

**Proof of Concept System for Automatically Determining  
'Need-to-Know' Access Privileges: Installation Notes and User  
Guide**

**Technical Report: CMU-RI-TR-04-56**

**Michael D Rectenwald, Kevin C. Lee, Young-Woo Seo, Joesph A.  
Giampapa, Katia Sycara**

**The Robotics Institute  
Carnegie Mellon University  
5000 Forbes Avenue  
Pittsburgh, PA 15215  
USA**

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**This research has been supported by Computer Technology Associates, Inc. ,  
subcontract 'BAA 03-02-CMU', under ARDA contract 'BAA 03-02-FH.'**

# **Installation and Running Instructions for Arda Proof of Concept System**

## **I. Introduction:**

This documentation presents the installation notes for ARDA supervisor and analyst interfaces. The main feature of the supervisor interface is to allow a supervisor to assign a task to an analyst. A task is defined to be a set of analyst's name, project name, list of positive examples, and list of negative examples. Upon submission of the task to the web service, the service will invoke the classifier agent to generate a set of weight vectors that determine the permission of each document for the analyst. An analyst assigned to a particular task will be able to check his/her task on the analyst interface by logging in and clicking on the particular task from the list of tasks menu. The task will open with all the documents within the communities of interest that the analyst is assigned to. As the analyst clicks on each document, the authorization agent will determine whether it is viewable to the analyst based on the generated weight vectors. We have shown the accuracy of the classifier with minimal sets of positive and negative examples and the performance of it.

## **II. Installation Procedures:**

### **a. Analyst Installation Instructions:**

1. Save the Analyst and Supervisor folder to C:/.
  - a. The Analyst folder should contain the arda2.war file and "build" folder.
  - b. The Supervisor folder should contain the "bin" folder, which includes the executable and relevant files.
2. Install Sun Application Server All-in-One Bundle.
  - a. On the web, go to: <http://java.sun.com/j2ee/1.4/download.html#sdk>
  - b. Scroll to "All-In-One Bundle" of "J2EE 1.4 SDK and Sun Java System Application Server Platform Edition 8 2004Q4 Beta September 20, 2004."
  - c. Click on Download.
  - d. Choose your platform and download using default settings
  - e. At the "Admin Configuration" interface enter a password for the Administrator and choose "Don't prompt for Admin. User Name."
3. Once the installation is complete, start the web server by going to Start -> All Programs -> Sun Microsystems -> J2EE 1.4 SDK -> Start Default Server:

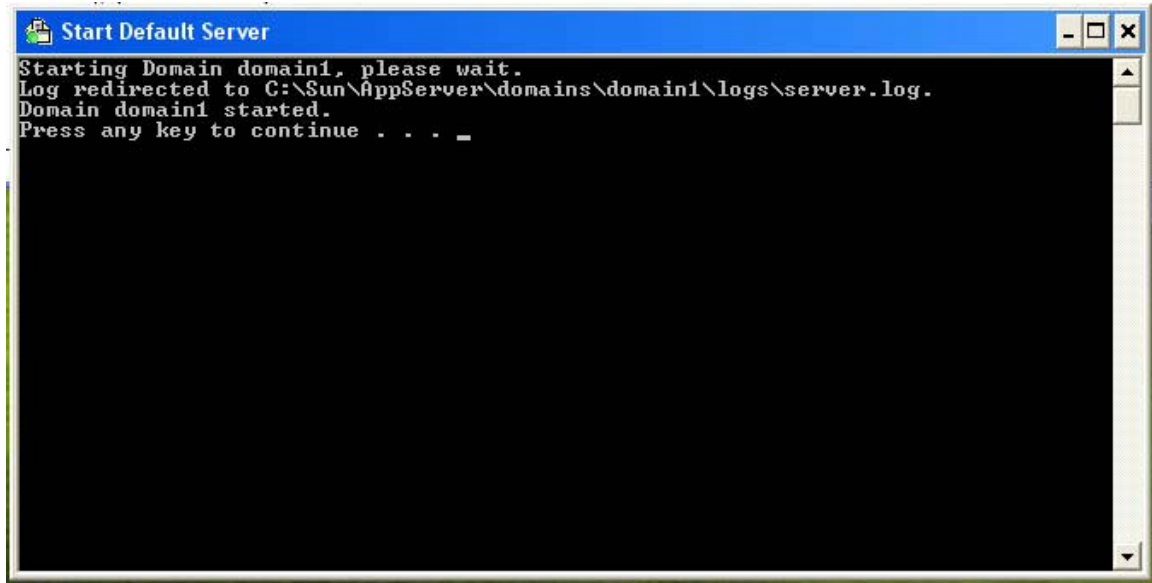


Figure 1: It shows that the default server has started

Press the enter key to exit out of the command prompt screen (close screen) shown in Figure 1.

