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XP/LEB/00/037
C. No. 2001/326
FINAL REPORT

cc: Registry
Ms. Puff ✓

IRI Intranet Survey



Industrial Research Institute

1 Introduction.

This document outlines the overall requirements of Industrial Research Institute (IRI) for the development of IRI intranet. The purpose of this document is to define the scope of the required solution identifying all significant data types, sections and functionality. Based on the requirements defined in this document it shall be possible to make a detailed cost estimate for the development of a solution.

This document includes a number of screenshots visualising a possible solution for the requirements. However, this is not necessarily exactly how the solution shall function and look. The detailed requirements for the solution within the scope of the solution identified in this document are to be specified later during the web site development process.

2 Survey Phase

The initial requirements have been identified through several meetings done between Arachne and IRI's different departments:

- Mr. Robert Haddad; Quality Control
- Mr. Imad Hajj Chehade; Metrology and Calibration
- Mr. Antoine Faysal; Subcontracting and Partnership Exchange
- Mr. Tarek Hakim; Welding
- Mr. Salim Kfoury; Accounting and Finance
- Mr. Elias Deeb; Soil, Civil and Mechanical Engineering
- Mr. Andre Kahale; Textile, Leather and Rubber
- Miss Nadia Khoury and Miss Samia Abou El-Hosn; Laboratories and Library
- Mr. Nabil Chlala; Inspection and Control
- Mr. Nabil Njeim; Library
- Mr. Kaya MohamadBey; Technical Director

3 System Mission

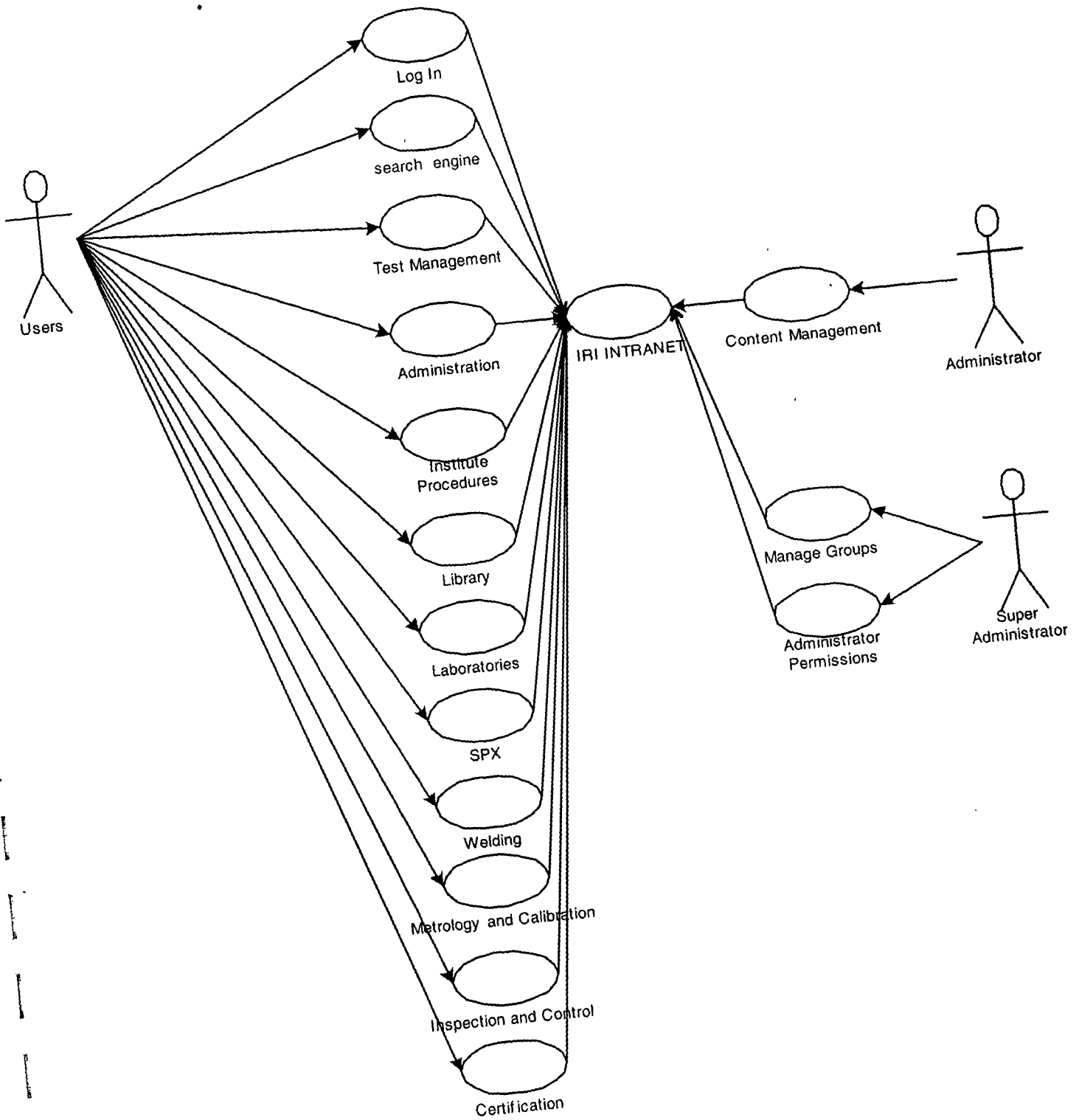
The IRI intranet goal is to facilitate the Institute's internal work and management, as well as, improve its services to potential clients.

