Flexible Internet Evaluation Report Architecture (FIERA)

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Introduction

IBM Flexible Internet Evaluation Report Architecture (FIERA) allows for the rapid creation of online surveys for an inventory of products in a streamlined and efficient manner. The software provides for the generation of online surveys and reporting of survey results. It supports a mechanism for highly flexible presentation and brand-level composition through a J2EE application (under WebSphere or Tomcat), which makes use of a relational database back-end (DB2 or MySQL) to allow for the creation, display, and reporting of survey results for user products. The software allows for the centralization of diverse brand items in a single framework, while maintaining a distinct brand-specific look and feel for surveys.

The readme.txt file contains instructions for the initial set-up of FIERA. The readme will get you to the point where your system has functional communication between an application server and back-end database. This file will guide you from your first steps to a fuller understanding of the various aspects that define the software.

The Basic Concept

FIERA provides a flexible multi-user environment for generating surveys across a collection of user-defined inventory items. The inventory itemspecific surveys may appear to have various levels of look and feel (branding), but survey results can be collected and processed in a single centralized model. User-defined questions and HTML are brought together in a multi-faceted Internet survey. The survey is composed of three main parts: look and feel, general questions, and inventory item-specific questions. Each of the three parts of the survey can be changed in a flexible manner from the FIERA management console so that brand-based look and feel can be managed across a loosely connected inventory.

For example: in a university setting, general questions may reflect the efficiency of the school as a whole, while the look and feel of the Chemistry department would differ from that of the Political Science department and each particular class will have questions that are specific to itself. FIERA allows for easy handling of the creation and reporting of the above multi-dimensional organization where a single owner (the university) has many faces (departments) and each face has specific products or services (department X classes.)

Some Important Terms

In order to better understand FIERA, you will need a few definitions. Most are obvious; some are used in specialized ways relative to this software.

Inventory: The collection of user assets known to FIERA. Inventory can be added by hand on the Item Management page (http://yoursite/fiera/itemman.jsp) or added programmatically by insertion into the aweval.eval_itemid table. FIERA maintains a simple identity table with three mandatory fields (item, itemshortname, itemid). It is expected that you have a repository in place for your inventory and that you will manage the relationship between your real back-end database and FIERA in a programmatic way. If you are going to add to this table programmatically, check the data definition language (DDL) for the table in the file aweval_ddl.scr, which is shipped within the WAR. It will show the specifics of the field types and their lengths.

Item: A piece of inventory, the unit about which evaluation results are gathered.

Question: The primary unit for composition of a survey. There are seven types of "questions" in FIERA:

Radio button (single-value choice)

Single-value pull-down (single-value choice)

Checkbox (multi-value choice)

Multi-value pull-down (multi-value choice)

Freeform (text area response)

Statement (a non-question that may provide information to the evaluator in a general sense or with regard to questions on a survey)

Header rule (a non-question that may assist in formatting the survey questions into sections).

Survey: A collection of questions which can be applied to some portion of an inventory. FIERA surveys have two question sections. The first part of a survey is general in nature. Questions in the general section are applied to all items that use a given survey. The second section of a survey is relative to the specific inventory item for which the survey was issued. Not all items will have item-specific questions. The item-specific area is for custom questions.

Return Link: The page to which a user will be redirected after a survey has been submitted. If no return link has been defined by a user, FIERA has a Thank You page that is used.

HTML: The surrounding format that provides the look and feel for a survey. FIERA allows for both user creation of a simple HTML format and for upload of more robust HTML. HTML can be assigned on a "per item" or "per survey" basis.

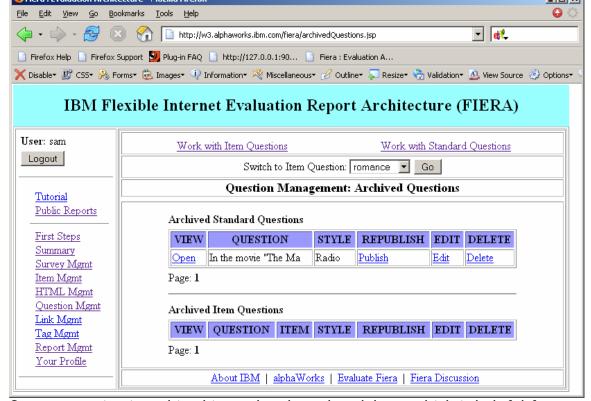
Publish: Standard questions are made available to the pool of questions that can be used in surveys by publishing them. Once published, the question and its answers are editable only after being archived. N.B. Altering a question or its answers after publication should be done carefully so as not to invalidate previously captured data. Publication also is used in the sense of making a survey for a particular item available. Item surveys can be made available or taken offline at any time through a "Publish" link.

Draft: The state of a question when still being prepared. Both standard and item-specific questions go through a draft and publication sequence.

Active: An additional question state that applies only to itemspecific questions that will be displayed on an item survey. Item-specific questions go through a publication process similar to standard questions in that they are drafted and then published; however, an item-specific question will be displayed on the survey for a given item only when it is made "Active."

Inactive: Item-specific questions that have been published, but are not to be displayed on a survey. All of the questions in the pool of potential questions for a given item that are not currently showing on a survey are "Inactive."

Archive: The act by which questions are removed from general availability. Both standard and item-specific questions can be archived. Archiving does not remove data, but it does remove a question from any surveys on which it may be present at the time of archival. Archiving is a way of moving out of the work area any questions that will not be used. Archived questions can be republished, though they will not be re-added automatically to any surveys from which they were removed when archived.



Once a question is archived it can be altered or delete, which is helpful for questions that still have typos even after going through the draft process. Deleting a question will remove all data relative to the question.