4. Open config.ini in C:/Analyst/build. Check the path to make sure it reflects the placement of the Analyst and Supervisor folders, as such:

```
data = C:/Analyst/build/data  
htmldata = C:/Analyst/build/htmldata  
supervisor_dir = C:/Supervisor/bin
```

5. Go to Start -> All Programs -> Sun Microsystems -> J2EEE 1.4 SDK -> Deploytool shown in Figure 2:

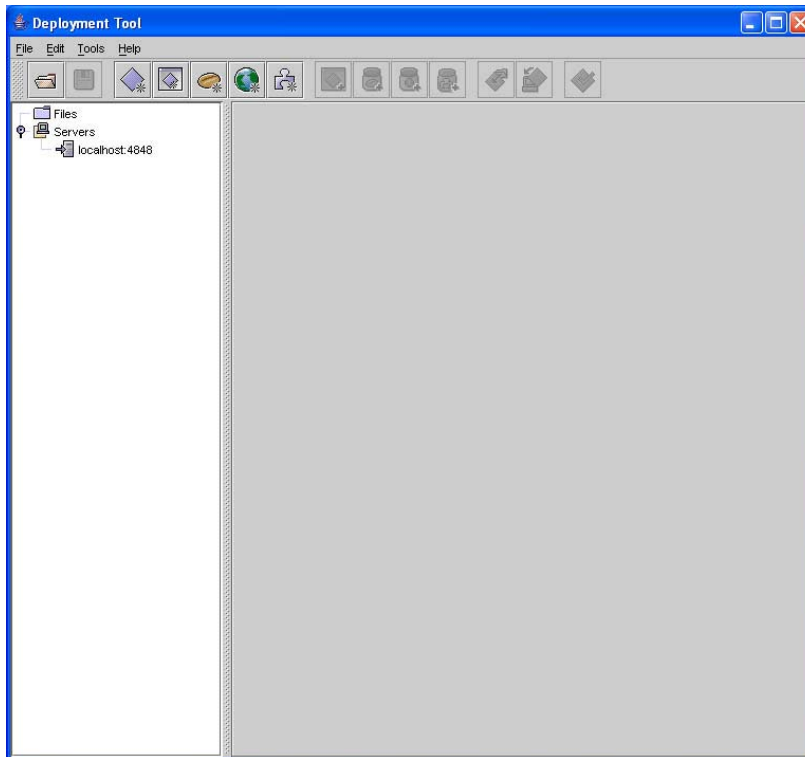


Figure 2: Deployment Tool window

6. In the Deployment tool go to File -> Open. The Open Module will appear as in Figure 3:

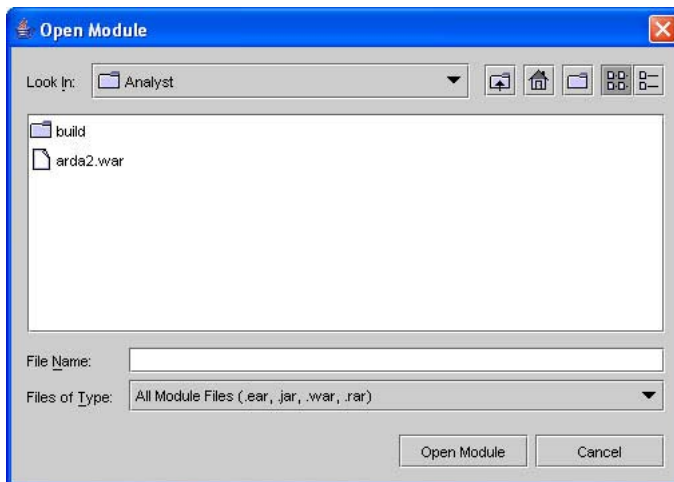


Figure 3: Open Module window

7. Select arda2.war. After the arda2 module has been loaded, select “Edit Contents...” in Deployment Tool as shown in Figure 4. The Edit Contents of arda2 Window will appear as in Figure 5:

