

Guidelines for installing and executing

The Election service consists of a server named ElectionCenter running in the AEOLUS testbed. Election clients communicate with the server in order to perform the basic functionalities. There are two types of clients, the ElectionClient that provides a graphical interface to allow the user (election handler or voter) to communicate with the server and the ElectionApi that provides an API to cover the basic functionalities.

ElectionClient consists of two java files, ElectionClient.java and ElectionGui.java. ElectionClient class is responsible for creating the connection between client and server and sending/receiving messages to and from the server.

ElectionApi consists of five java files, ClientApi.java, ErrorOnReceivedMessageException.java, Handler.java, Voter.java and testApi.java. Briefly the classes do the following.

ClientApi: responsible for creating the connection between client and server and sending/receiving messages to and from the server.

ErrorOnReceivedMessageException: this class is called when a ErrorOnReceivedMessageException arises.

Handler: provides the basic methods for the functionalities of an election handler.

Voter: provides the basic methods for the functionalities of a voter.

testApi: a test program that uses the API and demonstrates some of its functionalities. Should be used as a guideline for programmers to write their own code using the API.

How to install and run the Aeolus Election Center

The Aeolus Election Center comprises of a server and a client. Java Virtual Machine 1.6 is required in order to run the client using the graphical user interface, while access to the AEOLUS testbed is necessary in order to run the server. The compressed file containing the source is organized in four folders, Elections, lib, ElectionClient and ElectionApi.

Elections

The server runs on the AEOLUS testbed. After compiling and creating the file Elections.jar, it should be uploaded to the testbed. The files Compile.bat and Mkjar.bat (in the directory Elections) are used for compilation and for creating the jar file. Note that the directory paths in both files should be properly adjusted according to the user's settings.

ElectionClient

The client runs as a standalone application. By running the compile.bat file, the source code is compiled; again, the correct path to the javac compiler should be edited in the .bat file. The runElectionClient.bat file is responsible for running the GUI client. Once the GUI appears, the user connects to the ElectionCenter (server) and executes the protocol.

ElectionApi

In this folder we provide an API so that one can create his own java application that manages the ElectionCenter. By running the compile.bat file, the source code is compiled; again, the correct path to the javac compiler should be edited in the .bat file. The runtestApi.bat file is a little demonstration application that uses the API and should be followed as a guide for the programmer for making his own applications. For more information there are 2 documents in the sub-folder doc in the ElectionApi folder.

Lib

This folder contains the necessary files required by the client and contains JXTA files and jars related to the graphical user interface. Elections.jar, made after compiling the ElectionCenter (run compile.bat and then mkjar.bat), should be included in the folder lib.