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VtUJI

Telematic Voting System

Usage guide for the
Polling Post Officer

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Presentation

You have been drafted to be a polling post officer for this set of elections held on VtUJI.

Your duties will be to review the voter rolls and ballots, approve the opening of the polls, process and respond to the complaints and reports of the voters, allow the tallying, review the outcome and the records for anomalies and sign the election records.

Most of you will be regular officers, but one of you will be a chairman. Some of the functions described above are reserved exclusively to him. In case of chairman absence, there are rules to promote one of you to take over his functions.

Please, read carefully this guide. If you need further information, please refer to the executive and administrative documents.

VtUJI

VtUJI is a powerful and complete tool, developed at the 'Universitat Jaume I', to hold polls, elections and any other kind of referendum through the Internet, where the electorate can participate from any location with its own browser, with no need for additional software nor hardware and providing the highest guarantees of security, integrity and anonymity both to the voter and to the organizer.

This is a tool generally aimed to mid-size private and public corporations, but due to its efficiency, simplicity and personalization capability can be deployed on any situation and on any scale, from small localized communities to great and distributed companies.

If you need more information about the guarantees and security measures used to grant them, possibly on request of the voters, refer to the executive and administrative documents and the different user guides.

Voting application concepts about elections

The election management system is the web tool that enables us to create, manage and participate in elections. It has been designed with the aim to fit the most common electoral systems, and is prepared to create a wide variety of ballots. We'll explain the main concepts needed to understand how it works and to input data.

Main concepts

The core concept of the system is that of **polling**. It represents a set of *options* among which the voter has to choose. The minimum and maximum number of *options* that can be selected for it to be a valid participation is set per polling.

Also, for a realistic recreation of the physical world elections, each polling can be configured to accept blank ballots and/or explicit null ballots (allowing for the voter to write down text as if he was voiding it by writing his opinion with a ball pen)

Each **option** represents an eligible item and can be formed by an image (optional) and from one word to several lines of text. The order in which the options will be showed is defined by the user, sorting them numerically. Each option can optionally contain one or more *candidates* and zero or more *alternate candidates*. If there's at least one candidate, the option text is also optional. Many *candidates* on a same option represent a closed list. To implement an open list we need to use *separators*.

Each **candidate** or **alternate candidate** represents one person, who must also be a user of the voting system.

Each option admits a **separator** that will be placed above it on the defined order. A separator can contain multiple lines of text and/or an image. An open list would use an option per candidate (one option with no text and only one candidate), sorted first by the order parties are shown in the ballot and last by list order inside the party list. It would use the separator of the first candidate of each list to put the party/list name.

An **election** is composed of a voter roll, and a set of one or more *pollings*, which reunited form a ballot. It is the minimum participation unit in the voting system, so a voter will have to take part in all the pollings defined in the ballot. If two different pollings, even though related, allow independent abstention, you'll have to put them in separate elections.

A **polling station** is loosely related with the real world one, as it is not a physical place where voters can cast ballots. It's just a concept to group various elections and there is only one per election. A polling station is composed by a board of officers, the start and the end of the period to cast votes and a set of one or more *elections*.

Different elections held on different periods must necessarily be part of different polling posts, but if they share the period, if they are minimally related it is wise to put them together, to reduce complexity.

The same way, VtUJI allows to hold different but related elections (called **exclusive elections**) in which a voter is on multiple rolls but can only participate in one of them, automatically voiding his participation rights on the rest. This has to be done using a single polling post for all those elections. The voter will first decide which one wants to participate in, by examining the ballots, and automatically will be drawn from the other rolls.

Application user guide: polling post officer

Now, we will describe all the interface elements of the application that you will use.

Authentication score

Each user is assigned a role, classified by the sensibility of its functions.

The execution of each role's functions requires reaching a certain

authentication score. In your case you will usually need score 1, but in some cases that we will explain later, you will need score 2 or higher.

The score can be raised by one point by successfully authenticating using any of the available methods, or up to three points if using local authentication.

Local authentication will award you one point for providing the correct user name and password, and will additionally give one point for logging in from the usual IP address and another one for the physical possession of a certain Clauer (by connecting the Clauer to the computer during the authentication, you will need Clauer software to achieve this¹).

This additional information can be preset by the system administrator on the population edition or it will be set after the first successful login (the IP address and the identifier of the Clauer connected to the computer you are logging from will be recorded). You will need to ask the system administrator if you need to reset it.

