OBSERVERS
IN ACTION

# Electoral video-observation

Introduction to the methodology of video observation during election day, based on the case study of Russian Presidential election

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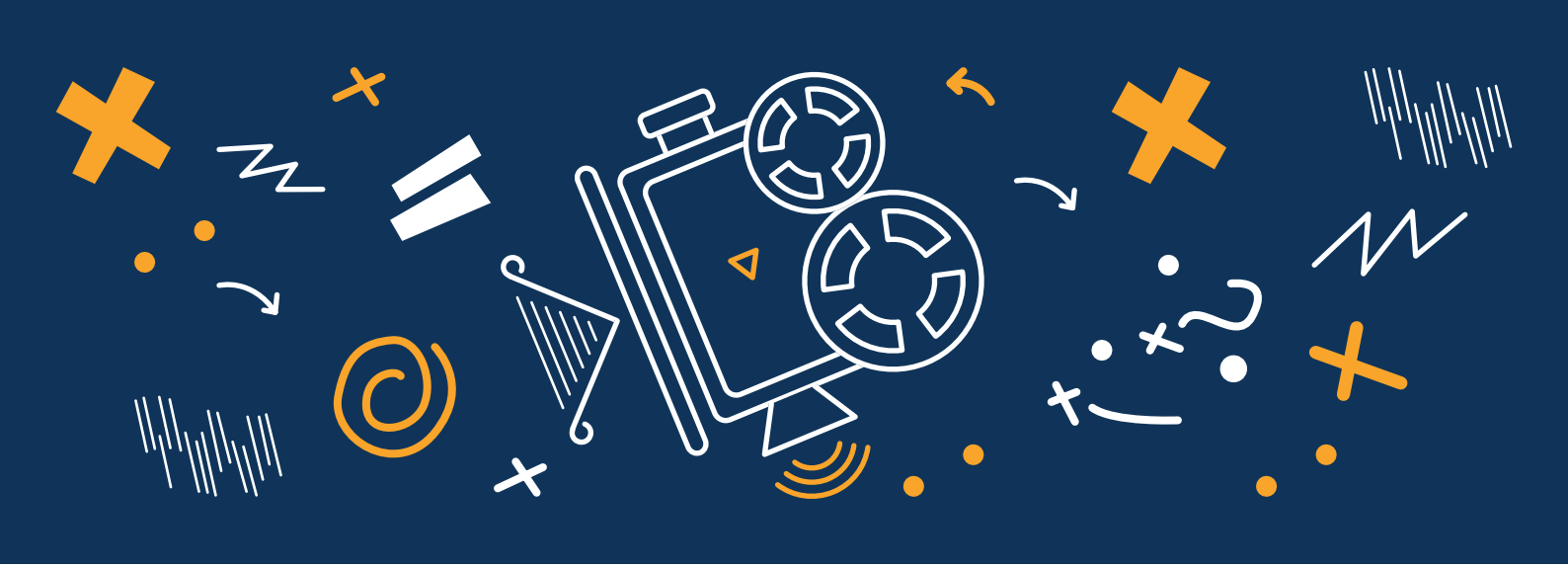

# Table of contents:

## Authors and editors:


### Main editor and author:

**Mateusz Bajek**
mateusz@odpowiedzialnapolityka.pl

### Authors:

**Karol Bijoś**
karol@odpowiedzialnapolityka.pl

**Azat Gabdulvaleev**
a.gabdulvaleev@gmail.com

**Roman Udot**
roman@golos.org

**Ivan Shukshin**
shukshin.ivan@gmail.com

**Franciszek Przasnyski**

**Agnieszka Tomaszewicz**

### Editors:

**David Kankiya**

**Robert Lech**
robert@odpowiedzialnapolityka.pl

**Zosia Lutkiewicz**
zofia@odpowiedzialnapolityka.pl

**Aleksandra Natasza Skupińska**
aleksandra@odpowiedzialnapolityka.pl

**Aleksandra Bajek**

## Observers in Action

Elections are one of the main elements of a democratic system within a given society. The degree to which they are held in a fair and transparent manner, impacts not only the strength and quality of democracy, but the society as a whole.

Citizens' involvement in the electoral process – whether by voting, running for office, or participating in the observing and monitoring efforts – is a healthy sign of a mature civil society and one of the conditions for the society to influence the direction (and methods) of a given country's development.

Election observation, in turn, is one of the most important forms of active participation of citizens in the electoral process, as it builds and deepens their confidence in election results while increasing the legitimacy of elected officials.

The above-mentioned factors, as well as the new legal regulations introduced in Poland in 2018, allowing for domestic citizen observation of elections, encouraged the creation of the first public observation of local government elections in Poland in October 2018.

This was made possible thanks to the support of the EU-Russia Civil Society Forum (CSF, www.eu-russia-csf.org), which recognized the innovativeness of the Observers in Action project – an initiative that combined training for the emerging citizen observer movement in Poland with video observation of the March 2018 Presidential election in Russia. The combination of two observation methodologies (direct observation at polling stations and observation of video recordings, in two different countries) allowed for the development of unique competences to observe the electoral process, training numerous citizen observers, and formulating conclusions and recommendations that could form the basis for discussing the importance and quality of electoral systems in both Poland and Russia.

These publication introduce the observation methodology we applied in both types of election monitoring, while discussing observations, conclusions and recommendations stemming from the analysis of materials gathered by volunteers during the observation itself. Conclusions con-

cerning the electoral process in Poland have already been raised with the National Electoral Commission, and some were even partly included in the recommendations the Commission prepared for the Polish parliament. We hope that the results of our video observation of the electoral process in Russia will help to inform the discussions between independent civil society and electoral administration of that country.

The aim of the Observers in Action project was to present an independent and objective evaluation of the conduct both of local elections in the Masovian voivodeship, based on in-person observations of voting and vote-counting carried out by a group of 90 citizen observers (described in a separate publication in Polish and English). It also consisted of an analysis of video recordings made during the presidential election in Russia on March 18, 2018 (described in this publication in English and Russian). The analysis of recordings from selected electoral commissions from four administrative regions of Russia - Kabardino-Balkaria, Karachay-Cherkessia, Bryansk Oblast and Belgorod Oblast was possible thanks to the involvement of 50 volunteers and 10 experts.

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The Observers in Action project is the first Polish non-partisan election observation initiative organized by the Political Accountability Foundation (www.odpowiedzialnapolityka.pl) and the ePaństwo Foundation (www.epf.org.pl), in cooperation with the Romanian non-governmental organization Code4Romania (www.code4.ro).

The aforementioned institutions seek to contribute to the development of civil society and believe that elections are one of the most important ways of doing so. The project leaders are not associated with any political party - neutrality and objectivity are the guiding principles of their actions.

Moreover, project coordinators have many years of experience in the field of observation of electoral processes, both in Poland and internationally. They conduct trainings in election observation, participate in international (especially OSCE/ODIHR and EU) observation missions and have previously organized election observation efforts in Poland and Central and Eastern Europe.

The project was co-financed by the EU-Russia Civil Society Forum, a network gathering various non-governmental organizations from the Europe-

an Union and Russia, whose shared aim is to strengthen the cooperation between civil society organizations in order to support democracy, rule of law and respect for human rights. The Forum makes use of funds from the European Union and EU member states.

## Introduction to the project

The publication presents the methodology of video-observation as developed and adopted for the purpose of this study.