The IRI intranet shall be developed as a flexible, integrated and scalable platform on which IRI can build new services in the most attractive and dynamic way possible. It should present all your departments in an easy to browse manner, as well as, create a specific and unique atmosphere for every area.

4 Required Solution

The IRI intranet shall include the following functionality:

- Members-only authentication for access control to web pages
- Content management system for distributed administration of the web pages.
- Intranet search engine to include database archives searches (in addition to the static web pages)
- Trilingual interface; English, French and Arabic



30 November 2001

4.1 Homepage and information pages

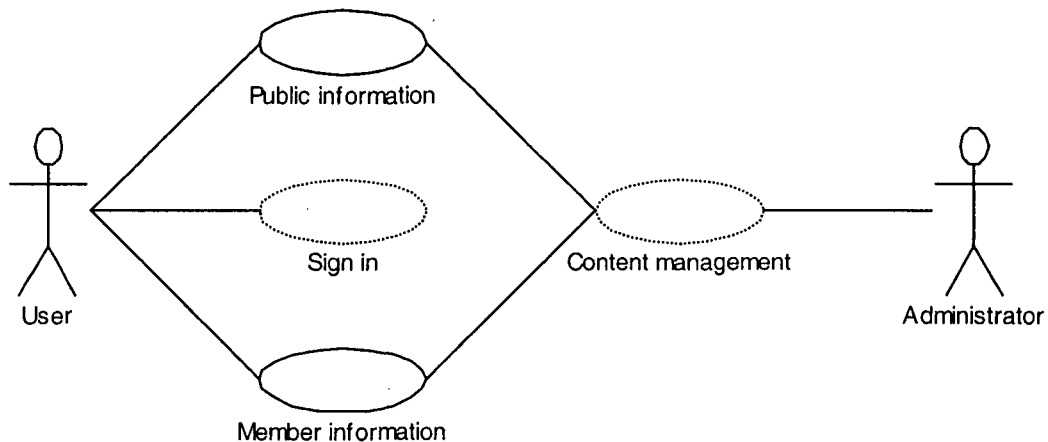
The purpose of this process is to provide access to the information and services offered on the IRI intranet to the users.

When a user visits the intranet he/she shall have access to a number of pages containing formatted text, images and links to other pages and files.

The user shall also have access to sign in as a member to access members-only information pages.

The user shall also have access to log into the "Test Management" module.

The IRI intranet administrators shall have access to maintain the primary content of the information pages



The member information pages shall only be available to members after they sign in using their personal username and password. Users shall be asked to sign in as a member using their personal username and password when they log into the IRI intranet so they can access a member information page.

IRI intranet administrators shall have easy access to update the primary content of the general information pages using a simple web-based word-processor application supporting text formatting, images, files (for download) and web links.



Enter your user name and password:

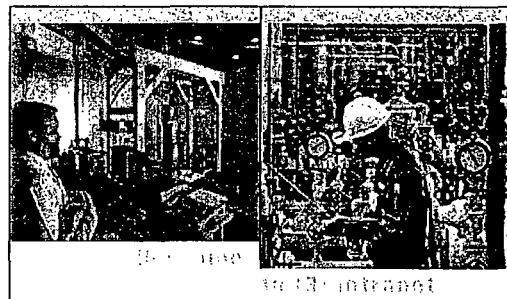
user name:

password:

♦ login ♦

♦ test management ♦

♦ intranet administration ♦



On the home page the user/member will have two dynamic navigation menus (First Set and Second Set) that will contain the following buttons:

First Set (Administrative Menu):

- Administration
- Institute Procedures
- Library

Second Set (Services):

- Labs
- Subcontracting and Partnership Exchange
- Welding
- Metrology and Calibration
- Certification



4.1.1 Homepage

The homepage will be the intranet's main page, where users/members will have to log in with their password and username in order to access the intranet's information pages and other functions.

Also on the homepage IRI intranet administrators and super administrators will be able to access the Intranet Administration section where they will be able to modify and update the intranet.

The homepage also provides access to the Test Management Module.

4.1.2 Dynamic Navigation Menu

Users/members shall be able to access the intranet information pages, as well as, functions through the use of two dynamic navigation menus (First Set and Second Set).

Several buttons on those menus will open on mouse click to give access to sub-sections.

4.1.3 Log in Section

Users/members shall be able to log in directly from the homepage. Each user will have a unique username and password. This is to ensure that every user will have access to the sections that he is entitled to use/check or even modify.