Header

Every page of the application shares a common header area, which contains the following elements (some of them will appear once authenticated):

Always

- **Title:** A title, 'Telematic voting' and a logo (optional) are located in the center of the header area.
- **Language Selector:** On the uppermost right corner, a set of flags let you change the language of the interface. You will be directed to the main page (or authentication selection page if not logged in) after each switch.
- **About:** Besides the language selector, this link will pop up a window showing information about the funders and developers of this project.
- **Help page:** Once configured, it will show help information about the use of VtUJl.

When authenticated

- **Start:** On the upper left corner of the header area, it will get you back to the main page.
- **Your full name:** Next to the 'Start' button. The full name of the user whose credentials you used to log in. You can always click on it to be directed to the authentication selection page, where you can authenticate with other method if you are required to. If you have a special role and you didn't reach your maximum access level, a red message will invite you to keep raising your score.
- **Exit:** Next to the 'Start' button. Will immediately void your session and your score and direct you to the authentication selection page.

¹ See <http://clauer.nisu.org/> for more details.

Authentication selection page

Every time you access the system and you are not authenticated, you will be shown the authentication selection page, which has the following layout:

- **Authentication method list:** Below the title area, centered and in a single column, all the available authentication methods will appear. Either as logos or as text links. Click on any of them to use it to authenticate. The first one will be the default method.
- **Report a problem:** At the bottom of the authentication method list, this link will send you to a form to contact a polling station officer to ask him for help or to report irregularities. It will sequentially ask you for the following data (in order of appearance, hit proceed after each selection):
 - **User ID:** Your user ID. Not your user name or full name, to identify yourself.
 - **Election:** The election you need help or want to complain about.
 - **Officer:** (or All) The name of the officer to whom you want to address your complaint/request.
 - **Message:** The message you want to send.
 - **Image numbers:** An automated Turing test, to avoid sending massive amounts of messages in order to collapse the server or the accounts of the officers. Write the numbers on the image.

Sometimes you will be **redirected to some other external page** (check the address bar on your browser) instead of this one. It will be an external authentication method and this is because the redirection to the default authentication method is activated. To **force showing the authentication selection page**, access again and you won't be redirected.

When you are set a temporary password, if you try to log in with any other method, you will be directed to the local authentication page to set your definitive password. You won't be able to continue until you do so.

Local authentication page

It is the basic and the only independent and autonomous authentication method. These are the fields shown.

- **User ID or user name:** Your user ID or your user name.
- **Password:** The password you have been given (either the temporary or the definitive one, depending on the state of your credential distribution process).
- **Image numbers:** An automated Turing test to, in case of massive credential theft, avoid massive impersonation and ballot injection. Write the numbers on the image.
- **Enter:** Submits the authentication request.
- **Generate new password:** If you check this box, once you are successfully authenticated, a new definitive password will be generated. It will override your current one and you will be directed to the '**definitive password settlement**', the same as after logging in with the temporary password.

- **Back:** Sends you back to the authentication selection page.

If you fail, you will be notified why in red below the submit button.

If a Clauer is detected, you will be prompted if you want to let the program read its ID. If you accept, you can add one more point to your score.

Definitive password settlement

- You will be shown an screen with your new password (case sensitive) clearly identified. Write it down before hitting **Continue**, or else you won't be able to log in again. This is the same screen your applicants will see.

Voting application main page

The main page is divided in sections, delimited by horizontal colored areas. Each area clusters all the functions of a role, ordered from the highest to the lowermost role. The number of shown areas depends on the role associated with your user and the score you have currently earned. These are the ones you will see:

- Polling post officer or chairman operations (default: pale green)

The voter role has three different assigned areas: One regarding ongoing elections that are active and he hasn't voted yet, another regarding ongoing elections where he has voted or still are not active, and another regarding past elections.

- Pending election area (default: light purple)
- Current elections area (default: pale yellow)
- Previous elections area (default: pale yellow)

Voting application main page: Polling post officer area

In this area you will find all the polling posts where you have served as officer.

On top, you will find a table with all those that are still on duty (they are in any state from 'in edition' to 'closed'). Below, on a selector, you will find the *archive*, all the polling posts where your service has ended.

Current polling posts table

In this table, each line represents a polling post where you have been drafted as an officer and you still have work to do.

For each polling post, you are shown the following information:

- **Name of the polling post:** this is the descriptive name of the polling post. It is an internal name, since voters see the elections alone, not grouped in polling posts. It is not unique.