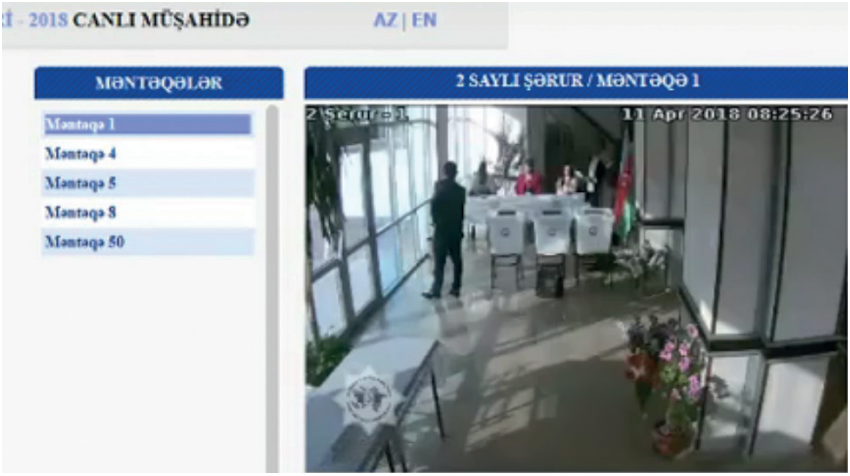
Video-observation can be carried out in two ways: (i) based on live broadcasting during the election day and (ii) through the analysis of archived material, obtained either from an official source or recorded by volunteers. In this study, both forms of video-observation are presented based on the experience and findings of Polish and Russian observers.

It has to be noted that video-observation will never replace the presence of observers in polling stations, but it can be a full-fledged tool used for several purposes:

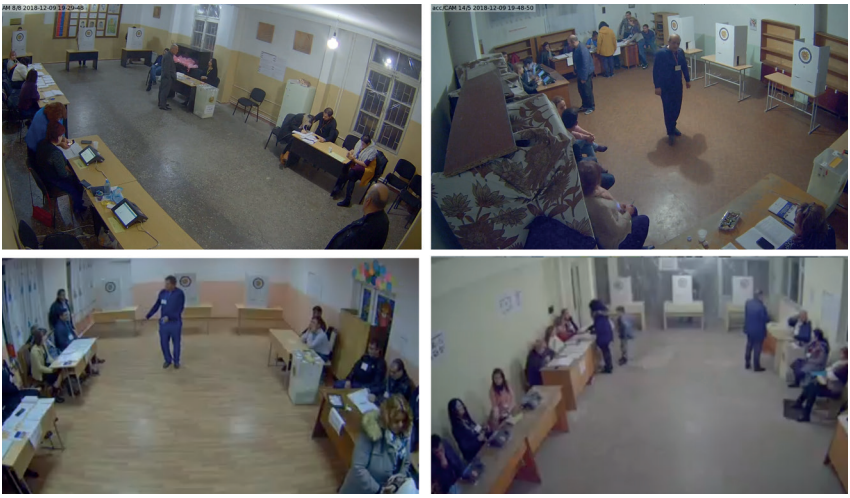
- to help assess the fairness of the electoral process; if necessary, it may be used as evidence in a lawsuit to prove electoral fraud, helping to bring about the annulment of the voting results in a given commission;
- to be used as informational and educational material for civil society, showing different types of electoral fraud and its possible scale – this is especially important in case of countries where fraud affects almost all stages of the electoral process;
- professionalization of video observation may contribute to its recognition as an effective tool for monitoring electoral process on the election day, supplementing the traditional methodology of international observation missions.

Video recordings of voting and vote counting during election day have been tested in a number of countries, i.e.: Albania, Colombia, Sierra Leone, Russia, Azerbaijan. The latest example being the organization of live broadcasts from polling stations during the parliamentary elections in Moldova on February 24, 2019. However, access to broadcasts is not always publicly available.

In 2018, experts from the Political Accountability Foundation observed and analysed live election day broadcasts in Russia on March 18, in Azerbaijan on April 11, and in Armenia on December 9.




Online broadcast of elections in Azerbaijan



Online broadcast of elections in Armenia

It is worth noting that among the countries that provide live online broadcasts of elections, the undisputed leader is the Russian Federation, both in terms of professionalism and the quality of broadcast.

The purpose of this publication is not to assess the risk that comes with recording the electoral process and broadcasting it live on the Internet. We are aware of concerns about the impact of such broadcast on the secrecy of the ballot, sense of security amongst voters, or the level of trust in state institutions. We want to note that, despite numerous problems and threats associated with the presence of video surveillance at polling stations, video observation is an effective additional method for observing the election day.

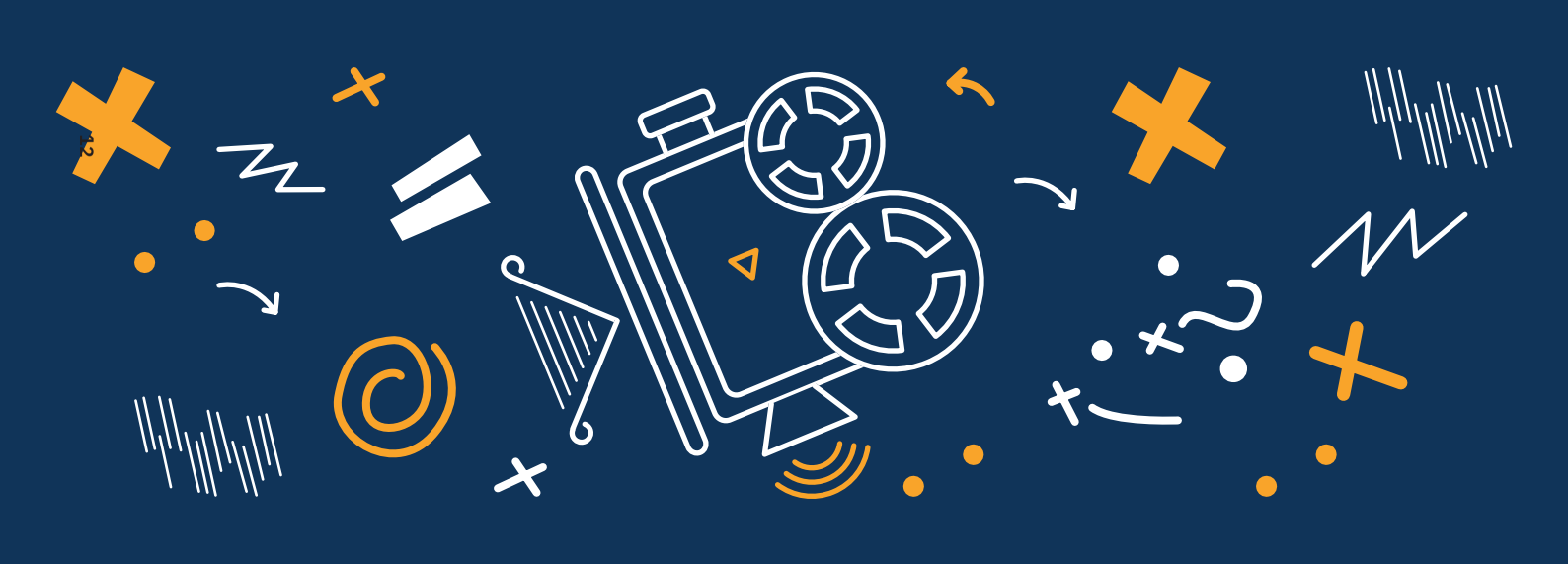
Taking into account our own experience in video-observation, as well as the knowledge and expertise of Russian colleagues, the March 18, 2018 presidential election in the Russian Federation was selected as the basis for this study. This publication is the result of monitoring and analysis completed by Polish and Russian observers and experts as part of the 'Observers in Action'.

The "Observers in Action" project was made possible thanks to the support of the EU-Russia Civil Society Forum (CSF). The content of this publication is the sole responsibility of the Political Accountability Foundation and does not in any way reflect the views of our donors.

One year after the presidential election in Russia, we would like to summarize the outcomes of the Observers in Action project. The results of two video-observation missions: the first one - carried out in real time during the voting day on 18 March and the second one – carried out based on archival recordings in the period between September – December 2018 – were published on a dedicated website: www.observersinaction.eu. The site acts as a multimedia report of video observation activities and contains reports, videos and summaries prepared by observers' and experts. We would particularly recommend watching the films that document the election violations observed. The goal of the website is to disseminate knowledge about electoral fraud, to encourage other volunteers to conduct similar activities and show the potential of video observation.

