** The content management will be bilingual, meaning the content will be displayed to the end user in two languages: Arabic and English.
- **Automated Content Backup.** A scheduler will be created for incremental database backups from remote servers to local servers. Database backups can be made in two ways. One is to make a full backup of the database, and the second is incremental backups from when the previous backup was taken.

3.5.2 Role-based Content Management

The system will allow the creation of permissions for content management, based on which a user will have the right to either View, Add, Edit, Approve and Delete the related content. The following issues will be covered:

The five levels of permissions include:

- 'View' - specified user or group can view items in the specified section
- 'Add' - specified user or group can add items to the specified section
- 'Edit' - specified user or group can modify items in the specified section
- 'Approve' - specified user or group can approve items in the specified section
- 'Delete' - specified user or group can delete items in the specified section

User types and Permissions:

- Internal users: ['View' - 'Add' - 'Edit']
- Inspectors: ['View' - 'Add' - 'Edit' - 'Delete']
- Administrators: ['View' - 'Add' - 'Edit' - 'Delete' - 'Approve']
- Insurance companies: ['View' - 'Add']
- Pension Funds: ['View' - 'Add']
- Actuaries: ['View']
- Brokers: ['View']

3.5.3 Content Management Navigation Menu

The navigation menu must satisfy a set of important requirements especially when you have a large Website driven by a Content Management System.

When speaking of a *Dynamic Web Menu*; that is means a client-side Web software tool that can get/receive menu data from a database and display it as a list of options from which a user selects actions to be performed.

Dynamic Web Menu requirements

1. Platform and Browser Independent

Since the Internet in its entirety is a network composed by a heterogeneous hardware and operating system platforms, and the implementation of browsers on various platforms is so widely different (and change constantly), the Web menu must be independent from these elements. This means that once a Web menu application is created, that same application must run without any modifications on any computer.

2. Internationalization

Since the portal is bilingual (Arabic and English), the Web menu must be capable to displaying different character sets and Unicode codification using both language directions (left-to-right or right-to-left).

3. Hierarchical

A hierarchical Web menu is able to represent the entire structure of the site (site map) or a portion of it using different techniques (drop-down, popup, and tree).

This will improve usability of the portal because it allows visitors to click directly onto the page they are seeking, instead of moving through the site navigation system and down through categories by clicking on links on different pages.

4. CDL (Content-Display-Logic) paradigm

The menu must follow the CDL paradigm where the Content, Display and Logic are maintained separated.

- **The Content** is the set of menu data stored in a convenient form (text file, XML, or database).
- **The Display** is the set of visualization and multimedia settings and files.
- **The Logic** is the Web menu software, the glue that holds everything together.

This separation allows one to change the Web menu content or to view it without involving technical resources. This results in lower maintenance costs and much more flexibility. Also the Web menu software could be easily cached by the client system, thereby reducing the downloading time.

Since normally a client-side software does not have the permission to receive data using a direct connection to the server database, the Web menu may receive its content using one of the following strategies:

- The content could be embedded on the page during its composition.
- The content could be parsed from a real static text or XML file (e.g.: menudata.txt) that must be created before page delivering.
- The content could be parsed from a virtual text or XML file (e.g.: menudata.aspx) that will be requested by the client menu software application and generated on-the-fly by a server-side software.
- The previous two techniques could be combined on a server-side software to cache the results reducing the server load.

5. Linking Capabilities

Each Portal menu item must have the same ability of an HTML anchor/link element to call various URL schemas (http, ftp, mailto, JavaScript ...), support JavaScript and target frames.

The Portal menu must have also the ability to disable each menu item, so you could temporary disable the access to a specific site section without affecting the entire menu structure aspect.

6. Accessibility

Accessibility is access to information not being constrained by reasons of deficiency or incapacity. Many people may access the information of a Website from contexts that are very different to ours, because...

- they may be visually, hearing or mobility impaired;
- they may have reading or comprehension problems;
- they may not be able to use keyboards or mice;
- they may have an only-text browser, a small screen or a slow connection, etc.

Accessibility is not only interesting for people with incapacity, but enhances global access to the Web and improves search engine submitting.

For the above reasons accessibility is an important Web menu requirement. However, due to its nature of client-side software application, *Dynamic Web Menu* often lacks some accessibility requirements that could be fully recovered including an alternative content.