- **Polls opening date:** the date when the elections are programmed to begin.
- **Polls closing date:** the date when the elections are programmed to end.
- **Status:** The current status of the polling post (See next section for a list of all the status).
- **Manage:** Hit this button to access the polling post management screen for the corresponding post.

Posts are shown sorted by status, and then by start date.

Polling post states

Through the process from its creation until it is archived, a polling post can go through this set of states.

- **Editing:** While data is still being inserted and is prone to change. the polling post can't be operated by anyone but the election administrator(s).
- **Programmed:** once the election administrator finishes his job and all the election data is frozen, it will switch to programmed state. If your revision of the data throws any mistakes, to correct them, it will fall back to the 'editing' state.
- **Active:** once the election data is revised by the whole board of officers, you will agree and the election will be opened, some time before the time voters can begin to cast their ballots. There is no way back to the programmed state.
- **Open ballot box:** once the polls are closed, the officer board chairman will open the ballot box and ballots will be tallied.
- **Closed:** after the tallying, all of you must review the results, to check for irregularities. Once you all agree with the correctness of the tallying, the records will be generated and the polling post will be closed.
- **Erroneous:** something went wrong during the tallying process and it has been dismissed.

Archive

On the archive, each line represents a closed polling post, and it shows the following information:

- **Name of the polling post:** this is the descriptive name of the polling post. It is an internal name, since voters see the elections alone, not grouped in polling posts. It is not unique.
- **Polling post ID:** the internal unique identifier for each polling post. To distinguish it, especially when reporting problems to the system administrator.
- **Initial date:** the date when the elections are programmed to begin.

The elements on the list are sorted by start date and then by polling post ID. All the elements will be in *closed* state.

Select the polling post you want to examine and hit *manage* to be directed to the polling post management screen for this one.

A **polling post will be transferred to the archive** once the records are signed or after a week without doing so (in case you are not going to sign them). You still can access and sign them any time.

Polling post management screen

The content shown in this screen depends highly on the current state of the polling post.

On edition

'*Office in edition, provisional data, still cannot be operated*': this message you'll get at the bottom of the screen when the election is on this state. Shown information is sparse and likely to change.

- **Name of the polling post:** the same as explained earlier.
- **Current time:** The moment you last refreshed this screen.
- **Polls opening date:** the date when the elections are programmed to begin.
- **Polls closing date:** the date when the elections are programmed to end.

For each election held on this polling post:

- **Name of the election:** the name that will be seen by the voter.
- **List of polling names:** one or more, the description of the different questions asked on the election. '*Description not provided*' will be shown if the polling has no specific description.
- **Security level:** The default usage of the *eSurvey controlled latency network* (LCN) the voters will do when voting. See the annexes of the *System Administrator Guide* for further information on the topic. Possible values are:
 - **Straight to ballot box:** The ballots go straight to the ballot box; no delay and no usage of external servers. Anonymity depends only on the voter's confidence on the server. Ballot box can be opened right after the closing time.
 - **Via LCN 1 server:** The ballots travel though one LCN node before arriving to the VtUJI server. It provides a moderate server independent anonymity. Ballot box opening will be delayed some time to let all the votes get in after the polls are closed.
 - **Via LCN 3 servers:** The ballots travel though three LCN node before arriving to the VtUJI server. It provides a great server independent anonymity. Ballot box opening will be delayed some time to let all the votes get in after the polls are closed.

Programmed

Once the election manager has ended editing the election data, he will set it to programmed. The common information shown is the following:

- **Name of the polling post:** As stated above.
- **Current time:** As stated above.
- **Polls opening date:** As stated above.
- **Polls closing date:** As stated above.

For each election held on this polling post:

- **Name of the election:** As stated above.
- **Population:** Will load the whole elector roll for this election on a frame on the right. This way you are able to review them for mistakes.
- **Ballot:** Will render the same ballot the voters will see for this election on a frame on the right. This way you are able to review it for mistakes.
- **List of polling names:** As stated above.
- **Security level:** As stated above.
- **List of officers:** List of all the officers on the board for this polling post. For each one, the following information and controls, are shown.
 - **Full name:** The name and surname of the officer. If he has an associated photograph, hovering the mouse over it will load the photo on the right. Click on his name to show the contact form to send him a message:
 - **Election:** The election you want to contact him about.
 - **Message:** The message you want to send.
 - **Proceed:** Hit this button to send the message.
 - **Office:** The office he is holding. We will provide a comprehensive list of offices, but the only real difference is between the chairman and the rest of officers. Alternates also have some distinctions.
 - **Reviewed:** For you, a **check box** will appear. Check it to say that you reviewed the post. Will tell if each of the officers has marked the polling post as reviewed or not. If you are the **chairman**, you will see a **text area** for each officer who still has not marked it as reviewed, where in case he doesn't do it before opening the polls, you are required to specify the cause of his negligence. Note that any officer not marking this, will be considered absent and won't be required from now on. Note that **alternate officers** won't be required to check this and the text area won't appear, since they are only required to do so if summoned in the event of an absent officer.
 - **Comment or incidence:** Here you will see the official comment or incidence report made by each officer during his review (except yours).
- **Update:** Hit it to submit any changes to the controls on this screen (check boxes, messages, etc.).
- **Assume:** This button will let an officer take over the position of chairman. It will appear only after the polls opening time has passed and is subject to a set of restrictions that will be explained later.