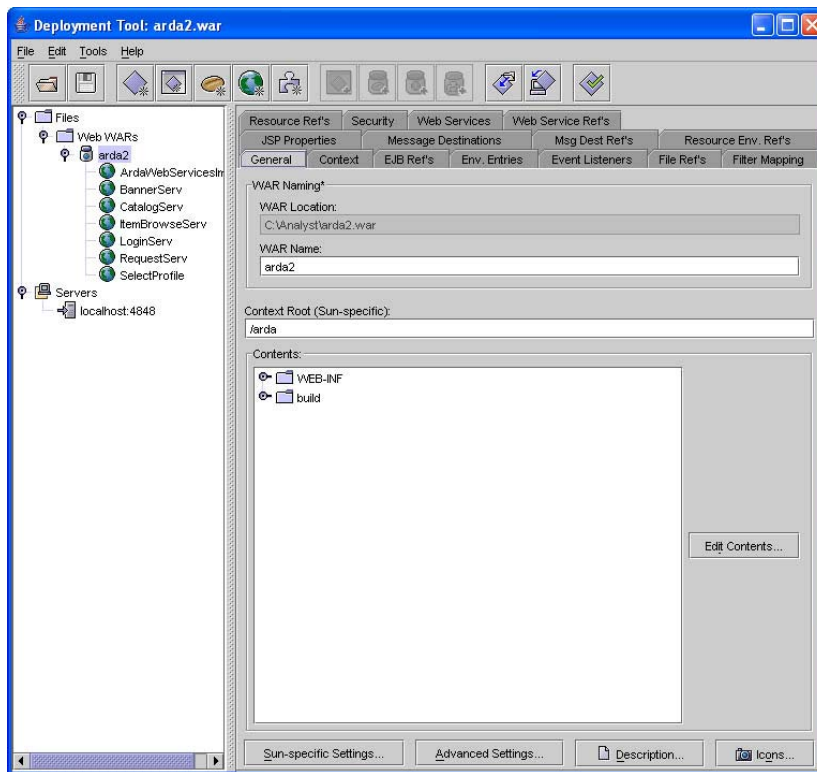


Figure 4: After arda2.war has been loaded, the Files hierarchy will show arda2 and its associated servlets and web service.

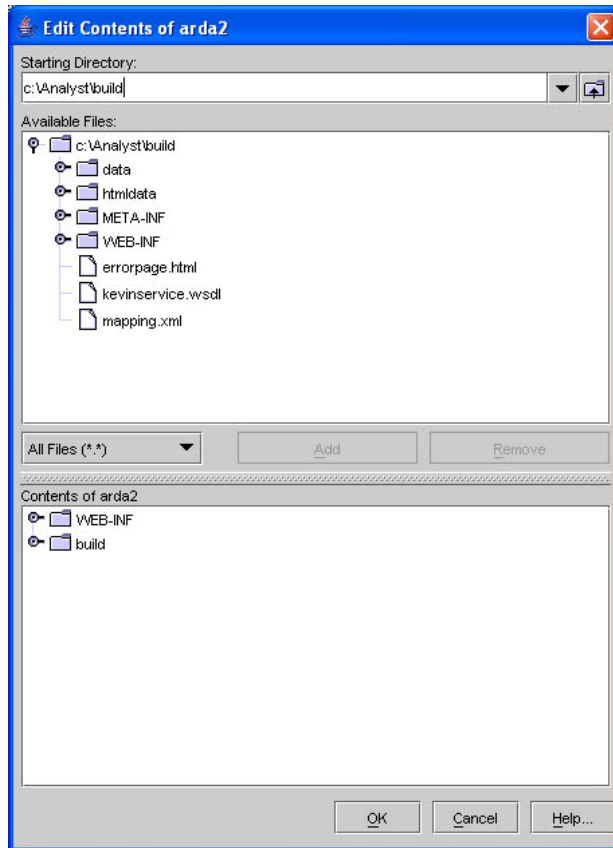


Figure 5: Edit Contents window of arda2

8. In the lower panel select “build” and then click on “Remove.” Answer “Yes” in the Confirmation Dialog box.
9. In the upper pane select c:\Analyst\build and click on “Add.” Answer “Yes to All” in the Confirmation Dialog box. Click on “OK” in the “Edit Contents of Arda2” GUI.
10. In the Deployment Tool, go to Tools -> Deploy. “The Deploy Module arda2” GUI as in Figure 6 will appear:

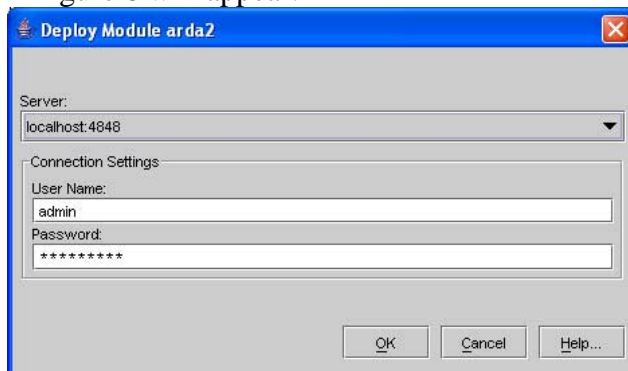


Figure 6: Deploy Module login screen

11. The admin password should be stored by default. Enter it if it is not stored. Click on “OK.”

If you receive the following error message in Figure 7, click on “Cancel Deployment.”