Only administrators can modify users/members and give them their respective username and password.

4.1.4 Web Site Search Engine

Users/members shall have access to keyword/phrase search the entire IRI intranet.

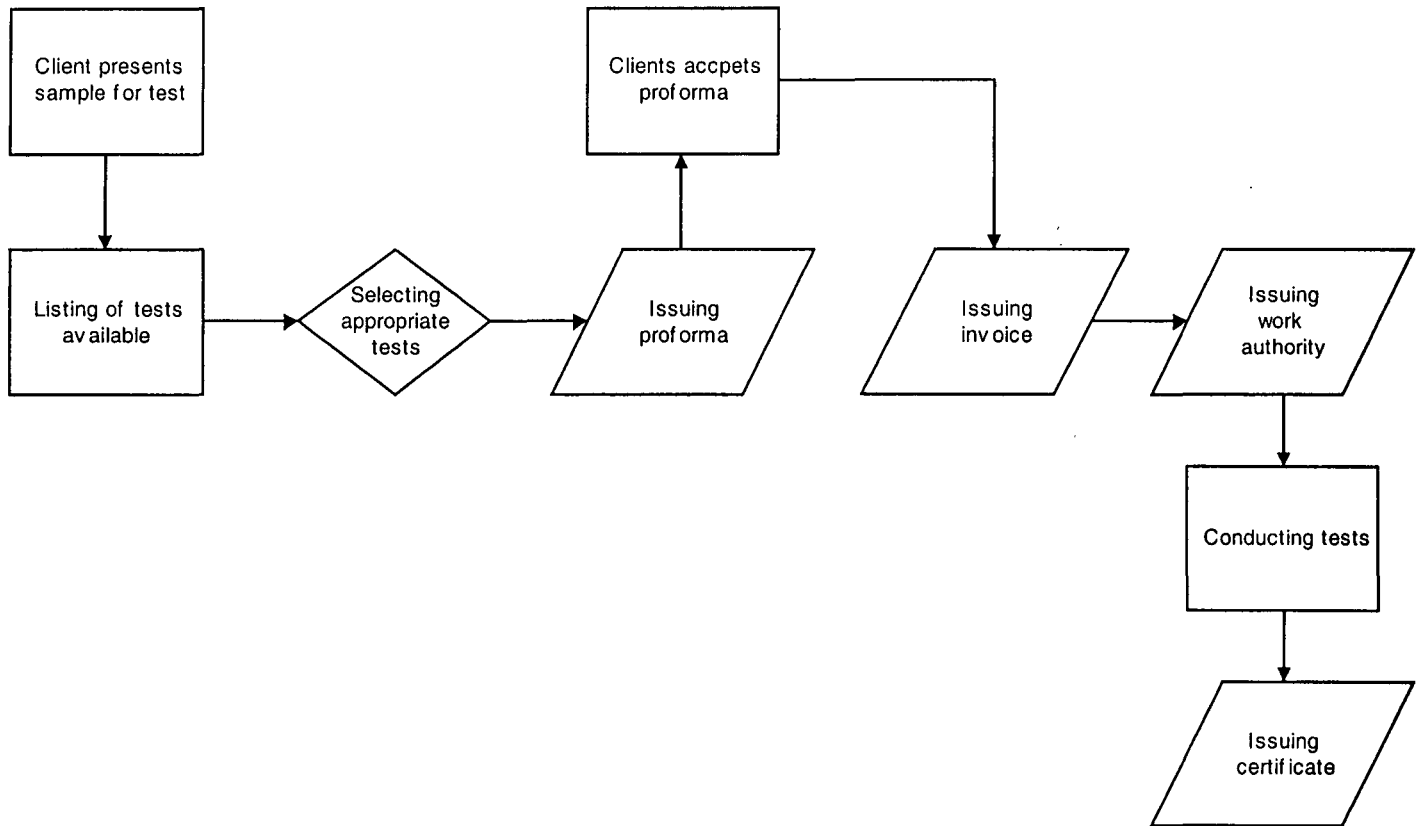
Users/members shall have access to keyword/phrase search the information pages for matching pages/articles. The keyword/phrase search shall support Boolean or "intelligent" searching with automatic ranking of the search results. Also the results shall be alphabetically sorted.

4.1.5 Test Management Module

This link will direct the users/members into the most important part of the intranet, the "Test Management" Module. This module will manage the flow of work in the Institute. The flow of work in the institute is characterized by the following:

- Selecting test to be done
- Issuing proforma
- Proforma changes into invoice (once accepted by client)
- Work authority is issued, sample is sent to relevant laboratory
- Tests are done and logged into the intranet
- Certificate is issued

Administrators will be able to add/update/delete tests, test description, test pricing, forms, work authority.