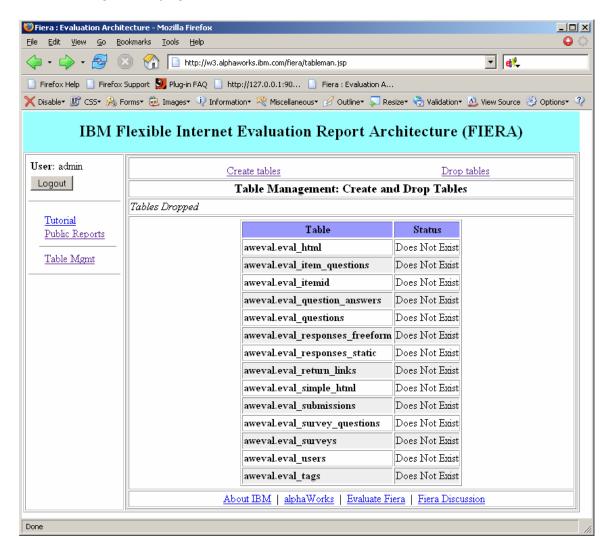
Getting Started (for Administrators)

The readme.txt supplied with the application will guide you through database creation, back-end connectivity and application installation. Once the FIERA application is installed under an application server with a connection to a relational back-end, there are some steps that the administrator must take to ready the system for users.

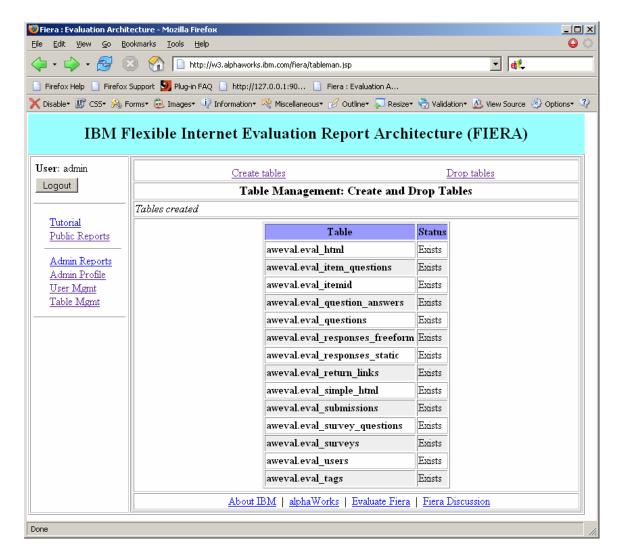
- 1. Create the relational tables.
- 2. Establish a new password for the administrator.
- 3. Register users.

Create the Tables

Log in to FIERA as "admin" with password "admin" and you will arrive at the Table Management page.



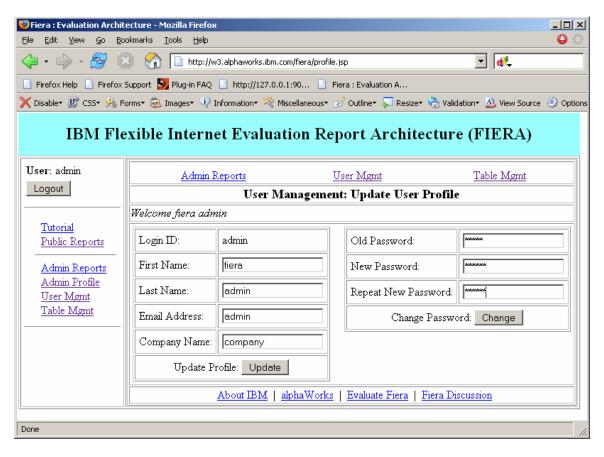
From tableman.jsp, the administrator can either create or drop the FIERA tables. The relational table structure is the backbone of the system. Creating the tables by clicking the *Create tables* link will initialize FIERA.



Note that the data definition language (DDL) for the tables built through the *tableman.jsp* is also included in a static file called *aweval.ddl*, which is located within the WAR file.

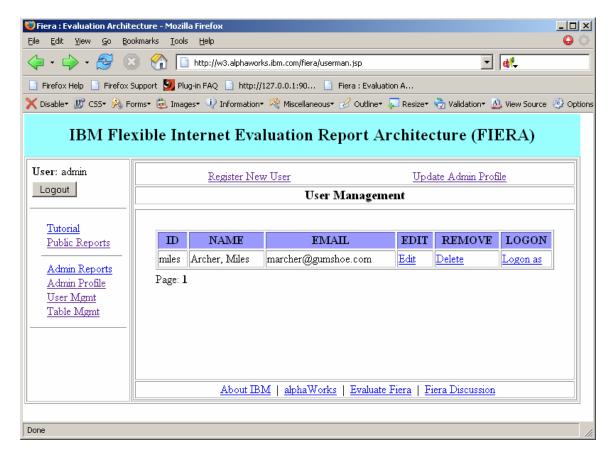
Change Administrator Password

By clicking the *Admin Profile* link, the administrator can update profile information and change the administrator profile. For the security of the FIERA system, it is important to change the default password. In the event that the administrator password is forgotten, the password can be restored to the system default by removing the record for *admin* in the *aweval_eval_users* table. (SQL: delete from *aweval_eval_users* where uid='admin')