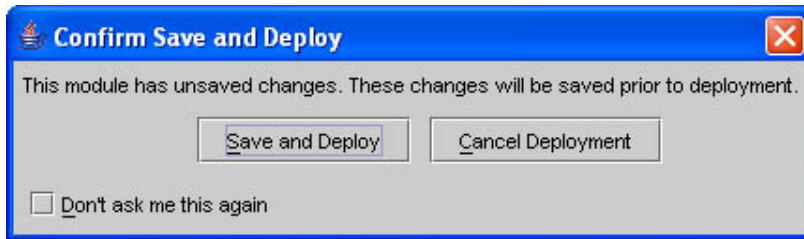


Figure 7: Confirm Save and Deploy window

You will need to manually start the server by clicking “Start” shown in Figure 8.

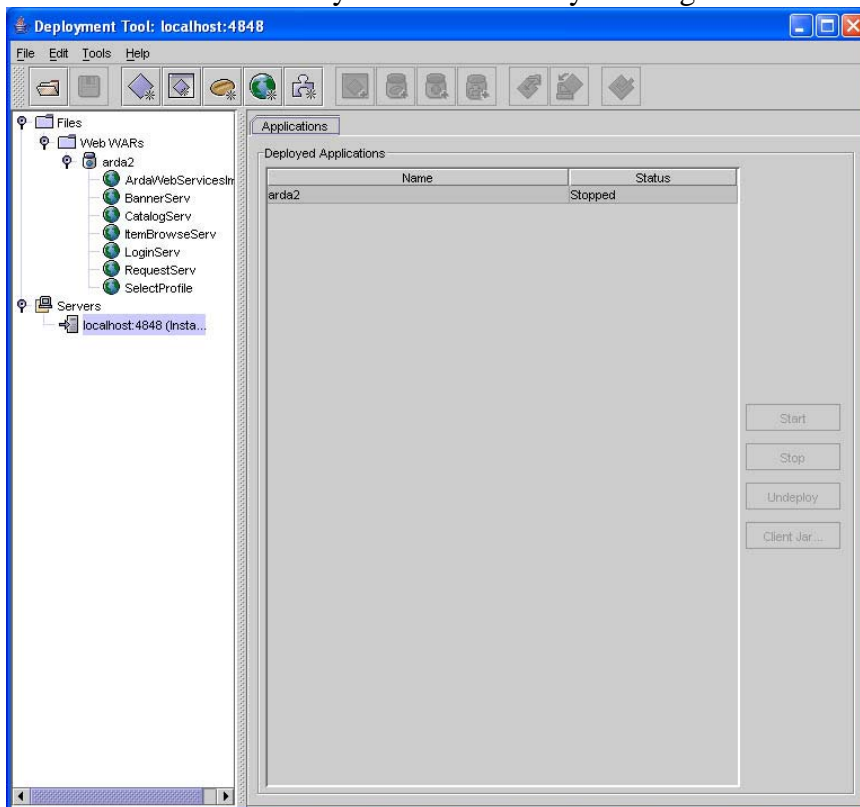


Figure 8: Click on arda2 and press Start

Go to <http://localhost:8080/arda/service?WSDL> to check to see that the service has been installed successfully. There should be an xml describing the services.

## b. Supervisor Installation Instructions:

1. In C:/Supervisor/bin/ open configure.ini. Make sure the path of analyst\_dir and supervisor\_dir reflect the placements of Analyst and Supervisor folders, as such:

```
analyst_dir = C:\Analyst\build\  
supervisor_dir = C:\Supervisor\bin\
```