An accessible Web menu must also not impede the whole page accessibility. A negative example is offered by some menus that produce markup-language specific code (e.g.: HTML) which cannot be easily ported to other markup-languages (e.g.: XHTML).

7. Intuitive / Usability

An intuitive Web menu means that it is easy to use and instantly understandable to most visitors of your site. Using an intuitive Web menu will greatly improve the usability of the Portal, and therefore user satisfaction and return rates.

Usability is a quality attribute that assesses how easy user interfaces are to use and it is defined by five quality components:

- **Learn ability:** How easy is it for users to accomplish basic tasks the first time they encounter the design?
- **Efficiency:** Once users have learned the design, how quickly can they perform tasks?
- **Memorability:** When users return to the design after a period of not using it, how easily can they reestablish proficiency?
- **Errors:** How many errors do users make, how severe are these errors, and how easily can they recover from the errors?
- **Satisfaction:** How pleasant is it to use the design?

8. Visual and Multimedia features

Visual and multimedia presentation aspects are often overlooked by many developers but, since the Web is a communication medium, they must be taken in serious consideration. The presentation aspects stimulate instinctive emotional responses that could improve the Web experience.

A *Dynamic Web Menu* system must be able to adapt its visual/multimedia presentation to the needs of the Website where it's used. This may include the ability to change colors, fonts, images and also give some interaction to user using graphic and sounds effects.

9. Final Remarks

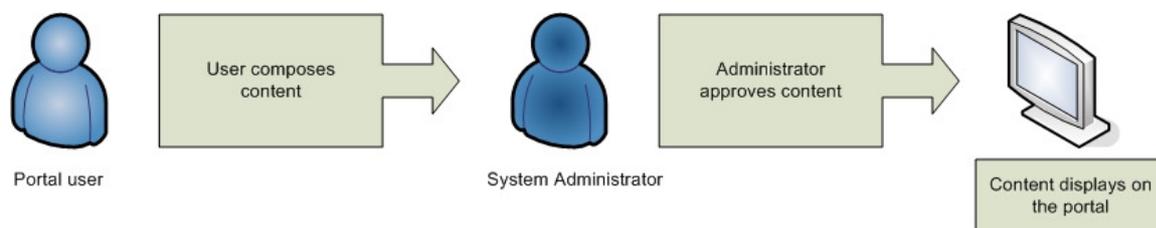
Web navigation menu still remains one of the key components of a Website. Nowadays the *Dynamic Menu Systems* used on the Web are largely based on hierarchical unordered HTML lists (that's and tags) modeled using CSS (Cascade Style Sheets). This technique allows to displays the simple hierarchy in a more complex form such as a set of dropdown menus or - with client-side JavaScript applications (ECMAScript) - an expandable/collapsible tree. Even if the Web browser is not able to execute the JavaScript code or render the CSS, the user may continue browsing using the hierarchical structure composed by the unordered list.

The alternative Web menu client solutions based upon specific browser plug-ins (e.g.: Java, Flash, etc.) normally offer better and richest multimedia experience but lacks some of the above requirements. For this reason, these last must always include an alternative version based on unordered HTML list.

3.5.4 Content Management Workflow Scenarios

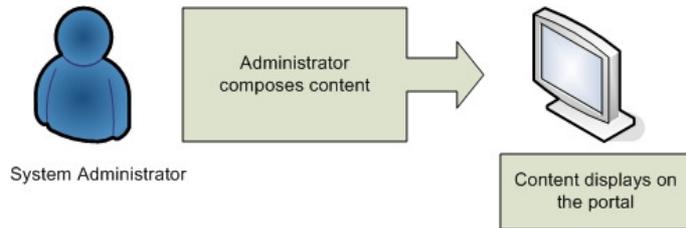
The process of adding content to the site begins with an intuitive content submission form. This form displays standard content fields, and may optionally allow the user to compose content within an WYSIWYG editing region. Only authorize users are allowed to submit and/or approve content. The entire process of content submission and approval is browser-based and can optionally include email notification as status changes occur.