- **Message/Record area:** This text area lets you write your official report about the revision, commenting all the incidences and mistakes you may detect. You can change the content at any moment, and is visible for all the board. The chairman will read it and use them in any way he needs. For the **chairman**, his area will be the record writing area, where once everything is done, he will write his observations about the polls opening procedure (he may use the comments of the rest of officers), which will be seen by the rest of the board at the comment field of the chairman. These observations will be appended to the polls opening record once the activate button is hit.
- **Activate the office:** Hit it to finish the revision process and open the polls. You will be directed to the records review screen.

Posts in this state are also divided in three sub-states, depending on the polls opening and closing date. Each of them will load a different set of controls:

- **More than half an hour before opening date:** You will be shown a message telling that you have to wait until half an hour before the polls opening time. You can review the ballot and the elector roll and send messages to the chairman, but the chairman won't have the records writing area nor the activate button.
- **After closing date:** You will be shown a message telling that the polling post has expired. The revision and communication with the other members still can be achieved, but it is useless. You are shown the text area to message the chairman, but the chairman is not shown the records writing area nor the activate button.
- **Between half an hour before opening date and the closing date:** All the controls are shown, except for the assume button, that has a special behaviour.

If the polls opening time has passed and you still haven't, you still can do it. If some officer hasn't marked the revision yet, a message will be shown to point out that you should open the polls if you are really sure that he is absent.

Active

When the polling post is activated, besides all the above described elements (except those specific for the post review), you will be shown the following:

- **Record:** A link to the polls opening record. If you have an associated e-mail address, it will be sent there. Else, it will be loaded on the right.
- **Registered voters:** It will show a button with the number of electors on the rolls. If you click it, the full elector name list will be loaded at the bottom, showing additional information coded as follows:
 - *The name is in **red**:* The elector hasn't voted yet.
 - *The name is in **green**:* The elector has already voted.
 - *The name is preceded by an **asterisk**:* This elector was added after the

polling station was activated. They are highlighted for an easier review.

- **Cast their vote:** the number of electors who have participated for the moment.
- **In the ballot box:** the number of ballots received for the moment. If using the eSurvey LCN, this number may be zero until the polls closing time. It must never be above the number of cast votes.
- **Officer list:** The officer list has an additional field:
 - **Records signed:** Shows yes or no depending on if this officer has signed the pending to sign records.
- **Open the ballot box/retry: (chairman)** If the retry button is shown, it will be accompanied by the scheduled ballot box opening date, meaning that you can't do it until that moment. When it appears and you click it, the tallying process will start (it may take long) and you will be shown the tallying results on a screen with a continue button, which will get you back to the management screen. The open the ballot button will appear under these circumstances:
 - *When the ballot box opening time arrives and all the ballots are in the box (if not using the eSurvey LCN, it will match the polls closing date).*
 - *One hour after the ballot box opening time, if all the ballots are NOT in the box. In this case, do it under your responsibility.*
 - *When all the voters have voted and their ballots are in the box. There's no need to wait until the polls closing time.*
- **Sign with cryptoApplet / sign with the browser:** The different available methods to sign the records. Supported browsers: Mozilla Firefox and Internet Explorer. You need Java to sign with the CryptoApplet.
- **Text to append to the signature:** Any comment or complaint you may have and want it to be on the record. Remember that it will be signed and you can't unsay it.

Open ballot box

Once the ballot box is open and the tallying done, you will be shown all the controls of the *active* stage and those regarding the revision and acceptance of the results and rolls (exactly the same elements shown when doing the pre-opening review). Additionally, you will be shown the following:

- **Close the office: (chairman)** Like the button to activate the post, it will end the revision process and generate the results record.
- **Tallying results:** Shows the results of the tallying.
- **Ballot shown to the voter:** Shows the ballot that was rendered to the voters, as it will appear on the results record.