2. Click on supervisor.exe to start the supervisor as in Figure 9:

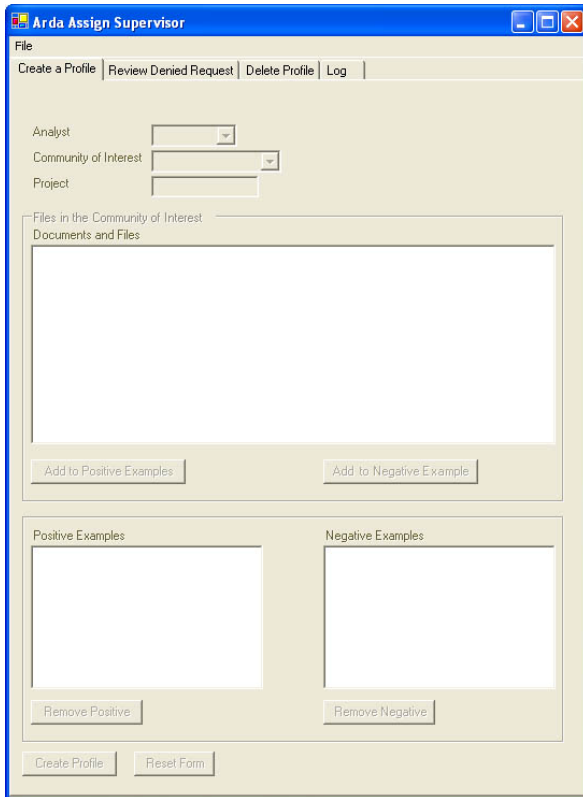


Figure 9: Supervisor interface before login



### b-1. Supervisor Interface Feature 1 - Create a Profile:

1. Go to File -> Create Supervisor in Supervisor interface in Figure 10 to create a supervisor's account.

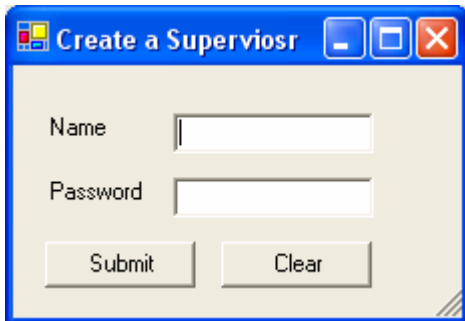
A small dialog box titled "Create a Supervisor" with a blue title bar and standard Windows window controls. It contains two text input fields: "Name" and "Password". Below the fields are two buttons: "Submit" and "Clear".

Figure 10: One can create a supervisor's login

2. Go to File -> Login in Supervisor interface to login. Choose a supervisor that is created as shown in Figure 11:


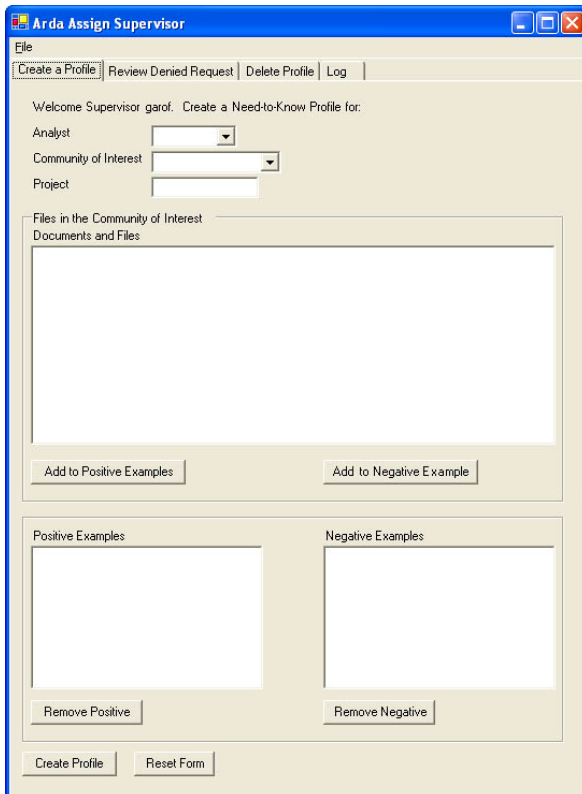
A dialog box titled "Login" with a blue title bar and standard Windows window controls. It features a "User ID" dropdown menu with "garof" and "kclee" as options, and a "Password" text field with "xxxx" as a placeholder. To the right of the fields are "Login" and "Clear" buttons. A blue hyperlink "Forgot your password?" is located at the bottom left.