The "Test Management" process starts when a client presents a sample for testing. After which the receptionist searches the IRI Intranet for tests related to his product. After selecting the appropriate tests a proforma is issued. Once the client accepts the proforma it will be transferred into an invoice, automatically a notification will be sent to the Accounting and Finance Department that will issue a work authority to the appropriate laboratory. Once the work authority is issued the appropriate laboratory will be notified and will conduct the appropriate test. Once the tests are completed a certificate will be issued and delivered to the client.



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laboratories - subcontracting & Partnership exchange - welding - metrology & calibration - certification - français - عربي

♦ Sample type ♦

Select sample type

<p>Exchanging information and technical experience. Preparing together research programs for the benefit of LNE and IRI. Organizing mutual meetings, seminars and other technical and scientific. Exchanging information and technical experience. Preparing together research programs for the benefit of LNE and IRI. Organizing mutual meetings, seminars and other technical and scientific. Exchanging information and technical experience. Preparing together research programs for the benefit of LNE and IRI. Organizing mutual meetings, seminars and other technical and scientific. Exchanging information and technical experience. Preparing together research programs for the benefit of LNE and IRI. Organizing mutual meetings, seminars and other technical and scientific. Exchanging information and technical experience.</p>	<p>^</p> <p>v</p>
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♦ Sample type ♦

... test list

Exchanging information and technical experience.

Exam 1: capacity as a control and analysis laboratory. IRI emerged from the war with most of its equipment either damaged or obsolete. Belgium financed the purchase of equipment for IRI's.

Exam 2: capacity as a control and analysis laboratory. IRI emerged from the war with most of its equipment either damaged or obsolete. Belgium financed the purchase of equipment for IRI's.

♦ ok ♦



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◆ Sample type ◆

... test list

... test management

Client Name:	<input type="text"/>								
Sample type:	<input type="text"/>								
Test List:	<table border="1"> <tr> <td>Exchanging information.</td> <td>75\$</td> </tr> <tr> <td>Exchanging information.</td> <td>75\$</td> </tr> <tr> <td>Exchanging information.</td> <td>75\$</td> </tr> <tr> <td>Exchanging information.</td> <td>75\$</td> </tr> </table>	Exchanging information.	75\$	Exchanging information.	75\$	Exchanging information.	75\$	Exchanging information.	75\$
Exchanging information.	75\$								
Exchanging information.	75\$								
Exchanging information.	75\$								
Exchanging information.	75\$								
Total amount:	<input type="text"/>								

◆ submit ◆

4.1.6 "First Set" Administrative Menu

This section is a dynamic menu that contains links to the following sections: "Administration", "Institute Procedures" and "Library".

4.1.6.1 "Administration" Section

This link will open four alternative links to the user/member: "Accounting and Finance", "Stock Control", "Quality Control" and "Personnel Management". Those pages can be modified by the content management system.

4.1.6.1.1 "Accounting and Finance" Section

This link will give access to users/members of the accounting and finance department to several functions that are available for them.

Functions available in this section include: checking/updating/adding/deleting: proformas, internal requisition, purchase orders and work authorities.

Administrators will be able to do the following:

- Search for proforma; by number, date, client name
- View/update/delete proformas
- Update proforma form
- Mark proforma as invoice

- Search for internal requisition; by number, date, sender
- View/update/delete internal requisitions
- Search for purchase orders; by number, date, sender
- View/update/delete purchase orders
- Set status for purchase orders, internal requisition

4.1.6.1.2 *"Stock Control" Section*

This link will give access to administrators of the accounting and finance department to check/modify/add/delete items in the stock. Items will be available in one general stock and divided into categories.

Each item will have a title, brief description and price field.

Administrators will be able to add categories and sub categories. Under those they will specify items.

There will be three methods for calculating the stock. User/member will be able to select which method to use and get results showing him the current total value of the stock available.

Users/members will be able to check who is taking items from the stock and when.

4.1.6.1.3 *"Quality Control" Section*

This link will give access to administrators of the Quality Control department to manage procedures and work instructions for the Institute.

Each Procedure is made up of: object, scope, description, related documents and life record. Once developed, the necessary person validates the procedure. Once validated it will be sent again to the Quality Control department that will publish for all users/members (Institute Procedures).

The same logic is applied for the work instructions.

Administrators will be able to do the following:

- Add/update/delete procedures
- Issue procedure to Super Administrators
- Once procedure is approved, they will publish the procedure to be accessible in the "Institute Procedures Section"
- They will manage the "Institute Procedures" from this section
- Same logic is applied for the work instructions

4.1.6.1.4 *"Personnel Management" Section*

This link will give access to administrators to add/update/delete employees. Each employee will have his contract posted, C.V and the department he works in and his qualifications.