# Video observation of Presidential elections in Russia – March 18, 2018

| | | |
|---|---|---|
| Real-time observation 18th of March 2018 | Type and schedule of observation activities | Observation based on archived material September 2018 – March 2019 |
| 143 hours = ~6 days | Number of hours spent observing | 760 hours = ~32 days |
| Penza Oblast, Tatarstan, Kabardino-Balkaria | Observed regions | Briansk Oblast, Belgorod Oblast, Karachay-Cherkessia, Kabardino-Balkaria |
| 27 | Number of trained observers | 70 |
| More than 4 thousand | Number of falsified votes/added to the protocols | More than 35 thousand |



# 1. Election video observation. Methodology and experience from international observation missions

Witnessing elections in Russia is a dream for many people interested in this country as well as for election observers. Unfortunately, the road to observe Russian elections is a bumpy one and only a handful of volunteers are selected to participate in any official international missions organized by the OSCE or other organizations. So how can we observe the Russian election if we can't go to Russia? For any foreigner the best alternative is to use recordings from web cameras which were installed in polling stations in Russia in 2012.

The "Observers in Action" project has so fat organized three missions to observe Russian elections using recording from web cameras. In September 2016 and in March 2018 live feed was used for observation while in between September 2018 and March 2019 we analyzed archived recordings from web cameras. The latter case was possible as a result of close cooperation with a group of professional IT specialists who provided a direct access to the materials recorded by the Central Election Commission of Russia.

One of the factors that prompted the project team to organize video observation missions was the lack of interest in this methodology from organizations that specialize in election observation, like OSCE/ODIHR or the EU. The priority of those organisations are on-site missions in countries where elections take place and so far they have not decided to include video observation as part of their standard methodology.

In order to make video observation mission successful, it is necessary to fulfill a number of conditions. In particular, selecting the correct form of observation (live broadcasting or archived recordings), preparing an interesting and understandable training course for observers and identifying a group of motivated observers, to train them and to organize the video observation process itself.

## 1.1. Training

**Content of training**. Video observation training should be divided into several information blocks so that observers understand not only what they should be looking for and how but also why they observe the election and what kind of result their work should bring. This way observers' interest in participating in video observation increases while the number of questions that follow decreases.

1. At the very beginning, it is useful to present the very idea of video observation, a topic citizens of many countries are not familiar with. Stories form countries where video observation is possible can be used as an example, followed by the presentation of applied technology and previous video observation missions.
2. The next information block should present a specific elections. In the first place, it is worth to discuss the electoral system of a given country as well as the most common irregularities observed in the past. Then, the background of the election should be presented i.e. competing political forces and expected elections results. In case video observation will be conducted on archived materials, observers ought to be informed what they should expect to see in the polling stations they will observe.
3. The next block should be focused on motivational to make observers understand why their work is valuable for the institution organizing the video observation mission as well as how participation in such a mission would be useful for themselves. Depending on the motivation level of participants, one can focus on the experience gained by the observer during the mission or on the opportunity to discover the truth about the observed elections. In addition, it is worth informing observers where and how the acquired knowledge can be used.
4. The next module, compulsory in all training programs, is the technical module:
   a. The issue of access to recordings from web cameras should be discussed first. In case of a mission based on live broadcasting, the structure of the internet portal where recordings will be made available should be made clear. Possibly, access to a Virtual Private Network (VPN) in the country of observation should be provided. This should be followed by a training on how to use video capturing software. In

case of missions based on archived materials, observers should learn how to access recordings (how to download files from the server) and what programs should be used in order to play the video.

b. Then the observer should learn about the schedule of the mission. In case of live observation, when two people observe one election commission, the time for rest and schedule for substitutions during the entire election day are of particular importance in order to ensure the continuity of observation. In case of missions using archived recordings, the schedule should be more flexible and adapted to every observer's availability, while ensuring deadlines are kept.

c. The last thing necessary to explain in this block should be the issue of reports from the course of observation. In the first place, observers should learn what data they are expected to provide i.e. turnout in cyclical intervals or information about all irregularities observed with indication of their duration. In addition, information on technical requirements for reporting and how reports should be transferred to the organizers should also be provided.

5. The last part of the training should inform observers how to work efficiently:
   a. First of all, the system of work of election commissions in a given country should be explained.
   b. Then, ways to calculate the turnout should be proposed. This is especially important in countries where there are different ways of voting available (i.e. traditional ballot box, optical scan voting system, etc.).
   c. Information about irregularities expected in a given country as well as ways of observing them should be provided. The observer should be made aware to look for votes in the ballot box even before the polling station is opened. The observer should also learn how different systems of casting votes to different ballot boxes may look like and how to discover instances of multiple voting. It is also necessary to draw observers' attention to such phenomena as covering the field of view of the camera, deliberately disorganizing the work of the election commission or disrupting the work of observers in the polling station. If the work of the election commission is observed after the voting is finished it is necessary to explain to observers what are the procedures applied in a given country as well as what

are the observable irregularities at this stage of election process, i.e. adding votes, falsifying counting results or falsifying the protocol. In addition to irregularities, the observer should also be trained to detect non-standard situations, typical in a given country. This block should be accompanied by video materials.

d. The observer should learn, in case of observation based on archived materials, when it is advisable to accelerate the video and when it is necessary to observe without acceleration.

## 1.2. Types of training

Our experience shows that the training on effective election observation based on video recordings can be organized in two different ways.

In case of video observation based on live broadcasting, and in situations where most of observers live relatively close to one another, training should be conducted offline. At the same time, such training should be broadcasted on-line for those who cannot join the on-site training. Close and direct contact with observers should be established to help them in solving any technical problems that will arise.

In case of video observation based on archived materials, when both organizers and observers have more time, training can be organized in the form of a webinar (for example using ClickMeeting). This type of training is additionally favored when direct contact between trainees is difficult. There should be multiple webinars scheduled at different times and days (working days, weekends) to allow for maximum participation.

Recordings from both types of training should be made available in the form of video, so that people who could not participate in the live training have access to necessary knowledge. However, in general online trainings are not the preferred type as the lack of direct contact with the trainer often discourages the trainee and makes it difficult for him/her to contact the trainer later on in case problems arise.

## 1.3. Choosing the right polling stations

If the aim of the observation mission is to examine the general picture of elections in a given country it would be advisable to choose random polling stations or to randomly select polling stations in a geographically limited

area (e.g. in regions known for significant or small number of irregularities). You can opt out of random selection of polling stations if your goal is to analyze the situation in one or several regions of the country.

In case of inexperienced the observers, it seems advisable to select polling stations where the field of view of the camera allows for full control of the voting process and that the ballot box is a traditional, non-electronic one and thus easier to observe. Otherwise, observers may become discouraged from further work. As observers' experience increases, they should be gradually assigned more difficult polling stations.

## 1.4. Missions using live broadcasting recordings

In the first place, observers should test the quality of Internet connection, the VPN software as well as screen recording software. Then observers assigned to one electoral commission should be prepared to work in a predefined schedule in two-person teams.

The first observer should begin his/her work about half an hour before the start of the elections - this is when the content of the ballot box should be checked. Then, observers, using one or two computers, should do their work applying the knowledge they gained during the training. During the observation process it is necessary to switch between observers providing enough time for them to rest. Reports on voter turnout and irregularities may be submitted to the organizers regularly or once at the end of the day. Depending on the needs of the organizer, the election observation may last until the polling station is closed or until vote counting is finalized. In case of technical problems encountered by one of the observers (e.g. problems with the Internet connection), support should be provided by the second observer or mission organizers until the issue is resolved. If live observation was not possible for a short period of time but it still could have been recorded (e.g. on the second computer), the observer should analyze the missing fragments as soon as possible.