Figure 11: Login window

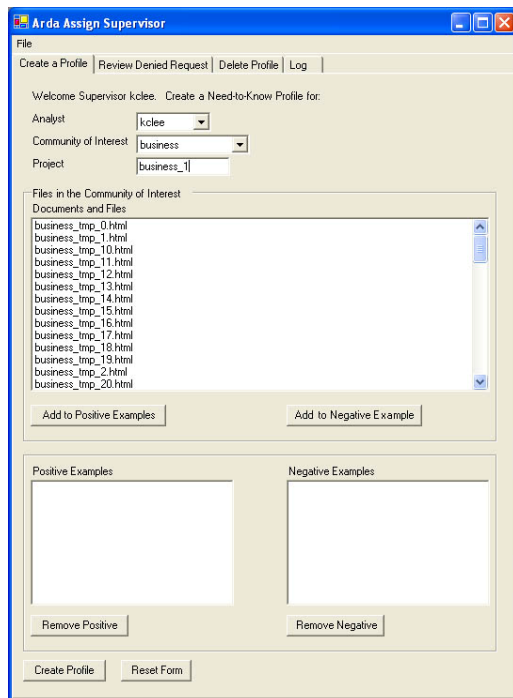
3. The "Arda Assign Supervisor" GUI will ungreyed out as shown in Figure 12:

A complex GUI window titled "Arda Assign Supervisor" with a blue title bar and standard Windows window controls. It has a menu bar with "File" and a toolbar with "Create a Profile", "Review Denied Request", "Delete Profile", and "Log". The main area contains a welcome message: "Welcome Supervisor garof. Create a Need-to-Know Profile for:". Below this are three dropdown menus for "Analyst", "Community of Interest", and "Project". A large empty box is labeled "Files in the Community of Interest" and "Documents and Files". Below this box are "Add to Positive Examples" and "Add to Negative Example" buttons. At the bottom, there are two sections: "Positive Examples" and "Negative Examples", each with a large empty box and a "Remove" button. At the very bottom are "Create Profile" and "Reset Form" buttons.

4. Now one can start assigning jobs to analysts.

Figure 12: Ungreyed out supervisor interface

Figure 13: Documents vary according to the selection of community of interest



First, select an analyst, community of interest, and the name of the project for the analyst. Depending on the community of interest, files will be dynamically shown to the supervisor as in Figure 13.

Select files and place them in either the positive and negative example boxes.

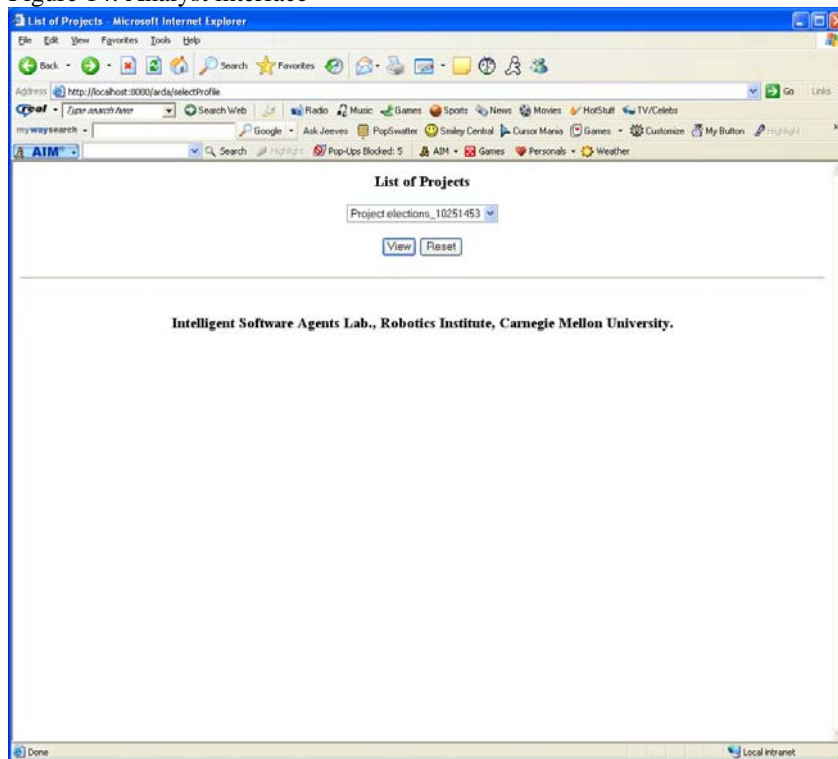
5. Click on “Create Profile” to create the profile. Profile creation can take some time, depending on the size of the positive and negative sets.

6. By going to <http://localhost:8080/arda> and logging in, the analyst can view his job assignment. Currently, the available analysts are “kclee”, and “ywseo”. Their passwords are the same as the username: for instance, the

password for “kclee” is “kclee.”

7. Select the project to view from the drop-down list of projects and click on “View” in the analyst’s interface shown in Figure 14.