Administrators will be able to do the following:

- Search employees database by: employee name, department, qualification
- Add/update/delete employees
- Add/update/delete employees details
- Add/update/delete employees contracts
- Add/update/delete employees qualifications
- Add/delete employees C.V (Attached file)

4.1.6.2 "Institute Procedures/Work Instructions" Section

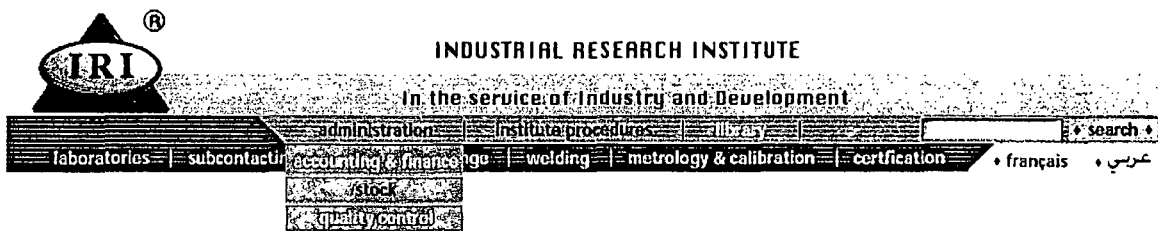
This link will direct the users/members into a page containing information about IRI procedures and work instructions. The administrator through the content management system can modify this page.

Users/members will be able to do the following:

- Search work procedures by the following fields: by department, by subject or by alphabetical listing
- View work procedures
- View work procedures status as archived or functional

Administrators will be able to do the following:

- Add/update/delete work procedures
- Add/update/delete work procedures details
- Set work procedure status as archived or functional



◆ Institute Procedures ◆



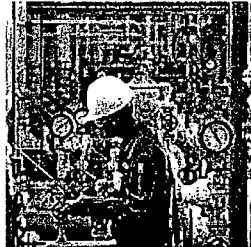
The Industrial Research Institute exercises three types of functions. issuance of compliance certificates, execution of industrial and economic feasibility studies, and execution of services in its capacity as a control and analysis laboratory.

purchase procedure v



◆ Institute Procedures ◆

... purchase procedure



The Industrial Research Institute exercises three types of functions, issuance of compliance certificates, execution of industrial and economic feasibility studies, and execution of services in its capacity as a control and analysis laboratory.

◆ download purchase form ◆

4.1.6.3 "Library" Section

This link will direct the users/members into the Library Management section. In the Library users will be able to search for books via the following search fields:

- By Title
- By Author
- By subject
- By free text

The user will get a listing of possible results. Once a book is selected the user will be directed into a details page where he will find:

- Book Title
- Book Author
- Book Subject
- Brief Description
- Available or not

The administrator can add/update/delete books and also set the book availability, as well as, state that took the book/when and till what date. The administrator can also see the history of rental of the book where he selects the "from date" and "to date".



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administration | institute procedures | library | search

laboratories | subcontracting & Partnership exchange | welding | metrology & calibration | certification | français | عربي

♦Library♦

♦ by title ♦

♦ by subject ♦

♦ by author ♦

♦ description ♦

♦ go ♦



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administration | institute procedures | library | search

laboratories | subcontracting & Partnership exchange | welding | metrology & calibration | certification | français | عربي

♦Library♦

... results page

- Exchanging information and technical experience.
- Preparing together research programs for the benefit of LNE and IRI.
- Organizing mutual meetings, seminars and other technical and scientific.
- Exchanging information and technical experience.
- Preparing together research programs for the benefit of LNE and IRI.
- Organizing mutual meetings, seminars and other technical and scientific.
- Exchanging information and technical experience.
- Preparing together research programs for the benefit of LNE and IRI.
- Organizing mutual meetings, seminars and other technical and scientific.
- Exchanging information and technical experience.

♦ next ♦

4.1.7 "Second Set" Services Menu

This section is a dynamic menu that contains links to the following sections: "Laboratories", "Subcontracting and Partnership Exchange", "Welding", "Metrology and Calibration" and "Certification".

4.1.7.1 "Laboratories" Section

This link will open six alternative links to the user/member: "Central Laboratory for Bread and Wheat", "Microbiology", "Textile, Leather and Rubber", "Soil, Civil and Mechanical Engineering", "Petroleum and Petroleum Products" and "Wet Chemistry and Physical Chemistry". Those pages can be modified by the content management system.

Each laboratory will have a database that contains its clients, tests, results, certificates and forms. They will be able to link to their own part of the "Stock Control".

Users/members will be able to do the following:

- View work authority once issued.
- Search for clients by the field client name
- View client's file (client information form, fields will be discussed later).
- View previous tests done for the client and check related certificates.
- Search the Laboratories test procedures
- View the Laboratories test procedures
- Search the stock control database to find appropriate items and respective quantities.

Administrators will be able to do the following:

- Everything the users/members can do
- Add in test results to the test results form
- Add/update/delete tests
- Add/update/delete tests description
- Add/update/delete Laboratory test procedure
- Issue internal requisition
- Issue purchase order
- Issue certificates.
- Add/update/delete clients by the use of the client information form.
- update items quantity in the stock control database



4.1.7.2 "Subcontracting and Partnership Exchange" Section

This link will direct the users/members into a database containing the clients/descriptions and other related data. Administrators will be able to add/update/delete forms and search archive results.