## 1.5. Missions using archived recordings

After receiving the video recordings, the observer should proceed to observe the election commission using the knowledge gained during training and starting observation about half an hour before the opening of the

polling station. In the first hours of work, when voters turnout in the polling station is usually the highest, observation of the work of the election commission should be conducted without accelerating the video or with slight acceleration only. Along with the decrease in the number of voters, the observer could significantly speed up the analyzed video in order to increase the pace of his/her work. Depending on the needs of the organizer, the election observation may last until the election commission is closed or until the counting of votes in the commission is finished. In the latter case, it is preferable for the observer to know the language of the country of observation in order to be able to understand the content of key conversations happening during vote counting.

## 1.6. Cooperation with observers

For the video observation mission to be successful, a well-organized observers team should be established. If the budget of the mission does not allow for the remuneration of observers, volunteers should be adequately motivated to take part in the project.

## 1.7. Recruitment

The first necessary condition for building a team of video-observers is successful recruitment. It seems most effective to recruit people interested in election-related matters or the country/region of observation. Recruitment should be advertised both on-line (ads on forums, industry websites and social media sites, including paid advertising) as well as offline, in the form of direct contact with influential individuals and organizations influencing the election-related environment (journalists, academics, NGOs). Groups with previous observation history should also use their contacts from previous projects.

Although it is desirable that the recruited observers already have some prior knowledge or experience in election observation, each video observation project should provide appropriate training for those interested. The training should not only be suited for beginners but should allow everyone to gain experience which will be useful in observation. Knowledge of the language of the country where video observation is to be conducted may be desirable, however, lack of such knowledge should not be an excluding

factor as it does not prevent the observer to assess the majority of observable elements of the electoral process.

It should be emphasized, as part of recruitment promotion, that video observation can be carried out remotely, even from the observer's home, which allows people who can not travel to participate. In addition, in missions using archived materials, observers can allocate as much time as they want for observations and to take breaks at their convenience. This allows for the involvement of a much more diversified group of people than in the case of a standard mission.

## 1.8. Motivation

Motivated observers are another key component of a successful observation mission.

In the first place, motivation should be based on an attractive presentation of the mission itself and its usefulness to the observers - a modern approach to election observation – supplementing the results of classic observation, acquiring new skills "without leaving home", access to unique, materials.

Direct contact between observers and organizers is another important motivating factor. It is necessary to provide observers with up to date feedback during the observation process and appreciate their work. The best observers should be invited to share the knowledge they have acquired during a discussion on observation techniques and methodology.

If the budget permits, organizers should cover parts of expenses incurred by observers, such as travel costs, purchase of specialized software, per diems or other forms of remuneration.

Good contact with mission participants should not end the moment they complete their work, especially as they are the best potential participants of future video observation missions. The end of the mission should be celebrated with a final meeting (or an online webinar) during which the results of the mission will be presented and where space would be created for observers to discuss and present their own opinions and experiences. Participants should also receive a certificate / diploma, that will not only carry symbolic value but should increase the observer's chances for recruitment if the organizer decides to plan any observation mission in the future.

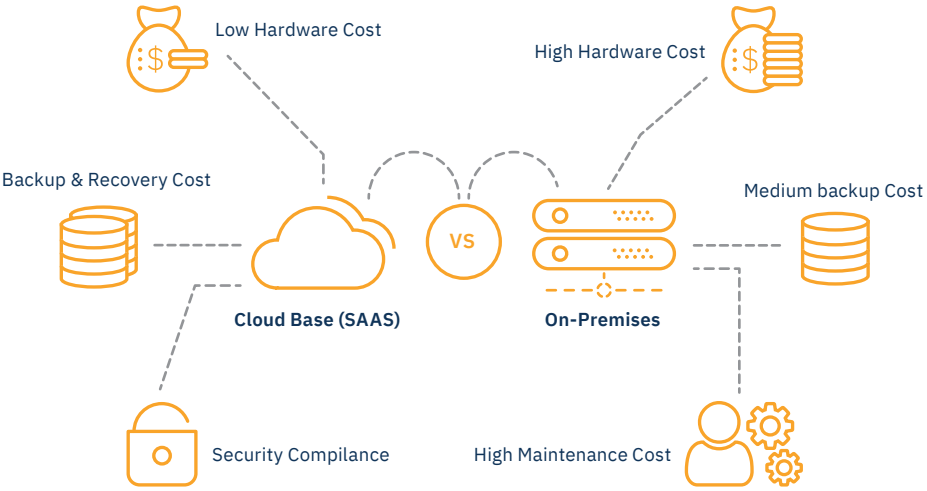
## 2. An online broadcast recording

In order to record a video for further research, it is possible to use either of the two options.

The easiest one is to record the online broadcast from the poliing station with the help of a special computer program. In this case, one computer will record from only one camera. There are several programs available for this purpose. Bandicam is popular for Windows, Kazam for Ubuntu, and Icecream Screen Recorder for Windows and MacOS.

The second option, the difficult one, is to record the broadcast using a server capacity. This, requires programming skills, but is more efficient and is usually more reliable. You can use CamStudio or OBS Studio.

## 3. Video storage




The storage of video files is inextricably linked with the way they are record and always requires the work of a programmer. Videos can be stored either on volunteers' personal computers or on the server.

If volunteers themselves are recording live feeds on their personal computers, they can also store videos there. In this case, it will be necessary to compile a register, where there will be information about the whereabouts of each recording. This option does not require any costs, but practice has shown that access to video in this case is very inconvenient.

Records can be stored in various forms: as one file of the full election day recorded or as an archive folder with smaller files consisting of 15-minute video recordings.

Since video files are not compressed during the process of adding them to the archive, there is no big difference in the efficiency of various forms of storage. 15-minute recordings make the whole observation process easier for volunteers to observe. Automatic screenshots allow you to quickly identify the polling station and field of view.

When storing data on volunteers' computers, there is a problem of accessing the video. It becomes impossible to send a several gigabytes file via email, and if you use WeTransfer service, you will have to split the recordings up, since the free limit is only 2 GB. The capacity of Yandex.Disk or Google Drive is bigger, but is also limited.

If you record video on a server, then you will need to have appropriate software developed and extra money to pay for disk space. Amazon S3 or Glacier are good for storage and quick access to archives from dozens of polling stations, but storing several thousand videos will be quite expensive - 1000 records cost $ 100 a month. You can use specialized services, for example, Wasabi, where the storage of 1000 videos will cost about $ 30 a month.

## 4. Distribution of work among volunteers

After the recordings are obtained and the storage is organized, the issue of their analysis arises.

Working with a large array of videos is impossible without crowdsourcing: recruiting volunteers, distributing work, collecting the results and quality control. There is no perfect solution to this problem yet. Here we are sharing our experience rather than recommending a particular course of action.

## Attracting volunteers

**Oleg Shein Initiative (2012)**
After there had been massive election falsifications during the mayor of Astrakhan election back in 2012, one of the candidates, Oleg Shein, received recordings from polling stations and asked activists to analyse them. Shein was at that time a serious politician, a former deputy of the State Duma. His political weight helped recruit volunteers.

**"Observers of Tatarstan" (from 2012 to the present)**
In Tatarstan, there is a cohesive team of like-minded people who have been studying recordings from local polling stations since 2012. Their activity is partly connected to the regional political agenda. In 2018, they have moved their activities from the regional to the national level.

**The search for carousel riders, St. Petersburg (2016)**
The first project that coped with the difficult task of finding and exposing cases of multiple voting was organized in St. Petersburg after the municipal elections. It was initiated by those candidates who believed that there were falsifications against them.

**PECDocFest. The Golos Movement**
**(from 2018 to the present)**
In 2018, broadcasts from 8,000 polling stations from the presidential election in Russia were recorded and stored. The Golos Movement, "Association of Observers of Tatarstan", "Observers of St. Petersburg", the project "Count yourself", the journalist of "Novaya Gazeta" Tatyana Yurasova, foreign observers and many others joined the video observation of the recordings.