Figure 14: Analyst interface



8. The list of classified documents will be displayed as in Figure 15:

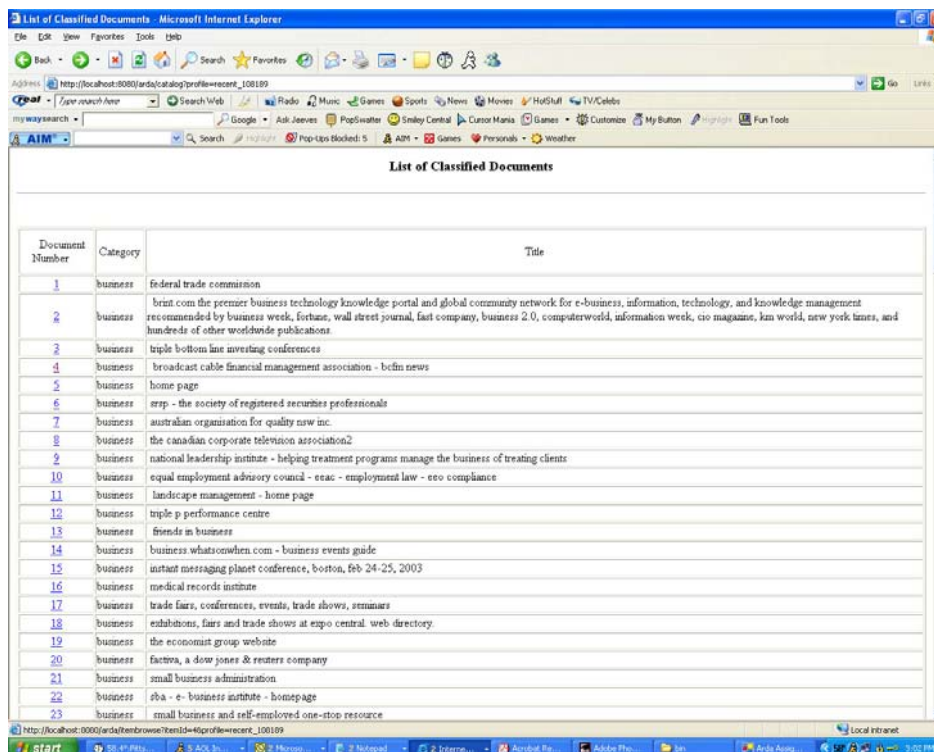


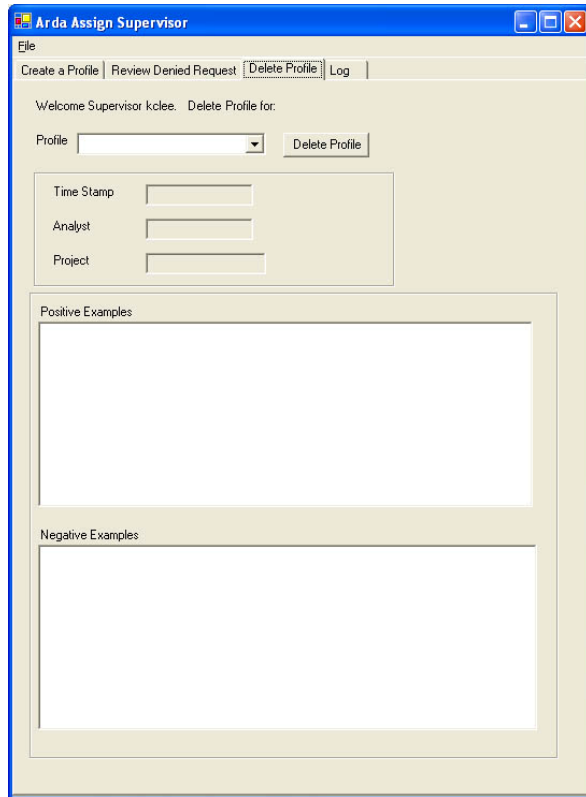
Figure 15: Display of classified documents on the analyst interface

Approval to access documents will be granted for documents for which the specific analyst has clearance. Rejection notices will be displayed in cases of access denial.