Users/members will be able to do the following:

- Search the client's database by the following fields: client name, type of client and type of work
- View client's file

Administrators will be able to do the following:

- Everything the users/members can do
- Search work procedures
- Add/update/delete work procedures
- Issue internal requisition
- Issue purchase order
- Add/update/delete clients by the use of the client information form

4.1.7.3 "Welding" Section

This link will direct the users/members into a database where they will have categories/sub-categories each related to a kind of certificate given. People enlisted for training for a certain certificate will be added with their registration forms and following exam results.

There will be a module for reporting. A daily and weekly report will be issued for each trainee.

Users/members will be able to do the following:

- View work authority
- Specify trainee Course
- Add trainee into respective course by the use of respective registration form
- Issue daily report regarding trainee's work by the daily report form
- Issue weekly report regarding trainee's work by the weekly report form

Administrators will be able to do the following:

- Everything the users/members can do
- Search work procedures
- Add/update/delete work procedures
- Issue internal requisition
- Issue purchase order
- Add/update/delete courses by the use of the course form
- Add/update/delete registration forms



- View daily/weekly reports
- Add/update/delete certificates
- Issue certificates

4.1.7.4 "Metrology and Calibration" Section

This link will direct the users/members into a database containing the clients/descriptions/tests and other related data.

Users/members will be able to do the following:

- View work authority once issued.
- Search for clients by the field client name
- View client's file (client information form, fields will be discussed later).
- View previous tests done for the client and check related certificates.
- Search the stock control database to find appropriate items and respective quantities.

Administrators will be able to do the following:

- Everything the users/members can do
- Search work procedures
- Add/update/delete work procedures
- Add in test results to the test results form
- Issue internal requisition
- Issue purchase order
- Issue certificates.
- Add/update/delete clients by the use of the client information form.
- update items quantity in the stock control database

4.1.7.5 "Inspection and Control" Section

This link will direct the users/members into a database containing the clients/descriptions/tests and other related data.

Users/members will be able to do the following:

- View work authority once issued.
- Search factories: list by alphabetical order or by code number; search by Factory name, search by factory category (Boilers, Gas Cylinders, Mobile Tankers, Other Vessels, Miscellaneous and Customs Declaration)
- View factory details (form will be discussed later)
- View factory boilers
- View boiler details (form will be discussed later)
- View previous tests done for the client and check related certificates.
- Search the stock control database to find appropriate items and respective quantities.

Administrators will be able to do the following:



- Everything the users/members can do
- Search work procedures
- Add/update/delete work procedures
- Add in test results to the test results form
- Issue internal requisition
- Issue purchase order
- Issue certificates
- Add/update/delete factories
- Add/update/delete factory category
- Add/update/delete factory details
- update items quantity in the stock control database

4.1.7.6 "Certification" Section

This link will direct the users/members into a database containing the certifications information. Administrators will be able to add/update/delete certifications and search archived certifications.

Users/members will be able to do the following:

- View work authority once issued.
- Search for clients by the field client name
- View client's file (client information form, fields will be discussed later).
- View certificates issued to the client
- View certificates details

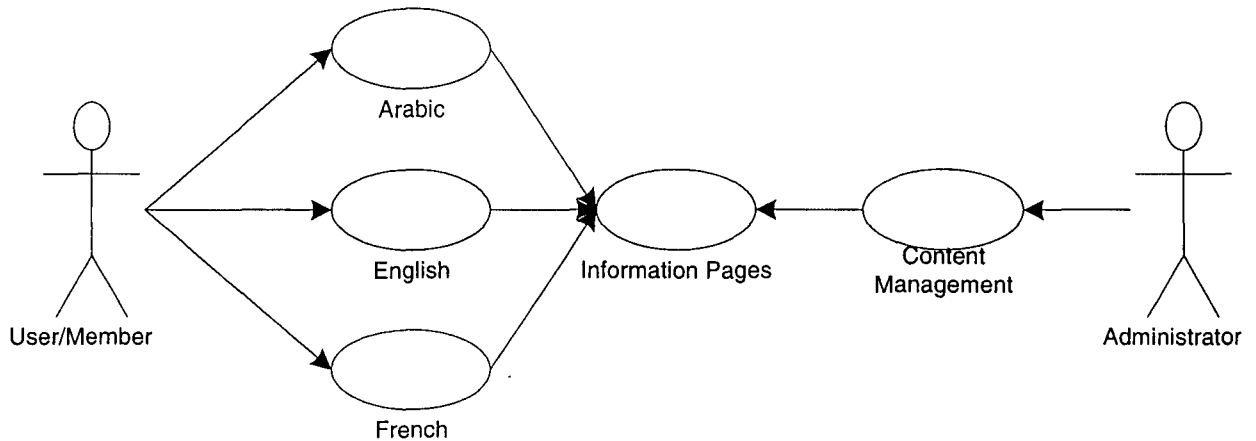
Administrators will be able to do the following:

- Everything the users/members can do
- Search work procedures
- Add/update/delete work procedures
- Add certificates for client
- Add/update/delete certificates
- Add/update/delete certificates details
- Issue certificates.
- Add/update/delete clients by the use of the client information form.
- Add/update/delete contacts
- Search contacts by the following fields: Type of Activity and Name
- Add/update/delete contact details

4.2 Trilingual Interface; French, English and Arabic

The IRI Intranet will be available to users/members in three languages. Users/members will have the choice to select their desired language from the main page itself. All contents available on the site shall be in three languages.