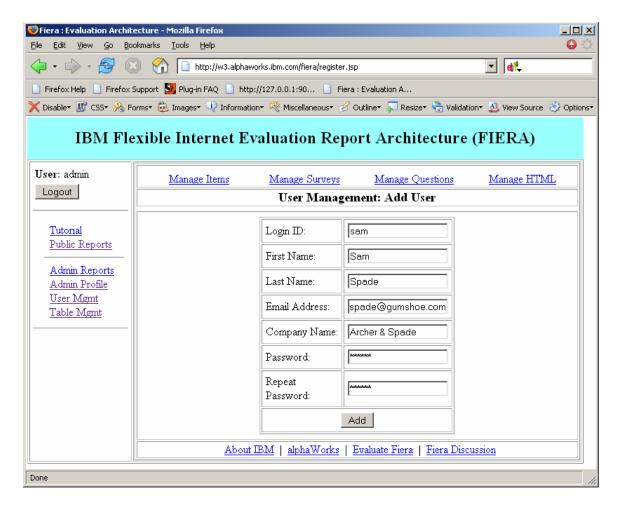


Register Users

The User Management page, *userman.jsp*, can be used to create new users so that they can exercise the survey and report features of FIERA. Note that from this page the admin can log on as any user in order to change a user's forgotten password or to assist a user in creation of a survey.



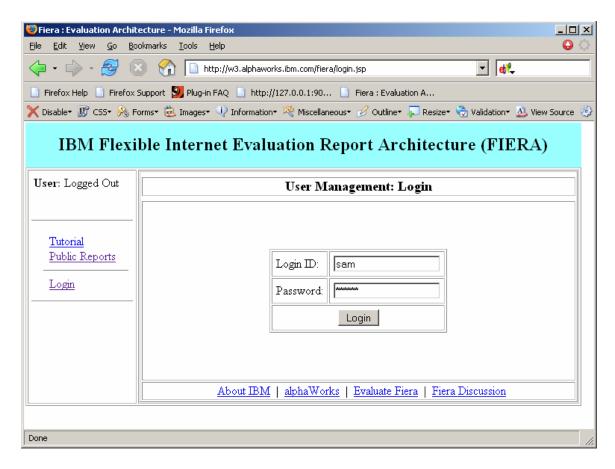
Click on Register New User to add a user.



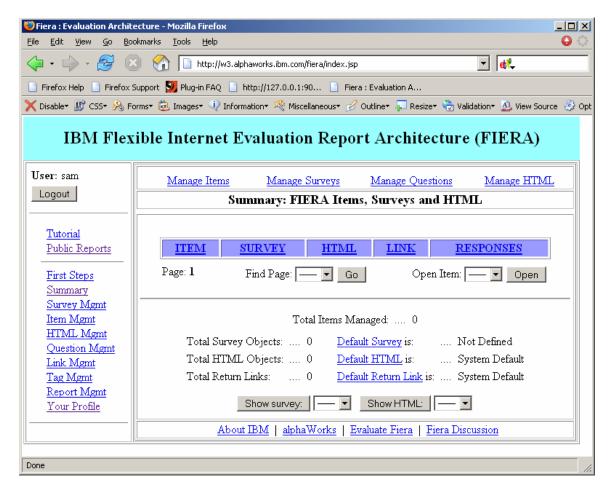
(Note that within the WAR file, there is an alternate means by which users can register themselves. In order to facilitate self-registration, substitute the file login.jsp.self for the original login.jsp and rename demoreg.jsp.self to demoreg.jsp.) Once registered, users will be able to get started with their own surveys.

Getting Started (for Users)

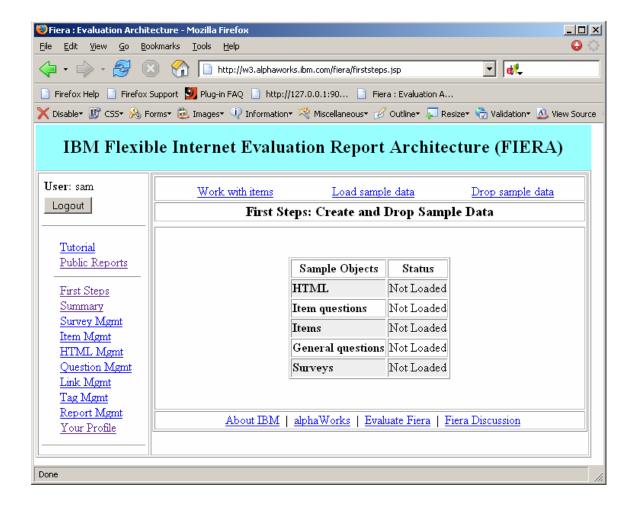
After registering, go to the application root (http://yoursite/fiera).



Once authenticated, you arrive on a summary page for the objects (Items, Surveys, and HTML) that you own. At first you will have no objects under your control.



To get a feel for what sort of objects and relationships FIERA creates, you will want to go to the *First Steps* link and click on *Load Sample Data*. The collection of sample objects created will provide a simple framework for getting familiar with the survey mechanisms.

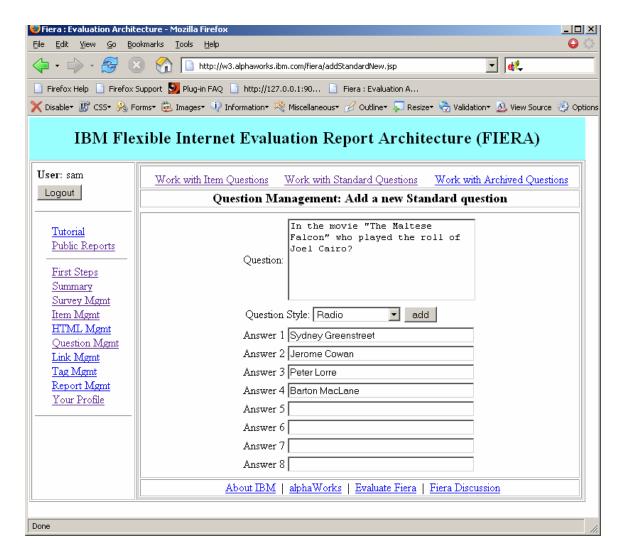


Moving On

The following sections explain the initial steps for using FIERA where the samples have not been loaded. A few things are required in order to make FIERA functional. The base requirement is that at least one question must be created and a survey must be created with that question on it. You must also have at least one inventory item for the survey to be applied to.