Taking advantage of its reputation and contact database, Golos announced a recruitment of volunteers for video monitoring. Moreover, activists of the movement took on the task of gathering and analyzing the processed information from other participants of this project.

**Distribution of tasks and collection of results**
Different teams and projects solve tasks in different ways. The simplest activities do not require the work of programmers, so they are easy to

organize. For example, the process of working with volunteers during the PECDocFest project.

1. A volunteer fills out an online form (the volunteer's email address becomes his/her ID).
2. The coordinator sends the activist a link to download the video and his/her unique password. In the further work, the password was no longer used, as the link already contains sets of random characters that perform a protective function.
3. The coordinator sends the volunteer an email with detailed instructions for viewing and a sample of the filling form. It can be a Word or Excel file.
4. The coordinator registers the data on when and what polling section was assigned to the volunteer.
5. The volunteer watches the recording in the video player and fills out the form where he/she indicates the turnout data, other observations and incidents.
6. The volunteer sends the file with the results to the coordinator. Example of the form filled out by a volunteer:
7. The coordinator enters the received information into the table where all the data is collected. If the volunteer wants to continue the work, the coordinator sends him/her a video from another polling station.

Example of the form filled out by a volunteer:

18 марта 2018, регион № 42 избирательный участок № 270

| Время трансляции | Число проголосовавших в помещении участка по данным просмотра записи | По данным комиссии | Расхождение |
|---|---|---|---|
| 8.00-8.15 | 31 | | |
| 8.15-8.30 | 30 | | |
| 8.30-8.45 | 21 | | |
| 8.45-9.00 | 14 | | |
| на 9.00 | 96 | | |
| 9.00-9.15 | 23 | | |
| 9.15-9.30 | 72 | | |
| 9.30-9.45 | 30 | | |
| 9.45-10.00 | 32 | | |
| 10.00-10.15 | 28 | | |
| 10.15-10.30 | 36 | | |
| 10.30-10.45 | 32 | | |
| 10.45-11.00 | 34 | | |
| на 11.00 | 322 | | |
| 11.00-11.15 | 38 | | |
| 11.15-11.30 | 44 | | |
| 11.30-11.45 | 25 | | |
| 11.45-12.00 | 36 | | |
| 12.00-12.15 | 33 | | |
| 12.15-12.30 | 31 | | |
| 12.30-12.45 | 29 | | |
| 12.45-13.00 | 17 | | |
| 13.00-13.15 | 18 | | |
| 13.15-13.30 | 11 | | |
| 13.30-13.45 | 16 | | |
| 13.45-14.00 | 23 | | |
| на 14.00 | 644 | | |
| 14.00-14.15 | 8 | | |
| 14.15-14.30 | 5 | | |
| 14.30-14.45 | 16 | | |
| 14.45-15.00 | 12 | | |
| 15.00-15.15 | 15 | | |
| 15.15-15.30 | 10 | | |
| 15.30-15.45 | 6 | | |
| 15.45-16.00 | 11 | | |
| 16.00-16.15 | 7 | | |
| 16.15-16.30 | 4 | | |
| 16.30-16.45 | 8 | | |
| 16.45-17.00 | 8 | | |
| на 17.00 | 757 | | |
| 17.00-17.15 | 8 | | |
| 17.15-17.30 | 5 | | |
| 17.30-17.45 | 8 | | |
| 17.45-18.00 | 6 | | |
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| 19.00-19.15 | 7 | | |
| 19.15-19.30 | 6 | | |
| 19.30-19.45 | 1 | | |
| 19.45-20.00 | 1 | | |
| 20.00-20.15 | 0 | 2007 обраб. работа по спискам | |
| проголосовало в помещении всего | 879 | 1247 | 428 |

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### Checking procedure

There are different methods of verifying the results. With a sufficient number of volunteers, each polling station is monitored twice by two independent volunteers.

If the report is divided into time intervals, only some intervals can be checked. The more experienced the volunteer is, the fewer segments need to be checked. Some volunteers managed to observe up to 20 PECs.

An open crowdsourcing project is always at risk of infiltration by provocateurs who might try to compromise its results. At the same time, the strength of crowdsourcing projects is the large-scale involvement. With hundreds of participants, provocateurs are not able to distort the overall result. Independent checking and rechecking by volunteers of each other's results is an additional way to reduce distortion.

## 5. Online observation

Online monitoring or observation is the process of watching a live broadcast from polling stations on the very election day. This can be done by anyone with an intermediate level of IT proficiency. All you need is a personal computer, a stable Internet connection and willingness to dedicate one day to observation.

There are special technologies for studying recordings, that can be used for online monitoring.

Turnout verification (evaluation) process is based on counting the people who vote. However, if possible sorting and vote counting should also be evaluated. There is a good chance that an observer will witness irregularities (ballot stuffing, conflict situations, etc.). The timestamp of such violations should be duly noted.

It is good to have at least some basic training. The first thing you should remember is to find a way to record a video directly on the your computer. The full recording of one PEC where there are two cameras lasts 24 hours and requires about 8 GB of disk storage. It is better to make a trial run in advance: to record something in order to find out if everything works properly.

It is recommended to record the entire election day, from the very beginning to the very end without making any pauses. Then the video may

be of considerable value, not to mention the fact that the observers themselves will be able to return to interesting moments on the video.

Generally, the broadcast is available before polling stations open, so in case of bad visibility the volunteer has time to choose another polling station.

To do the job more efficiently, it is necessary to work with a partner. No one can stand sitting in front of a computer for 12 hours. In case there is no partner available, it is possible to come back to carry out the observation of the skipped moments later.

It is better not to turn off recording, even after the commission leaves the polling station. Someone may still come back.

All of the above steps can be easily performed by even the least experienced observer. However, when working as part of a group, minimal coordination is desirable – there should be a team leader for each region in order to avoid unnecessary duplication.

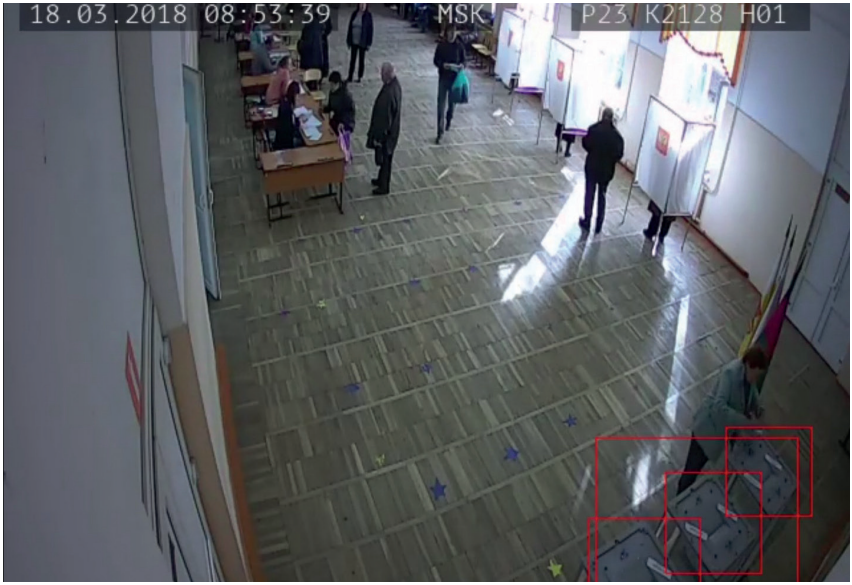
## 6. "Count It Yourself" project

**Automatic and semi-automatic vote count**

Computer vision and machine learning technologies can be used to speed up vote counting during video observation. Although there is no such technology that can ensure high-quality and fully automatic counting of votes yet, there is already software that makes video observation and turnout monitoring a lot easier.

The most well-known open-source software is the "Count Yourself" project. It is written in python in OpenCV 2 (Open Source Computer Vision) Library and posted on github: schitaytesami/tools.