Closed

Once the polling post is closed, these additional elements will appear:

- **See the record:** Click on this link to get the record loaded on the right. It is a public link. Copy it to share it with anybody.

- **Receive the record:** Click it to receive the results records on your e-mail box..
- **Record sending:** Click it to go to the records sending screen.
- **Sign with cryptoApplet / sign with the browser:** The different available methods to sign the records. Supported browsers: Mozilla Firefox and Internet Explorer. You need Java to sign with the CryptoApplet.
- **Text to append to the signature:** Any comment or complaint you may have and want it to be on the record. Remember that it will be signed and you can't unsay it.

Records review screen

In this screen, you will be shown a preview of the record, so you can check it properly before settling on it (you have a **back** button to go back to the previous screen and a **proceed** button to accept the record). It will be used both for the polls opening record and for the results record.

The information shown on the polls opening record will be:

- the names, ID numbers and offices for the Polling post officers who were active on this phase.
- The name of the election.
- The date and time the polls were officially opened.
- All the incidences on the process:
 - If the polls opening date was delayed, the scheduled time will be reflected.
 - All the officers who neglected on their duty and are automatically discharged.
 - All the substitutions on the board of officers (including when some other officers takes over the role of chairman)
 - The comments or incidences report written by the chairman and agreed by all the other officers.

The information shown on the polls closing record will be:

- The date and time the polls were the polls were officially opened and closed, and the date and time the records were finally agreed.
- the names, ID numbers and offices for the Polling post officers who were active on this phase (also if they were active on the opening and not on the closure).
- All the incidences on the process:
 - If the polls closing date was delayed, the scheduled time will be reflected.
 - The comments or incidences report written by the chairman and agreed

by all the other officers.

- The automatic incidences (void ballots, mismatch between the number of ballots and voters, etc.).

Records sending screen

In this screen, you are enabled to send all the results records to anyone you need to, it doesn't need to be a user on the system.

The interface elements shown are:

- **Default domain:** In case you have many recipients with a common domain, write it here. This way, when specifying the addresses, you can omit writing from the at symbol ('@') to the end of the address.
- **Address list :** A text area where you must write all the recipients of the records. As stated above, you can write a full e-mail address or just the leftmost part (the rightmost part will be taken from the upper field).
- **Records to send:** A list of check boxes, containing all the records generated for this polling post (the ones described in section 'Election records generation and closure' in page 19, for each election held on the polling post). Check the ones you want to send to the recipients.
- **Proceed:** When you hit proceed, the address list area will be cleared and a message for each address will appear on top if the records were properly sent to that one.
- **Return:** Will get you back to the management screen.

Records signature screen

You can choose to sign using Cryptoapplet or your browser. The supported browsers are Mozilla Firefox and Internet Explorer.

Cryptoapplet is a project in Java aimed at providing a good client-side digital signature tool. See <http://teclab.uji.es/cryptoapplet> for more information about its usage.

This screen will be **used sequentially for both the polls opening record signature and the results records signature**. It means that if you don't sign the opening record until the end of the election, when you access this screen, you will be prompted to sign the opening record. At the end you will be redirected to the management screen and you will have to access again to sign the results records.

First of all, you will be informed about the date and time of the signature, also if you are the first signer or not (see page 20 for a detailed explanation). You can go back or proceed with the signature. If higher than one, at the bottom you will be informed of the number of records pending to be signed, and it will decrease as you sign them.

If some error happens (signature timeout, different signatures collision, see page 20 for a detailed explanation of this procedure), you will be shown the message and a retry button.

Once all are signed, you will be shown a confirmation screen, showing the certificate data you are using to sign. If not the one you intended, go back. Else

hit OK.

If everything went alright, you will be notified and a back button will direct you to the management screen.

Procedures

Now we'll explain all the situations you will have to face while on duty. They are listed in the order you will have to take care of.

Obtain your credentials

As you are drafted users on each election and not permanent users, to get your authentication credentials you must do the same as any voter. This is the procedure you must implement:

To distribute credentials, voter registration desks will have been deployed by your organization. Direct yourself to one of them. **Don't forget to carry your identification card (with photograph) with you, to acknowledge your identity.**

This procedure must be done if local authentication is available to be used. You have to do it just **ONCE**, not before each election. Don't wait until the last minute.

You will **repeat this process** only if you **lose your credentials or suspect** they have been **revealed**.