1. Author submits content, Administrator approves content



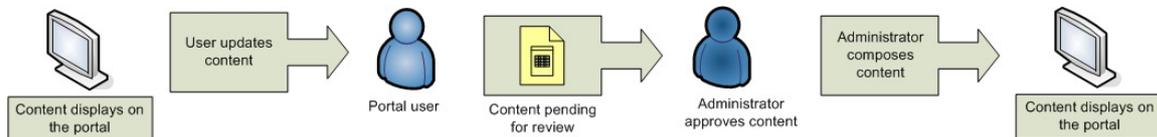
1. "Author" login
2. Select category and compose new information
3. Submit action
4. Pending approval notice
5. "Administrator" login
6. Navigate to the Content Management
7. Pending items listed first
8. Review unapproved items
9. Mark to "display"
10. Content approved (live display on Website)

2. Administrator submits content



1. "Administrator" login
2. Select category and compose new information.
3. Submit action
4. Content approved (live display on Website)

3. Author changes content, Administrator re-approves



1. "Author" login
2. Select and edit existing information
3. Submit action
4. Pending approval notice
5. "Administrator" login
6. Navigate to Content Management
7. Pending items listed first
8. Review unapproved items
9. Mark to "display"
10. Content approved (live display on Website)

3.5.5 Security Requirements

1. Login process of the content management module should follow the same security requirements that are stated in the administration module.
2. Administrators can restrict access to any content item by changing the required access level field of any content item.
3. Users can belong to one or more groups.
4. Permissions (granting or denying access to specific content, sections or categories)
5. Permissions can be set (granted) on a per content, category or section (Content Type) basis.

6. An individual user or an entire group can be assigned permissions. The permissions that are available (view, add, edit, approve and delete) depend on the level of the item.
7. When no permissions are set for a given content, category or section - the default security settings (based on user access level) should be enforced.

3.6 Complaints module

The module basically consists of four processes:

Step 1. Complaint registration process

Step 2. Forwarding the group of complaints to respective companies

Step 3. Receiving feedback on complaint submitted by EISA

Step 4. Scrutinizing the received feedback from the company and deciding whether the complaint needs to be opened (kept pending) or closed

3.6.1 Complaint Registration Process

- The complaint registration would be either through the web or through mail.
- The mandatory fields must be entered while registering the complaints using the web. Otherwise, the complaint cannot be submitted.
- If the complaint is received through mail, then EISA should enter the required data for registration from the received letter.
- Once the mandatory information for complaint registration is gathered, then EISA would submit the information.
- The system will generate a complaint confirmation number for each complaint.

3.6.2 Registration Format as Defined by EISA

According to the format, the mandatory fields identified are:

- Name of the complainant.
- Address of the complainant.
- Individual/company.
- Name of the insurance company
- Address of the servicing office
- Policy number
- Email
- Telephone

NON-MANDATORY FIELDS:

- Nature of complaint, claim number, details of complaint, referral/reply information, status, previous ref number and remarks.
- Format for forwarding complaint to companies.
- Format for receiving remarks from companies to EISA.
- Data related to company name, category type, life, non-Life, complainant type for Life and Non-Life (are yet to be finalized by EISA).

Contents Related to this Module Include:

- Information about the complaint service.
- Frequently asked questions (for general public).
- The following registration specific information including:

1. Complaint Type

- a. General
- b. Specific

2. Complaint Status

- a. Pending
- b. Closed
- c. Re-opened

3. Action Details

- a. Forwarded to Insurer
- b. Reminder from complainant
- c. Reminder to company
- d. Interim reply from company
- e. Final letter from company

4. VIP References

- a. Ministry of Investment
- b. Court Orders

4. SPECIFIC REQUIREMENTS

4.1 Quality Characteristics

The entire portal development must follow basic standards of proper documentation.

4.2 Other Requirements

The following are other requirements to be followed:

- 99.8 % uptime, round the clock
- Firewall protection
- Network security
- Multiple level of security, human as well as electronic
- Technical support online and by phone during business hours
- Daily backup support

The Portal should support navigation using:

- Internet Explorer 6.0 and above
- Netscape Navigator 4.7 and above

4.3 User Interfaces

The Web Page interfaces will use standard controls for navigation.

- The portal should support the navigation using Internet Explorer 6.0 and any browser powered by the Mozilla engine.
- The portal graphical interface should be designed using the standard screen resolution (800*600).
- The portal interface should support different screen resolution settings.
- Portal graphics/images should be optimized for web use, considering the use of low connection bandwidth (56Kbps).

4.4 Verification and Validation Requirements

The portal must be thoroughly tested before being put into production and must be approved by management.