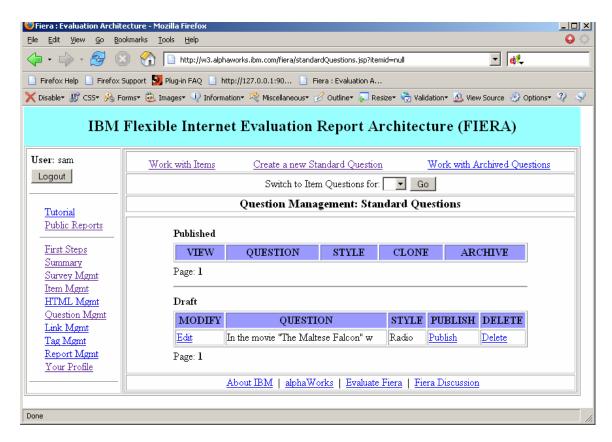
You can create a question on the Question Management page (http://yoursite/fiera/questionman.jsp), where question-specific data (related to the question, the question status, type, and style) is shown.

Click on *Create a new Standard Question* to provide text for the question and the answers you would like and to add the question.

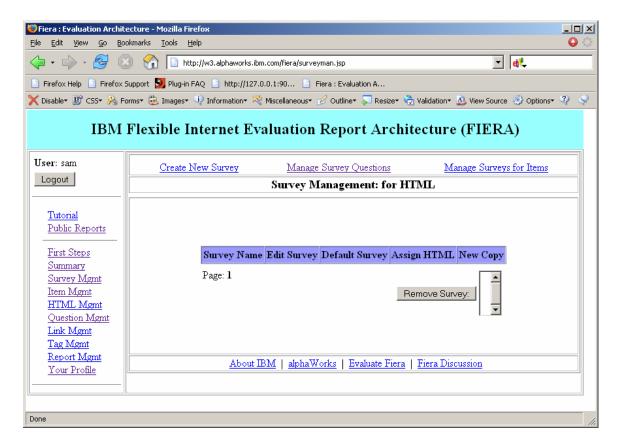


Once the question is added, you will be redirected to the *Question Management: Standard Question* console. From the question console, you can do several things:

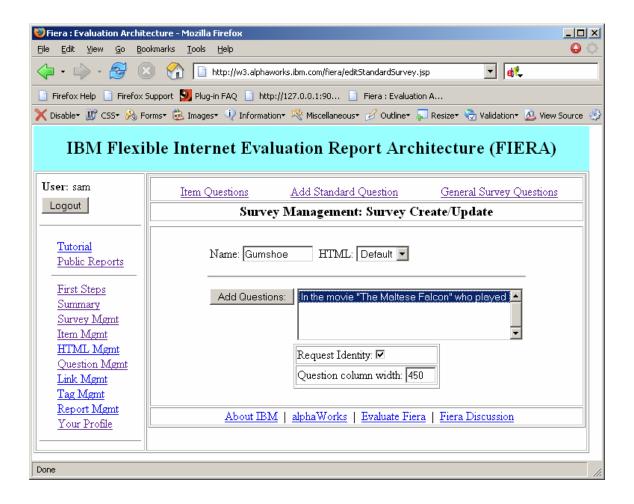
- Edit your draft questions (add more answers; change the order of the answers or the style of question.)
- Publish your question. Publication of a Standard Question means that it appears in the pool of questions that are available for use in the general portion of a survey.
- Archive your questions. Clean up your work area so that unused historical questions are out of the way.

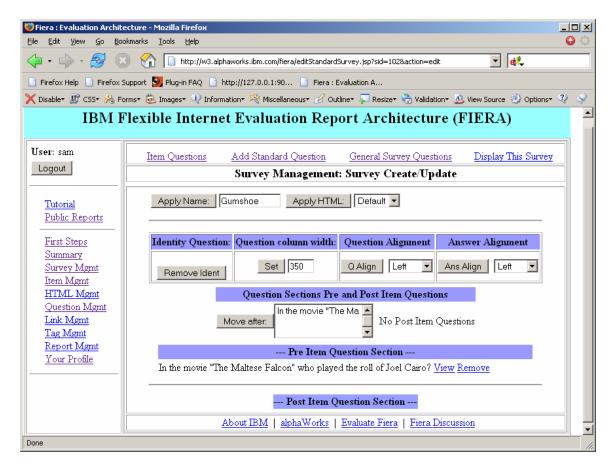


Publish your question and then go to Survey Management (http://yoursite/fiera/surveyman.jsp), where you can now *CreateNew Survey*. Other functions on the Survey Management pages allow for setting the current HTML for a given survey, assigning a default survey, and deleting surveys.