Remember that you can't delegate this procedure. You and only you may obtain your credentials personally on the desk.

Hand over your identification card to the operator. He will check its authenticity and compare your photo. He may ask you to confirm some data on your card. Then, he will check that you are allowed to belong to the voting system and will search/input your data on the voting system.

The operator will give you back your ID card.

You will be informed about the user name you must use for the voting system. It can be either your ID number, your corporate user name or a new one.

The operator will hand you a box with several cards. Pick one of your choice and give it to the operator. This will be your voter card.

You may be given some data cession contract to be signed. Do it now.

The operator will register on the voting system the temporary password printed on the card and will write the user name on it.

The operator gives you the voter card.

From this moment, this password has a **period of validity of 48 hours**. This means that if you don't finish this procedure before this deadline, you will have to start over.

Go back home or to some computer you trust. **Don't use any shared or public computer**, since you could be under surveillance and your definitive credentials would be revealed.

Access the voting server, with the user name and the temporary password (We will not deepen on this right now. If you need help on the topic, refer to section " in page).

Once you are logged in you will be shown a page with some text in black, clearly identified. This page informs you that the text in black is your definitive password, and you **must write it down on the card** on the voter card (Caps sensitive). The temporary password on the card is no longer valid.

If you hit continue or close the browser before writing the new password, you will have to start over, since you will have lost your credentials.

Why should I write the password on the card?

Self-generated secure passwords are hard to remember. Also, this password will be used sparsely, since you don't participate on elections daily. Trying to remember it would be wasted effort and registration posts would be collapsed by the avalanche of voters realizing that they have forgotten the password in the last minute.

If you store it safely until the election day, it would be really hard for anyone interested to steal your password. Also, you can change it as many times as wanted from the application, without having to go the registration post, as long as you have this valid password.

Gain your authentication score

Once you have the credentials, the next step is to use them to authenticate on the application.

In this application, you add one to the authentication score every time you successfully authenticate with any of the available methods. Additionally, if using the local authentication you can earn up to three points.

Local authentication will award you one point for providing the correct user name and password, and will additionally give one point for logging in from the usual IP address and another one for the physical possession of a certain Clauer (by connecting the Clauer to the computer during the authentication, you will need Clauer software to achieve this²).

These additional information will be set after the first successful login (the IP address and the identifier of the Clauer connected to the computer you are logging from will be recorded).

By default, you will be required 1 score point to operate as a polling post officer, so a simple local authentication would be enough. When a polling post is created, the administrator can set different authentication score requirements for each officer in the board (for example, requiring the chairman to have a score of 2).

Furthermore, under certain delicate situations (like a ballot box with missing ballots), the chairman will be required an score of 2 to carry his operations.

² See <http://clauer.nisu.org/> for more details.

Rolls and ballots revision

Your first duty after being drafted will be to check the correctness of both the ballots and the voter rolls. Of course, on big elections you will need to be given enough time to check the rolls, as they may be huge.

Any irregularity or mistake you may find, you must report to the chairman. He will contact the election authority or the election manager to have them solved. Check that they have been properly solved.

Once you are satisfied, you are required to mark the post as reviewed, and the chairman will draft the polls opening record. You will be able to read it besides the chairman name on the management screen, and you can send him private comments or put them on your comment area so everyone can read them. All of you must agree with the content of the record before activating the post. The record should contain any relevant observation or incidence that may have happened during this procedure.

Polls opening (*Chairman*)

Half an hour before the scheduled polls opening time, the chairman will be allowed to activate the post. This means anyone who still hasn't reviewed the rolls and ballots will be reported as absent and will be excluded from the board and discharged of his duties.

The chairman will write the report on each absent member and will activate the post.

In the event that the chairman is absent, the alternate chairman can take over his position at any moment. Since he is an alternate, he is not required to do anything until he is required to by the election authority or other officers (this way we also prevent collisions between the chairman and the alternate chairman).

Any officer can take over the chairman office if both the chairman and the alternate chairman are absent one hour after the scheduled polls opening time. You must decide who will be doing it using your electoral law or contacting the election authority.

To avoid collisions, since moment the chairman logs into the application, the alternate chairman must wait a 10 minute exclusion period to take over his functions. The same happens between the alternate chairman and the other officers after the one hour wait.

Voter complaints, reports and questions reception and processing

During the celebration of the elections, your duty is to check periodically your e-mail box, since it is there where you will receive any complaint, question or report that any voter may address to you or all the board.