In order to use this software one should make several screenshots of the videos and, using a mouse, to indicate the location of the ballot boxes on them. The script notices activity in these areas and is able not only to count the number of times there is some kind of activity (which will be closely equal to the number of voters cast their votes into the ballot boxes), but also to create a video in which time intervals without activity will be automatically accelerated, and slowed down only when there is some activity around the ballot box. This way, the video file that the volunteer has to watch is not 12 hours long, but just 2-3 hours.




Screenshot of a video created by the speedup_video.py script, with three ballot boxes indicated

Computer vision allows to get preliminary figures of the number of voters, reduce computer memory needed for video storage and, most importantly, makes the work of video observers faster and more comfortable. In conclusion, it should be emphasized that in the future, the use of computer vision and neural networks will allow us to create fully automatic and reliable counting systems. This is when video monitoring will become the most accurate and effective method of election observation.

## 7. Collection of results

**Detect. Deduce. Demonstrate**

The results of video observation can be presented in the following forms:

- **Absolute numbers**
  The detected discrepancies can be recorded using absolute numbers. For example, "in 225 PECs, there were 100 thousand falsified votes." But such estimates can be misleading, as they depend on the number of polling stations studied. A small sample of PECs may not be representative and distort the overall estimation on falsifications level.


- **Relative numbers**
  The PPVT method is often used during traditional observation. It is based on a random selection of polling stations for independent verification of voting results. A similar approach can be applied to video observation. "Zero" may indicate that no violations were detected, while "certain relative numbers" can show there have been some speculations and falsifications of results. For example, "the turnout was falsified in approximately 30% of the polling stations" or "it was found out that on average there were 425 votes falsified in each polling station".
- **Violations**
  Video observation can be a powerful tool for detecting particular violations such as ballot stuffing, multiple voting, falsified protocols and so on. Information on falsifications and fraud must be recorded and made public so a lot of people can learn about these violations. It is also very important to send the data to election commissions and law enforcement agencies.

### Deduction

Identification of fraud with the help of logical inference.

This method does not show specific violations, however, the comparison of the received figures or images with other figures or images leads to the inevitable conclusion that certain violations have occurred.

For example, each act of voting at a certain precinct does not indicate a violation, but a comparison of the number of votes cast with official results leads to the logical conclusion that falsification took place and even gives a quantitative assessment of illegally added votes.

Another example: multiple voting. Each individual voting act of a certain citizen looks legitimate, but comparing the images of him/her voting in different polling stations or at various times a day leads to the logical conclusion that there was a violation.

**Detection**

Looking for violations. Video monitoring allows you to observe outright violations. The public trusts the recordings of the official broadcast, so it is difficult for the authorities to ignore the obvious facts.

With the help of video observation, you can detect the following violations:

- Ballot box stuffing;
- Stuffing during vote counting;
- Attacking observers;
- Multiple voting (carousel);
- Falsification of voters' signatures in the electoral register.

Video observation also reveals violations of the rules and procedures governing voting and counting, where there is no corpus delicti, and which do not distort the citizens' perception of the election. These violations are most often recognized by the authorities. Unfortunately, the reaction to them only distracts from real crimes.

**Demonstration**

Public opinion is the main force in the fight against falsification and fraud. The demonstration of the evidence found should thus be clear and understandable even for citizens who are not very interested in the electoral process, and should not allow for any ambiguous interpretation.

Inaccurately presented information will be immediately criticized by pro-government experts, as well as by online trolls in order to discredit the observer community and its work in the eyes of society.

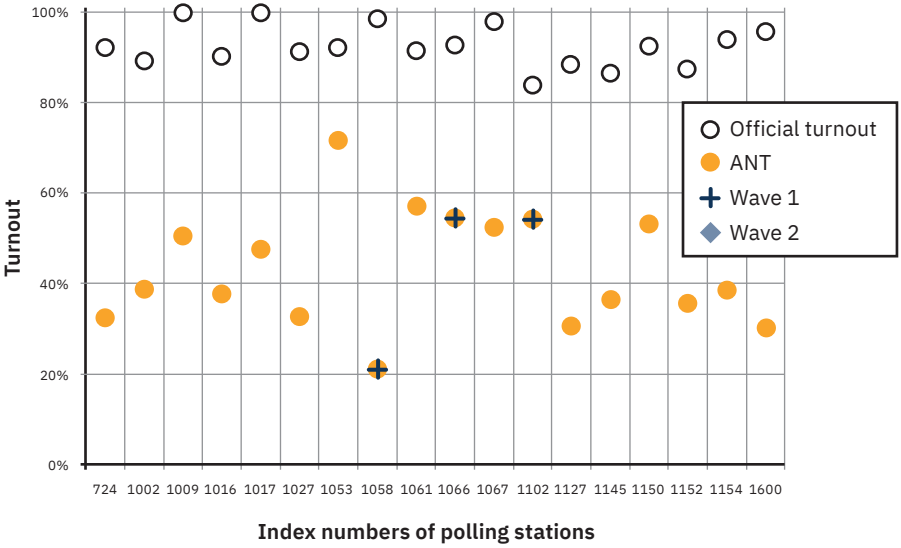
# 8. Video processing

Video processing can bring a lot of value only if the campaign is organized thoroughly. Otherwise, all we will have is just a huge collection of files and unsystematised analysis from individual volunteers.

It is necessary to clearly define the stages of the project to ensure accurate and convenient work of all participants.

The coordinators of the video observation project should try to forecast what kinds of falsifications might happen during the election. During the presidential election in Russia in 2018, the main falsification method was the overestimation of real turnout. This has been previously expected by experts, and afterwards was proven using mathematical analysis. It is important to assign polling stations among volunteers in such a way that, everyone gets not only non-falsified commissions, but also the ones where there is a high probability of finding potential fraud.

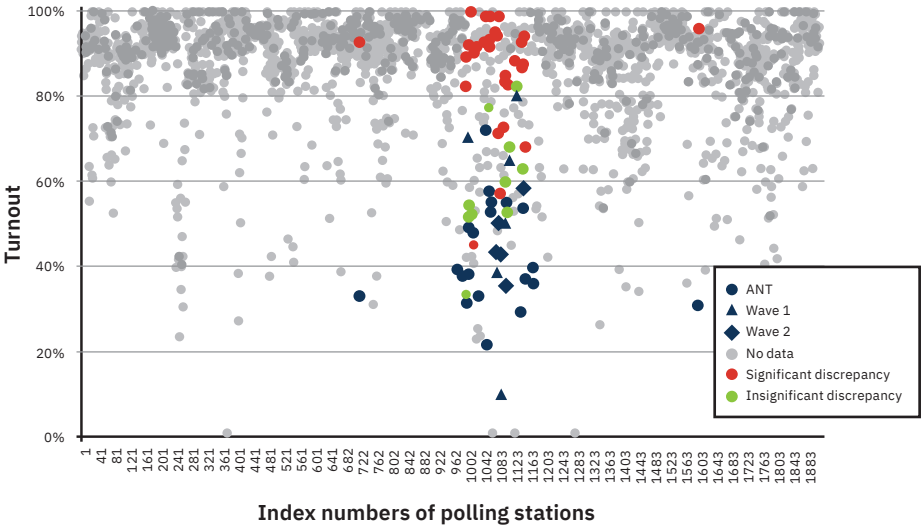
Voting results can be presented graphically (for example, with the help of the Gabdulvaleev diagram, or the Shpilkin diagram (the result of the candidate vs turnout)).




Example: Gabdulvaleev's diagram, discrepancy of turnout observed by volunteers in comparison with official numbers

The organizers of the project are responsible for assigning recordings to the volunteers. When the volunteer resources are limited, it is necessary to decide what is more important – to focus on thorough examination of the work of polling stations situated in a particular area, or to monitor several polling stations located in different regions which will give a bigger picture.