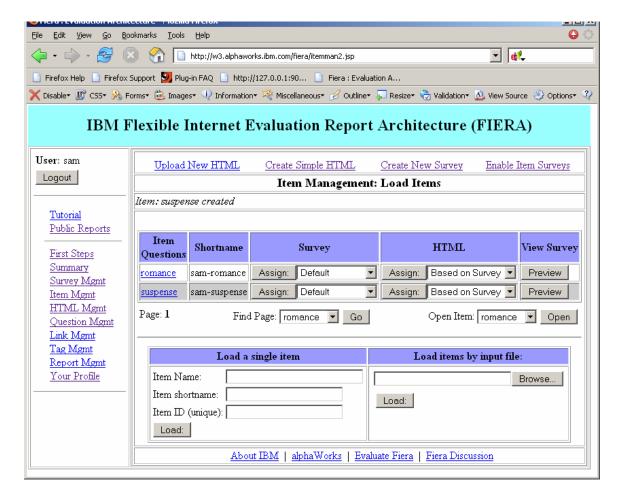


Now that you are creating a new survey, you will need to add a question (or more likely, several questions) to the survey and give the survey a name. What you are creating here is the general portion of an Internet survey. These are the more widely applicable questions, which may reflect how an organization works or how its products are received in a broad sense. Note that if there is no survey set as the current default or if the survey added is the first survey, then FIERA will make the new survey the default survey. If an inventory item does not have an explicit relationship with another survey, then the default survey is used. As you use FIERA, you will want to create a fairly general survey defined as a catchall for items that may be newly introduced into your inventory.



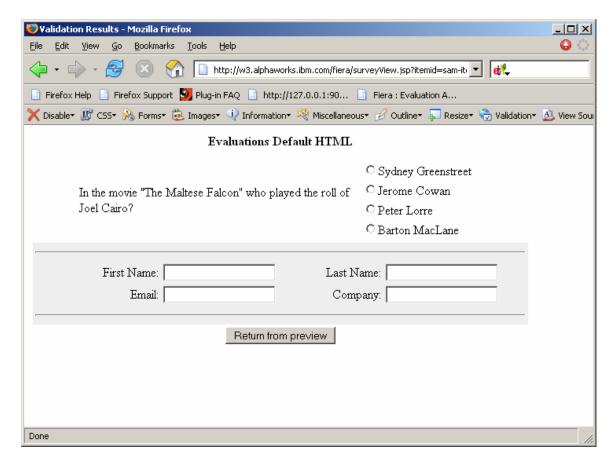


At this point you can adjust various aspects of how the survey and its questions will display, but, now that you have a survey created, you will need some inventory to which the survey can be applied. Go to the Item Management page (http://yoursite/fiera/itemman.jsp) and choose Load Items from the top menu. Here you can load items individually or in bulk. In addition, you manage the assigned survey and the assigned HTML that will be displayed for your items from the survey management pages.



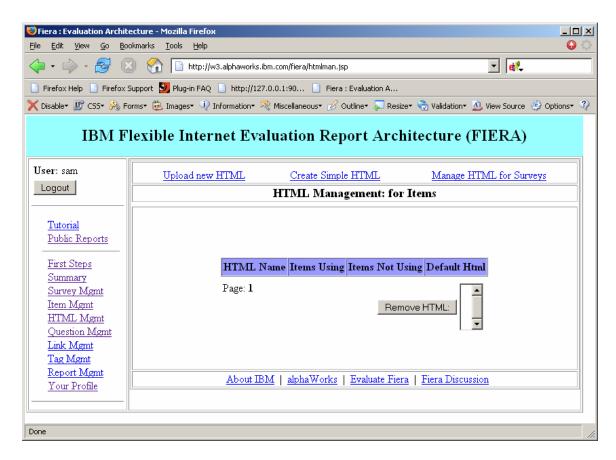
You can add items by hand by filling in the Item Name, Item shortname, and Item ID. Once created, Items cannot be updated in FIERA directly. By altering an item or its ID, we could change the sense of a question. But we do allow that items can be deleted. On deletion, questions that are item-specific, relative to this item, are also deleted.

With a few items in your inventory, now you can apply to an item (or items) the survey that you created earlier. The base requirements are now complete and you can display the item survey by clicking on *Preview* under *View Survey* on this page.

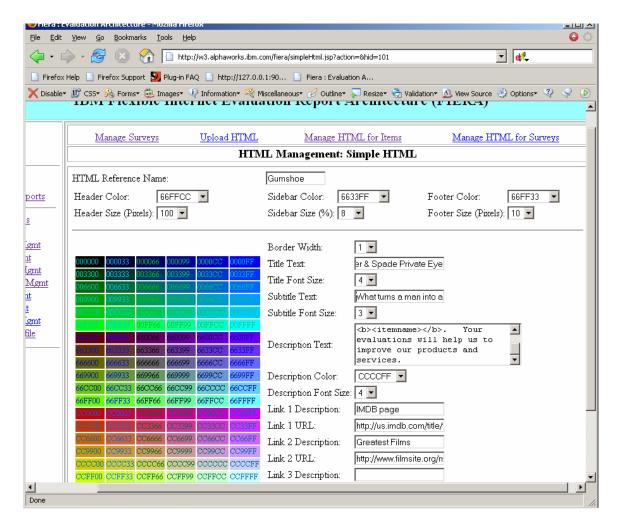


At this point you will want to add some HTML. The system default is a very plain page. Use the *Return from Preview* button to return to FIERA. The survey page that you were just on was only a preview, but it can be made live by publishing the item on the Item Management page.

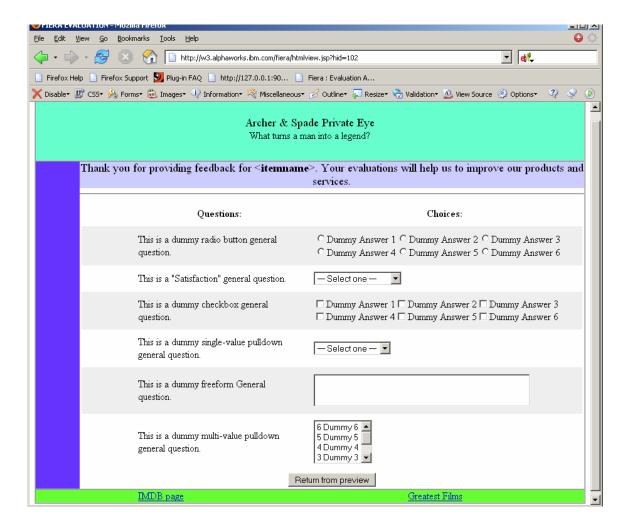
Now we want to define an HTML wrapper. Go to HTML Management (http://yoursite/fiera/htmlman.jsp).



