



User Guide

v1.0

October 2006

1 Introduction

This document describes Voter Module of MobileREVS system in the end user optic. The Voter Module is the application that executes in the voter's mobile cellphone.

2 System requisites

The Voter Module application was developed in J2ME (Java 2 Micro Edition) and it must be installed in a Java enabled mobile cellphone. It is recommended that the Java virtual machine has the following characteristics: CLCD 1.0 and MIDP 2.0, or above. The cellphone must also have Internet access through mobile telecommunications network, like GPRS or UMTS.

3 Notes about first usage

The application uses HTTP/HTTPS protocol to communicate through the network. To ensure confidentiality in communications it is recommended that you install the valid certificate for MobileREVS' servers, which Voter Module application communicates with. If you don't install it some protocol data will flow in plain text over the network, but the secrecy of your vote is always guaranteed.

4 Application

This section describes MobileREVS' functionality and use.

4.1 Authentication and system configuration

The first screen after MobileREVS application start is the authentication screen (see Figure 1). In this screen you must insert your voter number and password, selecting "OK" to authenticate yourself.

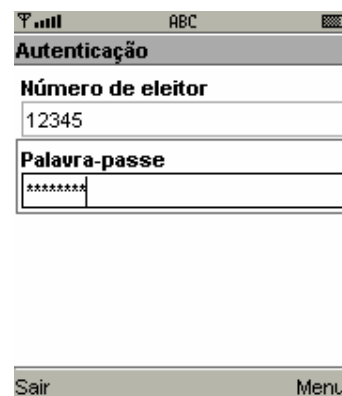


Figure 1 - Authentication screen

It is also possible, from this screen, to edit application configurations by selecting the "Settings" option (see Figure 2). In the settings screen you will be able to configure the following items:

- Election public URL, the one that the application will connect to so that you can vote. This ensures that you can participate in elections located in different MobileREVS systems, with the public addresses provided by each one election's administrators.

- Your votes can be stored persistently in your cellphone memory. This characteristic will enable you to continue an interrupted voting process another time, preventing the lost of your filled ballot (e.g. in case of network failures or servers down). This item has three possible options: selecting “Yes, always” will enable the application to store your vote automatically during every voting process; with the “No, never” option the vote will never be stored in memory; the “Ask” option will ask you if you want to store your vote during each voting process. By default, “Yes, always” is selected.
- The voting report is showed in the final stage of the voting process. Use this option to select the type of report you want to be shown: a simple report, indicating about the success or not of your vote submission; or a detailed report, which also includes specific information about the voting process. This last option requires some previous knowledge about the system’s architecture/protocol. The “Simple report” is the default selection.
- In the “Submission” item configures the vote submission to one of the following options: submit your vote to all available servers (“Submit all”), the default

selection, or submit your vote to one server (“One only”). This last case has the advantage of minimizing the data exchanged in the network, and therefore the derived costs of the communications, since it communicates only with the first available server. By the other hand, the first option can be used if you want to ensure your vote is counted in the final tally, even if some of these servers are compromised.

- Finally, in the last option you can dynamically define the application language. In the first release of the project only English and Portuguese languages are available.

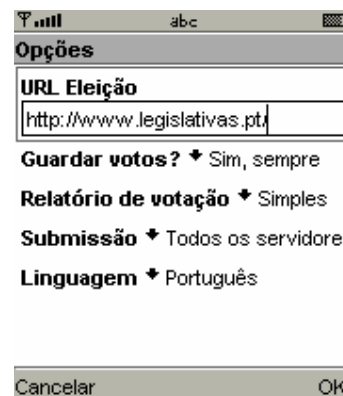


Figure 2 – Settings screen

4.2 Choosing an election

After completing the authentication step the list of available elections is displayed (see Figure 3). Then you will have to choose the election you want to participate. After that the election ballot will be presented for

you to fill it (see Section 4.3). This list omits all elections that verify both the following characteristics: (1) the voter has already completed the voting process for that election with success, on another occasion; and (2) there is a stored vote for

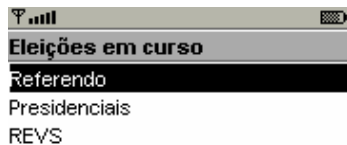


Figure 3 – Current elections screen

that election. Notice that elections whose voting process has been interrupted, and for which there is a stored vote, appear on the list. However, choosing one of these elections will not display the respective ballot, since it has been filled on a previous occasion. Instead, confirmation about continuing the interrupted voting process will be asked, as shown in Figure 4.