## b-2. Supervisor Interface Feature 2 – Delete a Profile

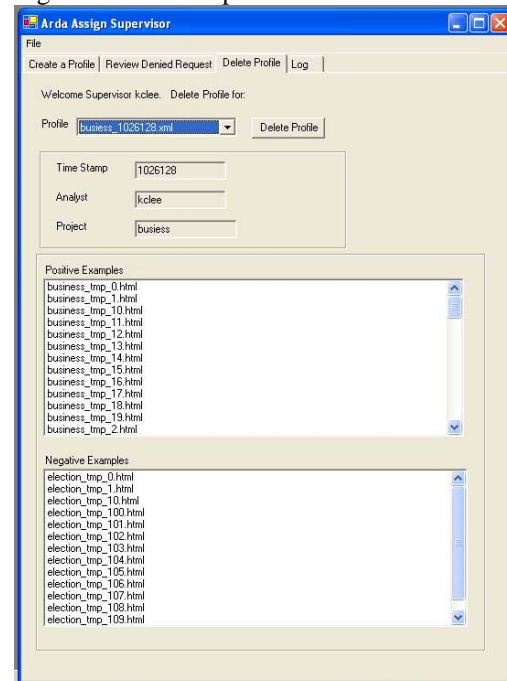
1. Click on “Delete Profile” tab as shown in Figure 16.

Figure 16: Delete Profile tab on the supervisor’s interface



2. Select a profile from the drop-down menu list to view the profile to be deleted in Figure 17:

Figure 17: Select a profile to delete



3. Click on “Delete Profile” to remove the profile or the task associated with an analyst.

4. Click on “Yes” in the “Are You Sure” Dialog Box in Figure 18 to delete profile:

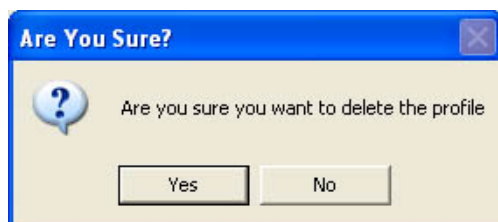
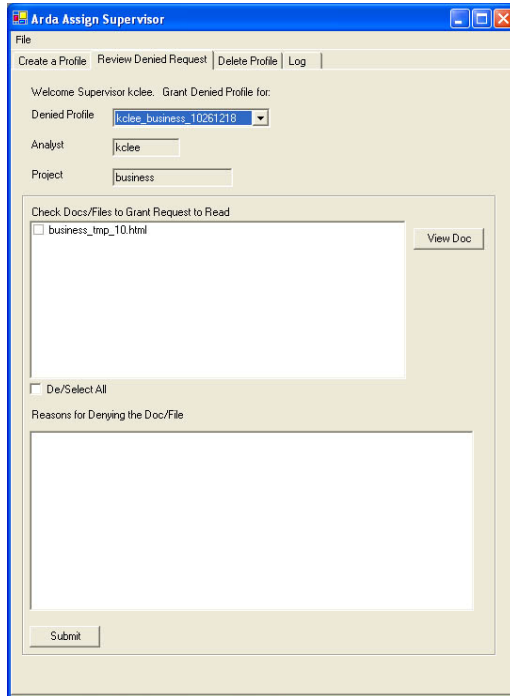


Figure 18: Click Yes to delete the profile

### b-3. Supervisor Interface Feature 3 – Grant Request to Retrain Classifier

1. Suppose the analyst has filled out a request to view a document. The request can be viewed by going to the supervisor’s “Review Denied Request” tab page in Figure 19:

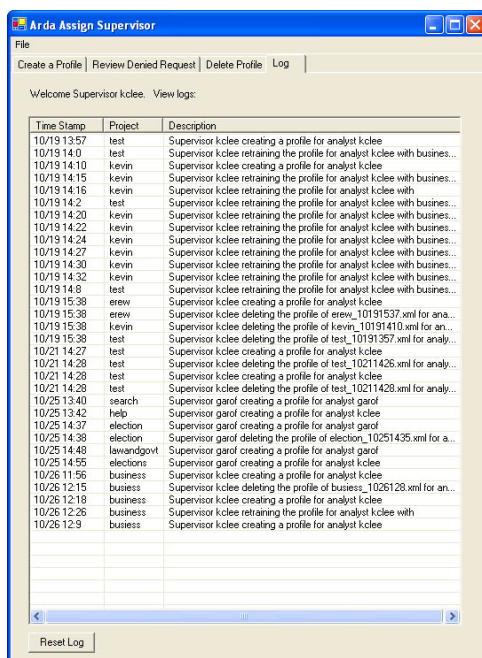


2. Check the documents(s) to which the supervisor would like to grant access request.

3. Click on “Submit.” The classifier will be retrained with the additional set of documents. When the analyst logs in next time, he/she should now be able to view the document(s).

Figure 19: Review Denied Request tab on the supervisor’s interface

### b-4. Supervisor Interface Feature 4 – Log



1. Click on “Log” tab as shown in Figure 20 to view a log of all events that are active for the analyst(s) and supervisor:

2. Reset the log by clicking the button of “Reset Log”.

Figure 20: Log tab on the supervisor’s interface