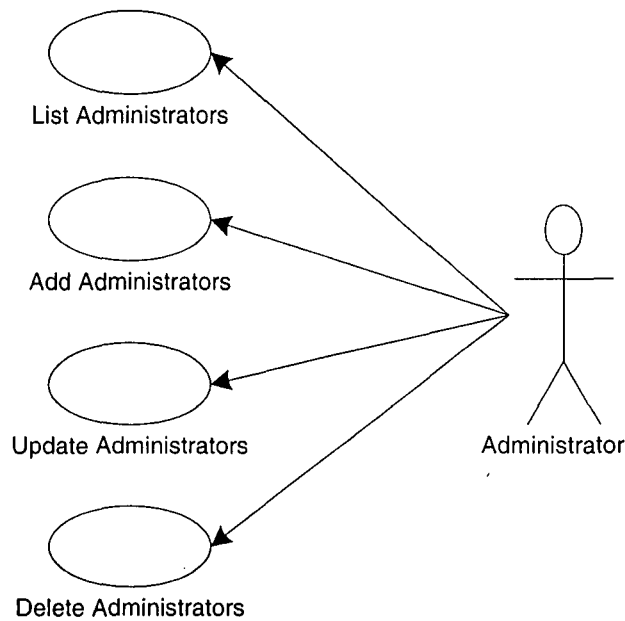
The design will not change from language to language. The only difference would be in layout once a user/member changes the language into Arabic. This will make the web site change from being left side oriented to right side oriented.



The administrators can modify/add/delete any information available on the site in French, English and Arabic.

4.3 Administrator permissions

The web site super administrator shall have access to maintain other web site administrator permissions defining personal usernames/passwords for each web site administrator.



The web site super administrator shall have access to list all web site administrators with access to add new web site administrators, update each of the web site administrators and access to delete each of the web site administrators.

A number of administrator permissions shall be defined for each web site administrator. The administrator permissions shall include access to each of the administration sections as well as each of the groups of information pages.

4.4 Web site administrator homepage

The purpose of this section is to provide access to the administration services for the web site.

The web-site administrators shall have access to an administrator home page from where they have access to the administration services including information pages content management; registered users databases administration; Frequently Asked Questions database administration; web form / e-mail gateway administration...

Web site super administrators shall have additional access to maintain web site administrator permissions.

All web site administrators shall have access to the administrator home page from where they have access to the information pages content management; registered users databases administration; Frequently Asked Questions database administration; web form / e-mail gateway administration... Web site administrators shall only have access to the administration sections for which they have administrator permissions.

Web site super administrators shall also have access to maintain web site administrator permissions.

4.5 Information pages content management

The web site administrators shall have access to list, create, update and delete the primary content of the information pages.

The web site administrators shall have access to list, create, update and delete the groups of information pages.

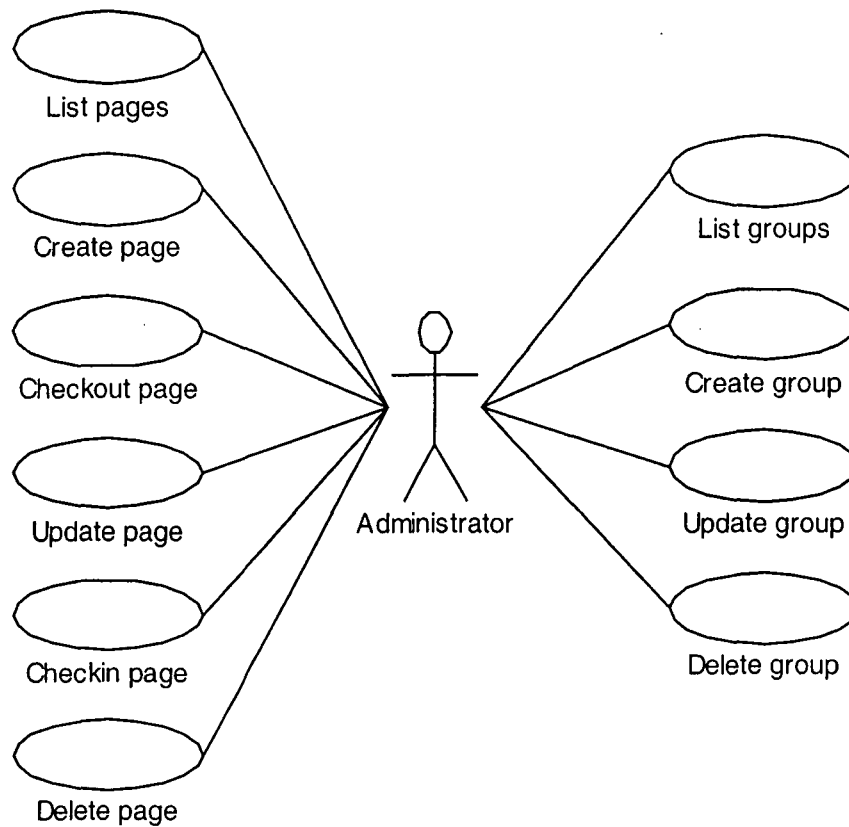
Web site administrators shall only have access to maintain the groups of information pages, which they have administrator permissions for.