You will have to attend those messages and answer them, in case you can, or

redirect them to whom it may concern (the election authority, the system administrator, etc.).

There may be reports of vote selling, coercion or selective disenfranchisement, which must be immediately reported to the election authority so they can prosecute the felons.

Some may be technical or usage questions, maybe referring to the security of the system. Direct them to the system administrator.

If some voter is reporting that he was accidentally left out of the rolls, tell him to complain to the election authority, since it is their decision to authorize a last minute voter insertion.

Tallying

Once the polls are closed, we have to wait until the tallying is authorized. This will happen depending on a set of factors, and can be accomplished by different roles on different situations.

Initially, the only **one able to start the tallying is the chairman** (or the officer promoted to chairman in case he was absent). He will usually be able to do it from the polls closing time, if all votes were direct to ballot box or after an estimated wait period if there's any vote left to get in (usually meaning that some voter used the eSurvey Toolbar to override the default LCN usage) that will appear on the screen.

The ballot box open button will appear once this period is over only if all the ballots have arrived. If not, it will automatically **delay the tallying one hour** (or at least until all the ballots arrive).

After this one hour period, you will be able to start the tallying under your own responsibility. Ask the election authority for help on the decision. Also, you will need an score of 2 to do this.

If all the voters on the rolls have participated, the button will appear immediately (even if the polls closing time has not arrived yet), since there's no one left to vote.

If the chairman is absent at the tallying, any other member of the current board will be able to open the ballot box one hour after the polls closing time.

Additionally, in the event that all the officers neglected their duties, the election administrator will be able to do the tallying 24 hours after the polls closing time.

Election outcome and records review

Once the tallying is complete, your duty is to review everything again in search for anomalies and mistakes.

- Start with the election outcome. Examine all the automatic incidences for anomalies and verify that the outcome is similar as expected.
- Look at the ballots again. Verify that the options/candidates match the results.
- Search the voter rolls. Look if there are any added voters (they will be marked with an asterisk). Double check with the election authority that all of

them are allowed voters. Their number shouldn't be elevated, so be aware if it is.

- Also, electors who have voted will be marked in green and those who haven't will be marked in red. Feel free to check with voters of your confidence/party if this information is correct, to detect possible impersonations.
- In case of doubt, check with the election authority.

Remember that you can communicate with any other officer using the contact form or post a message to all using the comment field on the management screen.

Election records generation and closure (*Chairman*)

Once you are all settled with the revision, you are required to mark the *agree* box. If you neglect on this, the chairman is required to report the causes on the corresponding field.

You can suggest comments or incidences to be included on the record. Use your comment field on the management screen.

The chairman will write and show the final draft of the record, registering any incidence of relevance. Once all is agreed, he will close the post. The full record will be shown for preview. He still can go back and rewrite his part of the record.

Once he accepts, the definitive records are generated and he will be shown the record sending screen. For each election held in this polling post, the generated records are:

- ***Polls opening record***: The one generated when the elections were agreed to be started. This is done just once per station.
- ***Tallying results record***: The one with the results of the election.
- ***Participation record***: The one containing all the electors who have cast a ballot.
- ***Verification receipts record*** (Conditional): If configured to allow participation verification, a record will be generated, containing all the verification codes.

Records sending

You can do it just after generating the records or save it for the future (it can be accessed from the management screen any time).

You must be provided with a list of all the people interested in receiving the records (maybe from the election authority or from your represented voters/party, etc.).

To send the records, write the addresses on the box and mark which records do you want to send them (not everybody needs or has authorization to receive all

the records). You can execute the shipment as many times as needed. Try to group the shippings by the set of records they must receive.

Remember that if you send the records right after generating them, you are sending unsigned e-mails, that are vulnerable to manipulation on e-mail relays or mailboxes. **Their validity is only informative unless they are digitally signed.** To check the records safely, log into the voting application and check the past elections section.

Records signature

The last step you must take is to digitally sign the records. This way, you mathematically assert your acceptance and the integrity of the records when sent via e-mail.

It is recommended to do this step, but it is not compulsory (unless your election code requires so).

You will need a personal digital certificate, issued by some commonly trusted authority. Many countries or organizations have inner certification authorities that will fit for this purpose.

You will have to go through the process two times. One to sign the polls opening record and another one to sign all the results records.