From here you can manage which items will use the various HTML wrappers that you have in place. In this case, navigate to "Create Simple HTML." You will be able to create a simple wrapper (some color, a title, a descriptive blurb, and some off-site links for reference.)

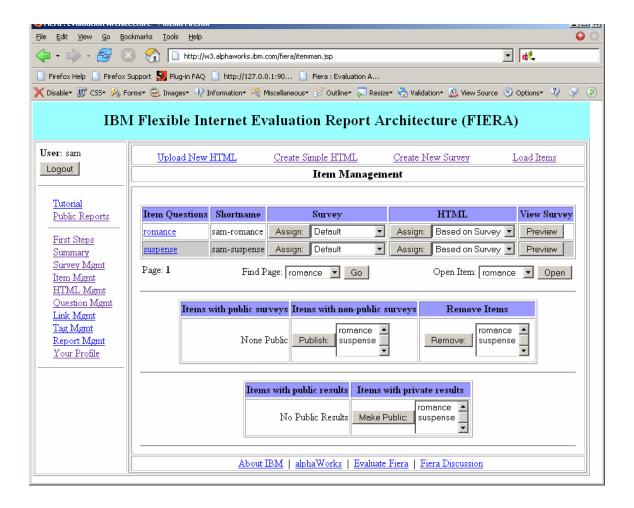


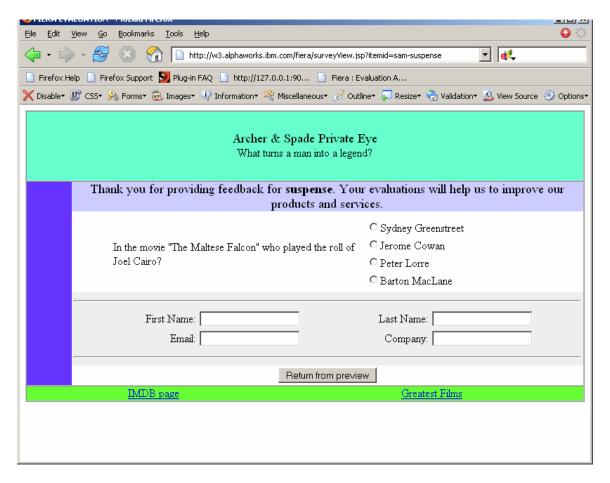
Once you have a page defined and saved, you can preview the HTML from the same page.



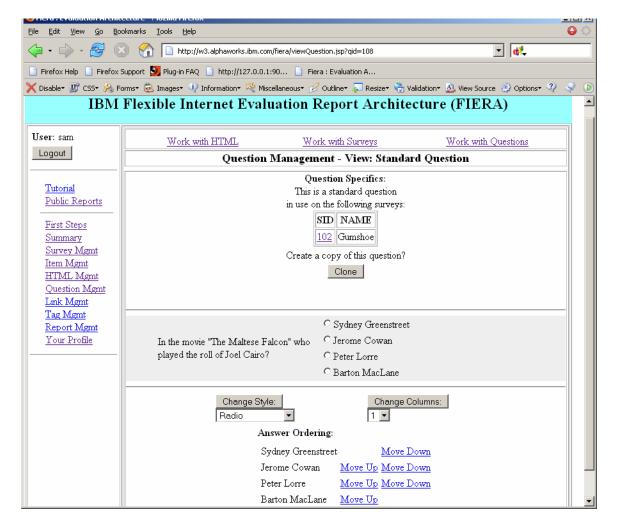
Use the Return from Preview button to return to the FIERA console and go to Item Management. Assign the new HTML to the some of your items by clicking on Assign in the HTML column. Note here that the first HTML that you create will be assigned as the default HTML for the system. As with surveys, you will most likely want to have a fairly general HTML set as the default for new items as they arrive in your inventory.

The survey (simple as it is with only a single question) can be displayed by clicking on *Preview* (or *Open* if you have made an item that is public) for one of the items for which this survey has been assigned.





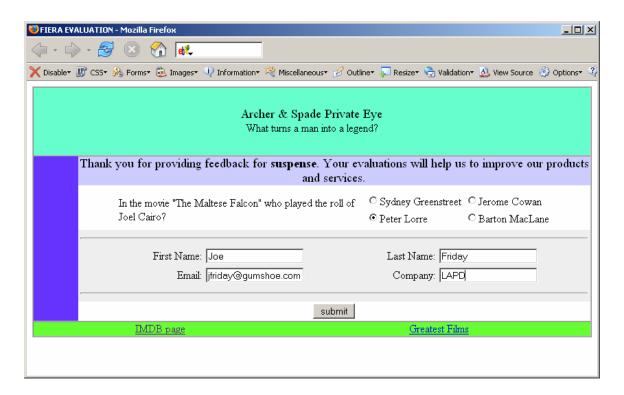
The last step you may want to take is to adjust the way this single question on this survey is displayed. Return to the FIERA console, go to the Question Management page, and click on the ID of your question.