Coverage of video viewing at presidential election 2018, Dagestan




An example when the organizers chose to focus their work only on one selected part of the region

Working with volunteers requires a careful and deliberate approach. You have to prepare simple but clear instructions and recommendations on the organization of work (Chapter 7 gives tips on using programs, counters, calculators), and provide software for automatic collection of results. For example, instead of volunteers sending reports to the coordinator for manual processing, you can create a bot to receive standard forms through Telegram, email or a website.

Thus, the result of the work of a group of volunteers will be structured, facilitating data analysis. In case a website is created to manage reports, the following indicators can be published there: the studied areas, the current progress of the project and the total results.

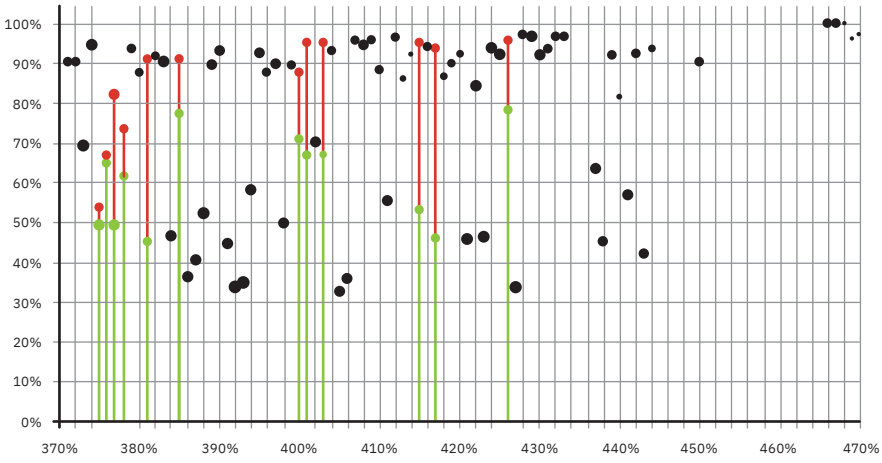
# 9. Video monitoring techniques and how to apply them

As it has been mentioned earlier, video observation can be carried out on the very election day as well as after. Now let's take a closer look at what can be seen in the recordings and what data can be analysed.

## 9.1. Voter Turnout Evaluation

The first thing that can be identified is the discrepancy between the official data and the actual turnout monitored through the use of video recordings. It is possible to count every voter and compare the obtained number with the protocol for the corresponding polling station. Such approach is of particular relevance to Russia, where voter turnout is often overstated.

Distribution of polling stations in the city of Grozny by turnout (percentage), in the presidential election of the Russian Federation on March 18, 2018




площадь значков соответствует численности избирателей

Составитель Габдульвалеев А.С.

In some countries, there is no such a problem as overstating turnout. For example, in Armenia, this kind of violations is technologically excluded due to the biometric technology for voter registration, and the fact that scans of electoral registers with voters' signatures can be found on the Internet.

Despite the initial simplicity, turnout evaluation through video recordings is quite a time-consuming process. Therefore, extensive research requires the involvement of a larger number of volunteers.

### Pretesting the video recordings

Before volunteers get started, recordings need to be checked. The fact is that the source materials are sometimes inadequate to work with. Damaged or incomplete recording make the study incorrect. The absence of even one minute of a recording reduces the reliability of the final result.

In addition to incomplete recording, there may be problems connected to the fact that ballot boxes are hidden from the cameras. Experience shows that the best time to count the votes (in order to estimate turnout) is when a voter casts the ballot into the ballot box. At this very moment the situation becomes irreversible, and the voter cannot change his/her decision. It is the best moment for a volunteer to press the counter button.


The moment of voting

Sometimes there are situations when not all ballot boxes are visible. In case of doubt, their number can be determined by finding on the records the moment when all ballot boxes are unsealed and the votes tallied.

### Tools for results calculations

Some tricks make the task of counting easier. In order to reduce the time, needed to analyse the recording from one polling station it is suggested to use a media player with the function of video playback acceleration. For example, the popular VLC media player uses the "+" and "-" buttons to adjust the playback speed, so the volunteer presses "+" several times when there is no one near the ballot boxes, and "-" when someone approaches.

Volunteers can use a manual counter, a special computer program, or a simple calculator to calculate turnout. "0 + 1" has already been entered on the calculator and then every time the ballot is cast, the "=" key should be pressed.

According to best practices it is quite important to have one standard for presenting the results of video observation. It should be presented in a special instruction, which contains a template report either as an Excel file, or as an online Google Docs table.

### Intervals

Splitting the recordings into fragments (15 minutes each) greatly simplifies the work of volunteers. Votes in each interval are calculated separately, and then they all are summed up.

| | Краснодарский край | | 23 | | | 708 |
|---|---|---|---|---|---|---|
| 4 | Начало интервала подсчета | Конец интервала подсчета | Количество проголосовавших | Начало интервала подсчета | Конец интервала подсчета | Количество проголосовавших |
| 5 | 8:00 | 8:15 | 28 | 14:00 | 14:15 | 24 |
| 6 | 8:15 | 8:30 | 12 | 14:15 | 14:30 | 12 |
| 7 | 8:30 | 8:45 | 18 | 14:30 | 14:45 | 18 |
| 8 | 8:45 | 9:00 | 33 | 14:45 | 15:00 | 16 |
| 9 | 9:00 | 9:15 | 20 | 15:00 | 15:15 | 7 |

Fragment of a typical report showing splitting into intervals

This technique reduces the risk of major errors. If one interval is calculated incorrectly, then this will not distort the overall picture very much. In addition, it is easier to verify the results. Moreover if one recording was viewed by two different volunteers, it is easy to find possible errors by comparing separate fragments.

**Double check**

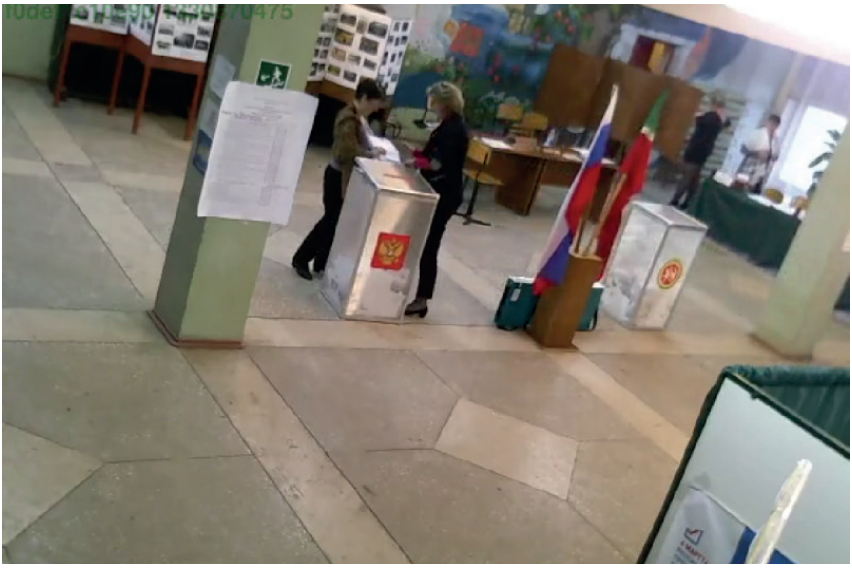
After the results from volunteers are received, more experienced observers recalculate them. Thus, we can say that there are two stages in the analysis of each polling station: the primary viewing and verification.

Needless to say, this technique doubles the labour intensity of the process. However, verification is a justified measure. The counting quality can be considered good if a possible error fits within 1% of the actual turnout.

## 9.2. Ballot-stuffing and other voting irregularities

Perhaps the most "spectacular" type of fraud is ballot stuffing.

This type of falsification is sometimes hard to observe during the first viewing if the ballots are organized in neat piles. Later, if the calculated turnout differs from the official data, but the vote count by the commission was performed without violations, it is worth reviewing the video to find the exact moments when ballot stuffing occured.