- First of all, write on the text box any comment you want to attach to the signature. Remember that once it is signed, it can't be undone.
- You can choose between using a Java applet or the browser built-in signature functions (just Mozilla Firefox and Internet Explorer).
- First, you will be informed on the official signature time that will appear on the record. You will also be informed about if you are the first signer or not and the number of pending records to sign (because some browsers will require authorization to sign each one of them instead of only once).
- Hit sign to start the signing process. You will need to specify the certificate you want to use to sign and then authorize it by providing your key protection password.
- Do it as many times as required until you are shown the common name field of the certificate you have used to sign. If everything is correct, hit OK to submit the signatures. Else, hit back to rollback and start again.

Due to compatibility constraints, records are signed on a layered structure; that is the first signer will wrap the records with his signature, the second signer will wrap the first signer's signature, and so on. This means that signature has an **exclusion mechanism**; so if two of you are doing it at the same time, only the first one to submit will be accepted. The second one will be required to start over. It is recommended that you organize on signing the records.

Also, if you take too long to sign (**more than five minutes since you hit the sign button**), the time stamp of the signature will have expired and you will be required to start over.

The election will be sent to the archive as soon as you sign all the records, or one week after the closing date if you don't. You still can sign the records from the archive at any time.

Unexpected situations

Now we'll expose how to act when facing some non common situations.

Chairman is absent

The chairman can be absent either at the polls opening or at the tallying.

At the opening, the **alternate chairman** can take over his position at **any moment**. Contact him to get him on duty. If for some reason the chairman was logged in, he will have to wait **10 minutes** before he can take his place.

If for some reason the alternate chairman was also absent, **one hour** after the scheduled start time **any other officer** can take over his position. You must arrange or consult who.

At tallying time, none of the excluded members can get back in, so if the chairman is absent, **any other member** will be able to start the tallying **one hour** after the polls closing time.

If at some point, all of the officers were absent, the tallying can be carried by the election administrator 24 hours after the closing time.

Lost ballots

If you find that at the polls opening time some ballots are not on the ballot box yet. Don't try to open it until you have tried everything else.

It can mean two things: Some voters used the eSurvey LCN even though it was not the default option and the voters have not arrived yet, or some voters have had trouble when casting their ballots.

To check if it is the first one, do the following:

- The first step would be to report to the system administrator, so he can see if there are network problems preventing the eSurvey node from connecting to your VtUJI server (maybe a bad SSL certificate or firewall issues).
- If ballots still don't get in, try contacting the eSurvey administrator to report the issue. He will try to contact the nodes administrators to diagnose the issue.
- If needed, start a maintenance session on the VtUJI server to try a more accurate diagnose. You will have to gather the key custody committee.

On the second case, the votes will be lost. Open the ballot box, do the tallying and let the election authority decide if the elections are invalidated by the ballot loss.

Received reports of irregularities

Any report about witnessed or experienced coercion, ballot sending, selective disenfranchisement, ballot manipulation, ballot dropping, or any other incidence against the proper celebration of the elections must be immediately notified to the election authority, so they can act in accordance.

A voter is accidentally disenfranchised

If you receive an incidence about a voter claiming that he should be allowed to vote and he isn't, do the following process:

- Ask him if he can log into the voting system.
- If so, ask him if he got his credentials at a registration desk.
- If so, ask him if he logged in before 48 hours to get the definitive ones.
- If so, ask if he wrote down and is using the proper credentials.
- Direct him to the registration post to renew the credentials.
- If he can log in but he doesn't see the election, direct him to the election authority whom he must plead for the authorization to participate.
- If he is authorized, the election administrator will be notified to add him. Have this into account when reviewing the voter rolls after the tallying.

Other unexpected situations

If you are facing any situation not explained here, always contact the election authority for instructions on how to act.

About the offices

Here are the offices available on VtUJI. You don't need to use them all, except for the chairman, which is a essential to have. Except for the chairman and alternate chairman, all the offices are conceptual, They don't differ in anything on VtUJI, but we'll explain their meaning.

- **Chairman:** The main office. He has the special responsibilities of coordinating the other officers and ordering the polls opening, the tallying and the closure of the election.
- **Secretary:** The second in charge; but only conceptually, because in VtUJI it is at the same level as the rest of officers.
- **Member:** A general officer. He is there only to testify what he is seeing.
- **Inspector:** A comptroller, usually sent by the election authority to guard its interests.
- **Representative:** A comptroller who guards the interests of the candidates or parties.
- **Alternate chairman:** He can take over the office of the president from the same moment they are allowed to operate the polling post if the chairman is absent, and his absence is not recorded as long as there is a chairman on charge.
- **Other alternates:** All the other alternate officers act the same as their counterparts, only that their absence is not recorded as long as there is someone on charge.