Testing will be conducted in a pilot environment with two insurance companies.

4.5 Hardware Requirements

The portal server shall meet the following requirements:

- Disk space – 36 GB SAS (15K rpm)
- FTP access.
- SERVER SMART UPS.
- DVD + CDRW Combo Drive for backup.
- Tab Backup.
- Power supply: 930W, hot-plug redundant power.

4.6 Software Requirements

4.6.1 Application Software

- Database: MS SQL Server 2000
- Web Server Application: IIS 7.0
- Development Tools:
 - HTML 4.01
 - CSS (Cascading Style Sheets)
 - JavaScript
 - VBScript
 - XML (EXtensible Markup Language)
 - SQL (Structured Query Language)
 - VBScript
 - JavaScript
 - C#
 - ASP.NET
 - MS Visual Studio.NET Environment
 - Crystal Report
- Anti-virus software
- Internet Explorer 6.0 and above
- Any browser powered by Mozilla engine such as: Netscape Navigator 6.0 or Firefox 1.5.
- Veritas Backup Exec version 10.0.
- MS Office XP Professional Edition 2003.

4.6.2 Operating System

Microsoft® Windows® Server 2003 R2, Enterprise Edition

4.7 User Documentation

A user manual and operational manual will be delivered along with the application software. System documentation will be done in MS Word.

5. Implementation Specification

EISA Web Portal should be implemented in 4 phases that are covering a total of approximately 9 months.

5.1 Implementation Phases

5.1.1 Phase 1:

Redo the existing web functions to enhance the presentation, design, and make it more suitable to add the future functions. This will require a designer, a developer (could be same person), and a system administrator. 3 months elapsed.

5.1.2 Phase 2:

Move the existing portal to EISA, after the new hardware and software have been procured and installed. This can be done at any time, but it is best to wait until the new hardware is installed. This will require 2 months primarily of system administrator time.

5.1.3 Phase 3:

Add the Pension Funds Excel forms and other documents (to be submitted as one file with descriptions of what follows as Word documents or PDF). By then, the new Pension Funds backend will be completed, and it will be capable of moving the non-Excel documents into the archives (or allowing someone to review them so that they can be indexed correctly). This will take a designer, developer, systems administrator about 3 months. Phase 3 can be start after the website hosting has been moved to EISA. This will continue for 3 months.

5.1.4 Phase 4:

Add Insurance companies, which basically is changing the network interface from the WAN to the Internet, requiring the users to sign on using SSL. 1 month of designer, developer, systems admin elapsed time.

5.2 Verification and Validation Requirements

5.2.1 Validation

- **Validate the HTML**

The first stage of checking a website is to make sure that you have valid HTML (or XHTML). This can be done with a validator such as:

- W3C validator (<http://validator.w3.org/>)
- WDG validator (<http://www.htmlhelp.com/tools/validator/>)

Your own browser may ignore certain errors, but there is a significant risk that markup errors will result in display problems in some browser or other.

- **Validate the CSS**

CSS can be validated with for example the W3C CSS validator (<http://jigsaw.w3.org/css-validator/validator-uri.html>). The considerations here are much the same as HTML validation, except that there shouldn't be *any* need for CSS syntax errors. It may sometimes be necessary to use something non-standard to get Internet Explorer to work, but such rules can be placed in a separate CSS file and hidden in an Internet Explorer conditional comment (http://msdn.microsoft.com/workshop/author/dhtml/overview/ccomment_ovw.asp), where they won't bother other browsers or a validator.

- **Check for broken links**

A dead link or broken link is a link on the World Wide Web that points to a webpage or server that is permanently unavailable. Dead links are commonplace on the Internet, but they are considered to be unprofessional.

The most common result of a dead link is a 404 error, which indicates that the page could not be found.

So it's important to make sure that the portal doesn't have any broken links.

5.2.2 Flexibility

- **Try varying window sizes**

A very important aspect of web design is coping with different window sizes. Window widths may vary by 2000+ pixels on a technical workstation in full-screen mode. While providing a readable site to the very smallest screens is something of a challenge, your site should still be readable on a wide variety of sizes. So the portal should be designed to be best viewed on 800x600 or better resolution.

- **Try varying font sizes**

Some people use large screen fonts because they have a large screen with a very fine resolution; other people have to use large screen fonts because of declining eyesight. On the other hand, some people like to use microscopic fonts with their nose pressed against the screen.