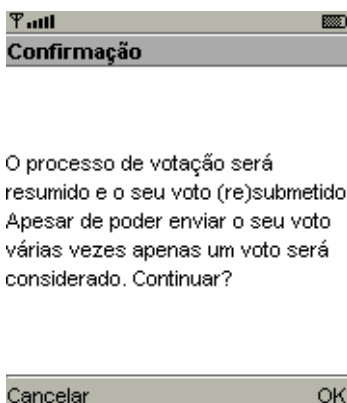


Figure 4 – Voting process resume screen

The “Saved Votes” option displays all the stored votes. From this screen you are able to view specific information about the vote and the election it belongs, and delete stored votes that are no longer needed, freeing up memory (see Figure 5).



Figure 5 – Saved votes screen

4.3 Filling the ballot

By selecting an election in which you want to participate a description about it will be presented. After choosing “OK” you can start to fill the election ballot, beginning with the display of the first question. The election ballot can have more than one question. In these cases each question will be display independently in one screen. You can use “Next” and “Previous” options to navigate between questions. In the last question there will not be a “Next” option but an “OK” option instead. Selecting “OK” will terminate the ballot questions’ filling. Each question’s screen has the following elements (see Figure 6):

- Question’s number
- Question’s description
- Possible question answers

The number of the question allows the identification of the question's order in the ballot. Depending on the type of election, the questions can be grouped logically. So, it is a number composed by two digits separated by a "." (dot). The first digit indicates the number of the group; the second digit indicates the question's number in that group.

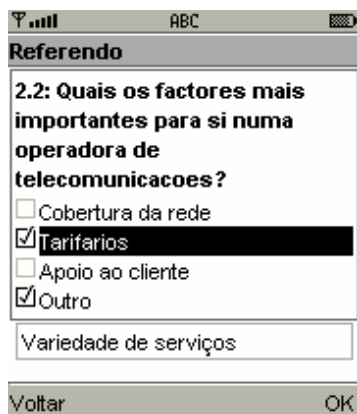


Figure 6 – Question answering screen

The displayed question can have an exclusive or multiple answer. The exclusive type just permits one selected answer. By the other hand, the multiple answer question type allows the selection of any of the displayed answers. The question can also allow an open answer. In this case, you will have to select the last option ("Other") and write your answer on the text box below the option.

4.4 Answers confirmation

After answering all the questions of the ballot it will be displayed a screen asking your confirmation (see Figure 7). You are

able to return to the questions by selecting the "Back" option. Select the "OK" option to confirm your answers and submit your vote.

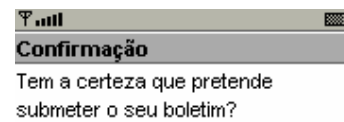


Figure 7 – Confirmation screen

From this screen you have also the possibility of previewing your answers to the ballot questions, through the "Preview" option. In the preview screen (see Figure 8) are listed the selected answers for each ballot question. If you wish you can change directly any of the answers by selecting the "Edit" option in the selected answer. Use "OK" to confirm your changes and return to the confirmation screen.

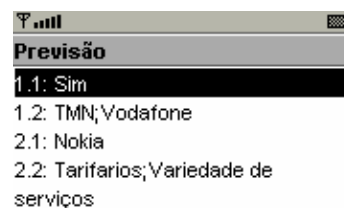


Figure 8 – Preview screen

4.5 Voting report

The submission of the vote ends with the voting report display. This report can be a simple voting report (see Figure 9) or a detailed voting report (see Figure 10), depending on how this option was configured in the application settings, see Section 4.1.

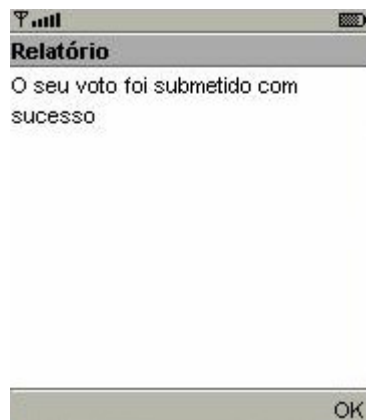


Figure 9 – Simple report screen

The simple report will inform you about the success of the voting process. By the other hand, the detailed report will describe architecture specific details of the voting process, so it's correct interpretation requires previous knowledge about the MobileREVS system architecture.

If any error occurs during the voting process you will have the possibility of resubmitting your vote, selecting the "Vote Resubmit" option. Select "OK" to return to the current elections screen.

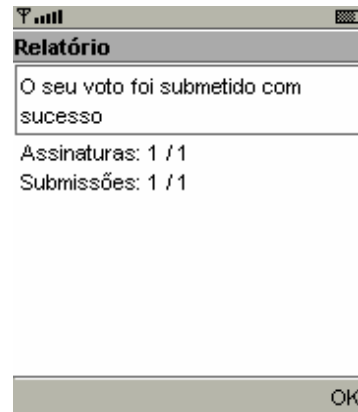


Figure 10 – Detailed report screen