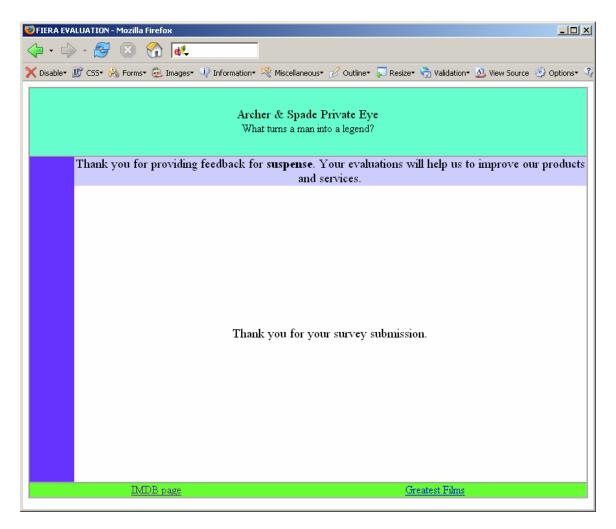
The *Question Management - View* page allows you to change the number of columns that are in use, change the order of the answers, or create a copy of the question as a draft (clone.) From this page you can you can change the "Style" of the question - with restrictions:

- A radio button can be presented as a single-value pull-down menu
- A single-value pull-down menu can be presented as a radio button
- A checkbox can be presented as a multi-value pull-down menu
- A multi-value pull-down menu can be presented as a checkbox.

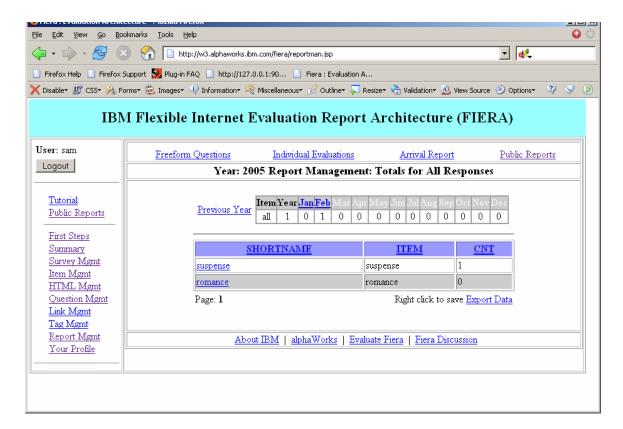
In this case, change the number of columns to 2 and click on *Change Columns*. Return to the Item Management page and *Open* the survey for one of your items. The new column arrangement is in place now.



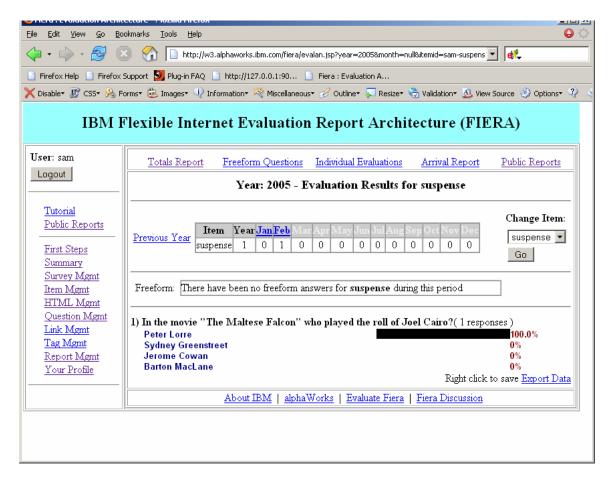
In addition to functions that affect the display characteristics of a survey, you can change the destination that a user will return to after a survey for an item has been submitted. Return to FIERA and go to the Link Management page. Put in the Link Text and the Link URL and "Load" the URL. Now assign the URL to one of your items. Once the survey for this item is submitted, the user will be redirected to the URL that you added (an item information page or possibly the company catalog main page.) FIERA has a default *thankyou.jsp* file that is the initial default Return Link; *thankyou.jsp* will merely present the HTML wrapper that was used for the survey, along with the statement "Thank you for your survey submission."



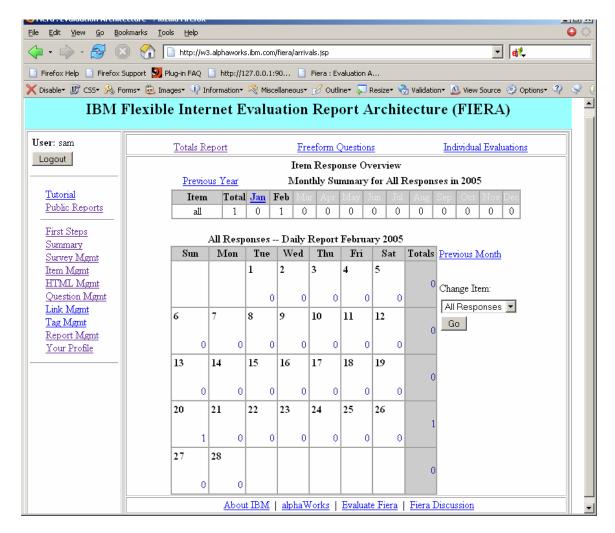
In this case, I've made a single submission. You can look at the reports for a given item or for overall general responses by going to the Report Management page (http://yoursite/fiera/reportman.jsp.) First we will see the aggregate number of responses for all of the items in the inventory.



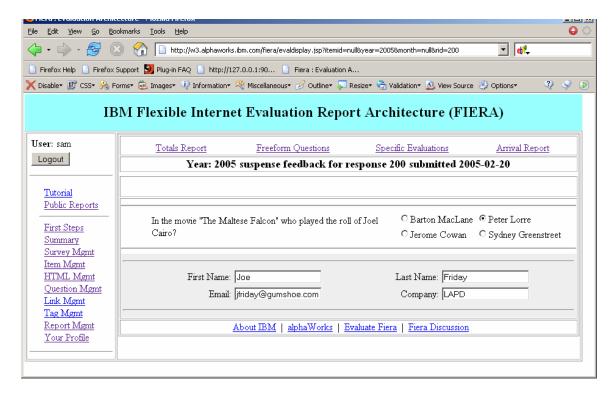
By drilling into the item, we see a report showing the percentage of responses for each of the questions that have been answered relative to the given item.