So while doing the above activity, adjust the default text-size in your browser, and check that all the text scales appropriately.

5.2.3 Speed

- **Access the site via a modem**

Dial in via a modem (a real modem – not an ADSL gateway, which is sometimes erroneously referred to as a modem).

If the opening page of your site takes more than half a minute to appear, then you are losing visitors fast. Don't overload it. If you have to include large objects on your site – perhaps it revolves around high-resolution reproductions of fine art – put them on later pages and tell your users what is coming.

- **Check image size specifications**

While doing the test above, check that at least the text of the page appears quickly. If it doesn't (or if it dances all over the place while the page is loading) it is probably because you have forgotten to specify HEIGHT and WIDTH attributes on some of your images. Specifying these enables the browser to work out where the text needs to go, and to display it before the images have finished downloading.

5.2.4 Accessibility

- **Test accessibility**

This is mainly important for handicapped users, but also relevant for e.g. people who use a text-only browser, or disable images, because of a slow connection. See the Web Content Accessibility Guidelines (<http://www.w3.org/TR/WCAG10/>).

- **View in text browser**

It is also worth running pages through a text-only browser, or text-browser emulator to see what e.g. a blind person using a text-to-speech converter will encounter. It will help you pick up on badly-chosen or missing ALT texts for example. It also shows you the site pretty much as a search engine will see it.

5.2.5 Browser independence

Your site may be viewed in a large variety of situations: different browsers, different operating systems, different features enabled or disabled. It is important that your site stands up well in these different situations.

- **Try different browsers**

The portal should be navigated well using popular browsers available for personal computers include (Mozilla Firefox, Microsoft Internet Explorer, Opera, Netscape, and Apple Safari).

- **Check printed pages**

Print some of the pages on a normal printer (i.e. with a paper size of A4, quarto or letter) and check that they appear sensibly. Due to the somewhat limited formatting options available for printing, you probably can't achieve an appearance comparable to a document produced by a word-processor, but you should at least be able to read the text easily, and not have lines running off the right-hand side of the page.

You should also consider using CSS to adjust the appearance of the page when printed. For example you could suppress the printing of information which is not relevant to the printed page, such as navigation bars. This can be done using the "@media print" or "@import print" CSS features.

The portal could provide separate "printer friendly" versions of the pages, which the user can select and print.

- **Switch Javascript off**

There are unfortunately quite a number of Internet sites which abuse JavaScript by, for example, generating unwanted pop-ups and irritating animations. There are also a number of JavaScript-related security holes in browsers, especially Internet Explorer.

It is therefore important to check that your site still functions with JavaScript disabled.

- **Switch plug-ins off**

The considerations for plug-ins (such as Flash or Java) are very similar to those for JavaScript above. We need to check the portal with any plug-ins disabled. The basic text and navigation should still work.

- **Switch images off**

If scanning a number of sites quickly for information, many readers switch images off, for quick loading. Other people cannot view images. So switch images off and check that the site is readable and navigable. This means, in particular, checking that sensible ALT texts have been provided for images.

5.2.6 Other checks

- **Check non-reliance on mailto**

In order to give readers a chance to contact them, web authors often include a link of the form "mailto:abc@xyz.org". However this unfortunately does not work for anything like all browser/e-mail client combinations. And people in e.g. an Internet cafe cannot use this type of link. Many readers prefer a form.

Therefore the best thing is to provide a contact page which has both a mailto link and a contact form; the user can then choose which to use.

- **Check no orphan pages**

An orphan page is one that contains no links back up to its ancestor. Once one arrives at an orphan page, the only way to get to the rest of the site is via the 'back' button. Which is fine until people arrive at the page via a search engine, or via a link that someone else gave to them. They cannot then visit the rest of the site.

- **Check sensible page titles**

Check that the page titles (i.e. the contents of the <TITLE> elements) are sensible. Page titles are important, as for example they show up prominently in search-engine results, in bookmarks and also on the tabs of multi-tab browsers such as Opera. Generally speaking, each page of a site should have a unique title.

Technical Assistance for Policy Reform II
BearingPoint, Inc,
18 El Sad El Aali Street, 18th Floor,
Dokki, Giza
Egypt
Country Code: 12311
Phone: +2 02 335 5507
Fax: +2 02 337 7684
Web address: www.usaideconomic.org.eg