Secure, distributed content management shall be supported through checkin/checkout functionality to prevent multiple web site administrators from updating the same information pages at the same time.

The web site administrators shall have access to select one of 2 pre-programmed web page graphic design styles/layouts (web page header, navigation menu(s) and footer) for each information page when creating/updating them. When the graphic design style/layout for an information page is changed it shall be re-programmed to the selected graphic design style/layout automatically. One of the pre-programmed web page graphic design styles/layouts shall be "empty" allowing the web administrators to create fully customised information pages. The other pre-programmed web page graphic design style/layout shall be the default Construction Specifications Institute graphic design style/layout.

The web site administrators shall also have access to create new information pages as copies of pre-defined information page content templates/layouts.

Web site administrators shall have easy access to create/update the primary content of the general information pages using a simple web-based word-processor application supporting text formatting, images, files (for download) and web links. Web site administrators shall also have access to create/update the primary content of the general information pages using "raw" HTML editing/programming.



Web site administrators shall have access to a listing of all information pages with access to checkout, update, checkin and delete each of them.

Web site administrators shall only have access to maintain the groups of information pages, which they have administrator permissions for.

Web site administrators shall only have access to update/delete information pages that are not currently checked out by other web site administrators. However, web site super administrators shall also have access to update/delete information pages what are currently checked out by other web site administrators.

The web site administrators shall have easy access to edit and format text and to insert images, downloadable files and web links using a web-based word processor. The web site administrators shall have access to edit the "raw" HTML code of the primary content of the information pages.



When a new information page is created from a content template/layout the initial content of the new information page shall be copied from the content template/layout.

When information page content is created/updated it shall automatically be inserted into the selected pre-programmed web page graphic design style/layout.

Created/updated information page content shall be published on the web site immediately.



5 Technical Platform System Specifications

This section specifies the technical platform that the technical solution of this project shall be developed for.

Application Architecture	Development Standard	Allaire ColdFusion Studio 4.0 and HomeSite 4.0 Microsoft Interdev Macromedia Dreamweaver 3
	Standard Applications	Web Browser Microsoft Internet Explorer 5.0 Netscape Navigator 4.5
		Web Server Microsoft Internet Information Server 4.0
	Application Server	Allaire Cold Fusion Server 4.5 Microsoft Active Server Pages
	Database Server	Microsoft SQL Server 7.0
System Architecture	Operating System	Windows NT 4.0 Server
	Hardware (minimum)	Pentium III-500 MHz Processor 256 MB SDRAM ECC 9.1 GB Ultra Wide SCSI Harddisk Drive and Controller 1.44 MB 3.5" Floppy Drive 32x Internal CD-ROM Drive 10/100 Mbps Ethernet Network Card Integrated Advanced System Management Processor
Communication Architecture	LAN	TCP/IP Capable Network
	WAN	TCP/IP Capable Network
	Protocol	TCP/IP

5.1 Web Server Hosting

For the deployment of the developed solution on a production server as an Internet service the server must be connected to the Internet. IRI can host it in-house but for cost efficiency, speed and stability Arachnea recommends to host the server with a web server hosting service provider.



6 System Development

The system development process shall be based on proven software engineering practices with a focus on the deliverables of each phase including documentation. The documentation shall focus on the main project requirements and bind the web solution provider and IRI to the agreed upon decisions specified in the documents.

In addition to and as an extension to this survey document specifying the overall business requirements, the project and system documentation shall include detailed requirements specifications, technical design specifications and program source code.



7 Project Schedule

This section details the required project schedule for this project. In case of missed deadlines the project may be rescheduled, as it may not be possible to just push the remaining activities similarly to the delay. The web solution provider and IRI will inform each other as soon as delays of tasks and deliverables are expected.

Tasks / Deliverables	Who	When
Survey	Arachnea	6 Days
Survey document	IRI	
Analysis	Arachnea	10 Days
Analysis document	IRI	
Prototype		
Design	Arachnea	10 Days
Design document		
Construction	Arachnea	
Program code		
Installation	Arachnea	3 Days
System documentation	IRI	
Training	Arachnea	4 Days
User manual	IRI	