We can also see a breakdown of the arrivals by day of the month on the Arrival Report page.



A listing of the specific responses is available under *Individual Evaluations*, and each submitted survey can be opened and inspected separately.



Granted, this example is the simplest form of a survey, and it is most likely not typical of what you will want to use. But it does show some basic techniques. We went through the required steps (in a simple way) to create a survey for an item, display that survey, update the look and feel of the survey, submit a response to the survey, and look over the basic report features. You can see from the above that FIERA provides for rapid creation and deployment of Webbased surveys.

Advanced Features

- Bulk Item Load
- Tag Management
- Data Downloads
- International Language Support
- Public Reporting

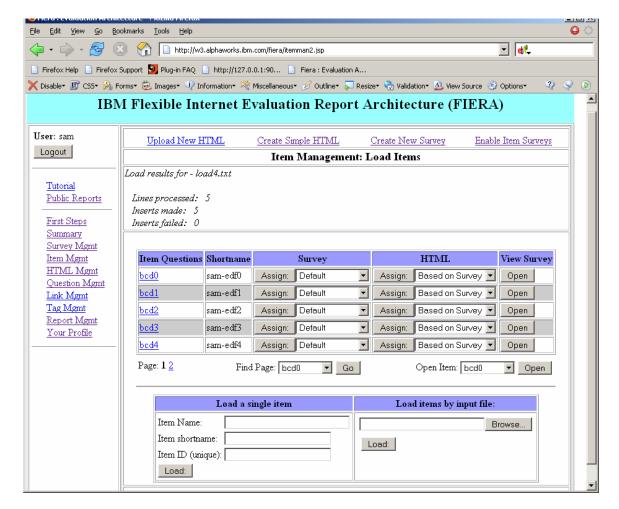
Bulk Load

You saw on the item management pages how an item is loaded into FIERA. We have both single-load and bulk-load capabilities. The bulk load requires a comma-separated value file with four fields:

- 1. ItemName (character, maximum length 256,)
- 2. itemshortName (character, maximum length 32),
- 3. itemID(character, maximum length 30,)
- 4. publicFlag (character, length 1, Y or N, not required, default is N)

For example, the following content has been added to a local file, c:\load4.txt. It holds definitions for five items with publicly-viewable surveys.

abc0,bcd0,edf0,Y abc1,bcd1,edf1,Y abc2,bcd2,edf2,Y abc3,bcd3,edf3,Y abc4,bcd4,edf4,Y



They will all use the "default" survey as specified in FIERA. (Since each field is text, we dispense with the quote marks, but by doing so we disallow the use of commas in item names.)

Tag Management

FIERA provides the ability to create replacement tags for use in questions and HTML on the Tag Management page (http://yoursite/fiera/htmlman.jsp). Tags are quite powerful. They allow for

the substitution of user-defined values for user-defined tags. There is one permanent tag in the system: <itemname>. Any question or HTML that uses the <itemname> tag will display the name of the particular item for which a survey is generated wherever it is used. See the sample data for an example. The HTML for the samples uses the <itemname> tag.

Rules for tags:

- Tags cannot hold other tags (none defined by the system, nor HTML).
- A tag cannot be deleted once used in a question or HTML(otherwise there would be a contextual "hole").
 - Tags can be updated at any time.

Due to contextual constraints, tags cause some problems. Tags are quite powerful, but be careful in using them since the entire meaning of a question can be changed by the changing a tag value.

Data Download

Three of the report pages allow for the export of data into CSV format. The link for the export is found on the lower right-hand side of the data tables. While the data in the tables will be paged, showing only one section at a time, the exported data is given in full, not just for a given page.

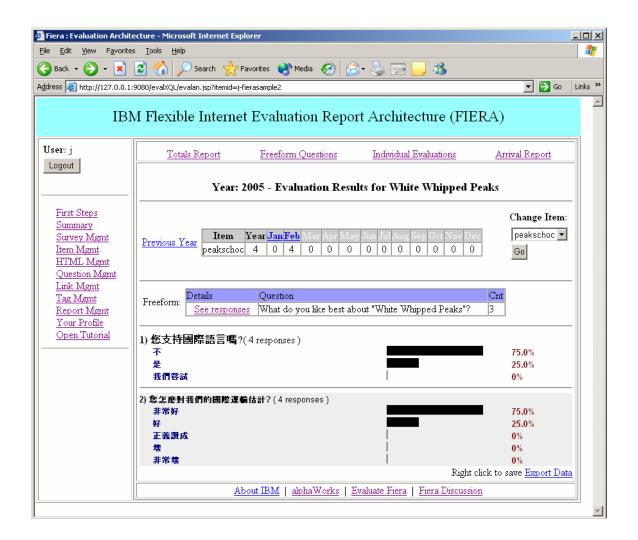
International Language Support

FIERA is a UTF-8 compliant application and will support questions, responses, and user profile information that use international languages.



(Note that the readme.txt bundled in the application war indicates several steps that are required for implementation of NLS.)

Reporting features also support UTF-8 to allow for truly international usage.



Public Reporting

While all of the resources of FIERA are privately owned by their creator, there are many reasons for wanting to share the results of surveys with a wide, anonymous, audience. The FIERA application allows for opening the survey results to a public view on a per item basis. From the Item management page (http://yoursite/fiera/itemman.jsp), users can control the public and private viewing of their item results. On the Item Info page for each item, users can control the public/private feature of the item's results.