Example of ballot stuffing through the slot of an unsealed ballot box

After the stuffing the election commission needs to find a way to make the numbers of ballots in the ballot-boxes similar to the numbers of people who voted according to the electoral register. In this case, during the count, the

video observer will notice a violation of the procedures: as a rule, members of the commission simply do not count the number of voters in the register.

Based on the number of ballots stuffed, it becomes possible to estimate the numbers of the ballots in a pile. For example, if the difference with the official data is approximately 800 ballots and there are 16 moments that resemble stuffing, we can conclude that the ballots were stuffed in the piles of 50, a fairly typical size for stuffing in Russia because of the convenience of the counting and the thickness of the pile is less than 5 mm.

In addition to estimating real turnout and stuffing, volunteers should identify and record other noteworthy violations.

## 9.3. Evaluation of counting and tabulation process

The second step of video-observation consists of evaluation of the counting and tabulation procedures.

Apart from ballot stuffing, there is another method of falsifications, which is based on redistribution of existing votes to someone else's favour or even "drawing" results that are not based on counting ballots.

Falsification during vote counting procedure becomes possible only through direct violation of legal procedures. Another way is opposing the presence of observers or obstructing observation.

Modern technology does not yet allow us to distinguish the marks on the ballot papers through the screen of our computers. However, it is possible for us to assess compliance with certain rules and the sequence of steps. You can see if unused ballots are accounted for, or if signatures on voter lists have been counted. You can also notice whether the announcement process was public or not. The moments of sorting ballots and counting them are extremely important. According to the Russian legislation, there should be an alternate announcement and presentation of ballots during their sorting. Therefore, the video observer can easily assess whether the law was respected or not.

It is also possible to detect such gross violations as throwing the unaccounted ballots onto the counting table or shuffling them between sorted packs. As is the case for turnout analysis, it is very important to have a clear view of the areas where the election commission works.

Assessing compliance with procedures requires knowledge of electoral legislation and other distinguishing characteristics of the process.

Example of presenting of ballots

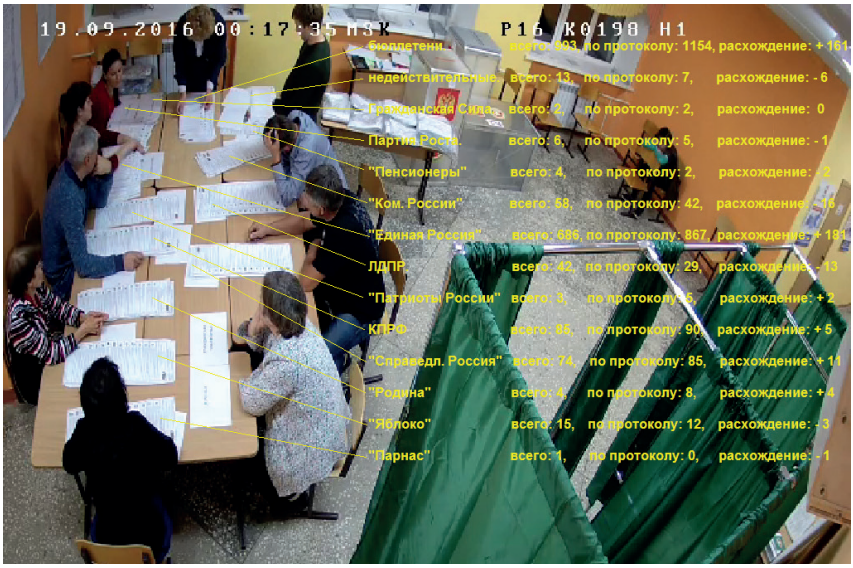
Volunteers are offered to fill out a questionnaire containing a few simple questions with answer choices. They complete this part only if they feel they have enough knowledge to do so. More thorough analysis should be conducted by more experienced observers.

The reality is that legal procedures are violated everywhere in Russia. Only in rare cases, you can see the processes of sorting and counting of ballots carried out properly.

## 9.4. Ascertaining the real distribution of votes

If the counting table is clearly visible and the established order of ballots sorting is at least partially complied with, the volunteer can visually determine how many ballots were put to each pile and compare the result with the final protocol.

Such work requires a great deal of experience and concentration. The complexity of this analysis may be even greater than when evaluating turnout. Since it is impossible to distinguish marks through video recordings, sound can be equally as important for the analysis. The distribution of ballots during sorting can be tracked during their announcement (if it



Volunteer successfully managed to evaluate the distribution of votes

took place) or visually by tracking the placement of ballots on the counting table. The ways can be combined according to the situation.

When studying the sorting process, one has to make the assumption that the member of the commission acts in good faith. It is usually easier to sort the ballots first and only then adjust the result. Otherwise, the fraudster runs the risk of overly complicating their task and becoming entangled in their own manipulations.

Watching a video recording with sound can provide other important information. For example, there are cases when the commission announces the results, but the figures in the official protocol are completely different. If the recording shows that, after the announcement of the data, no errors were found and the recalculation was not made, the difference in the results indicates intentional changes for which there were no objective reasons.

## 9.5. «Carousel voting»

The search for people engaged in carousel voting has recently become increasingly popular in Russia. Studies show the prevalence of this phenomenon and sometimes it can be seen how the members of election commissions themselves vote more than once.

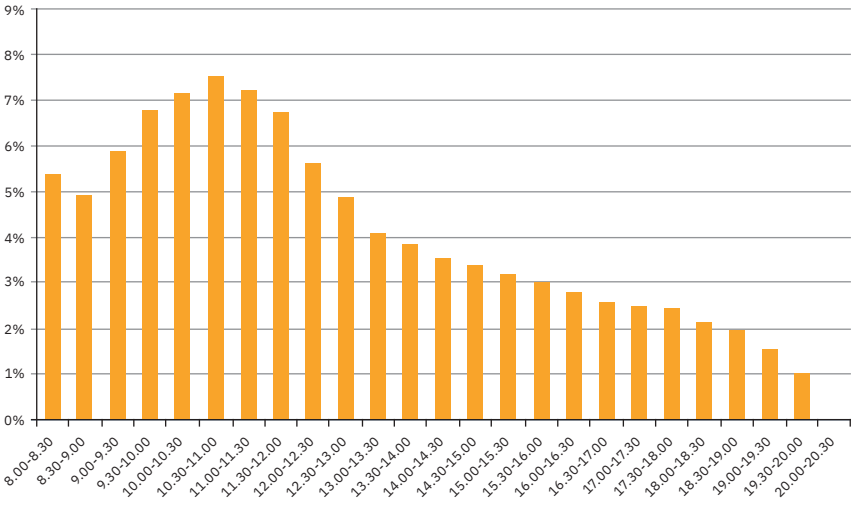
"Carousel voting" at PEC 0427 in Tatarstan during the elections to the State Duma in 2016

But most often “carousel riders” migrate between different polling stations. You can identify them by watching not one, but several video recordings obtained from nearby polling stations. This makes it possible not only to identify individual persons, but also to estimate the number of groups, to discover the routes and even roughly estimate their effect on the final results. In order to do that volunteers need to have good visual memory. The complexity of the process is no less than in the process of turnout analysis.

The study of video recordings is not limited to these methods. Video materials can be used to analyse controversial or even conflict situations arising at polling stations by making it possible to evaluate the actions of commission members and their competence. Recordings can be used as evidence in challenging unlawful actions taken against observers.

Altogether, the analysis gives an idea of how falsification works. This knowledge is necessary for the training of election observers. The unique data on the dynamics of voter turnout during the polling day can also be interesting. In each region or country, voter turnout draws its own curve, in Russia the most popular time is before lunch, in Armenia it is after.

The average turnout in Kazan during the elections of September 18, 2016




по вертжльной оси - процент от итоговой явки

Составитель Габдульвалеев А.С.

# 10. How to observe elections efficiently using video recordings?

The key element of effective video observation, besides getting access to video recordings, is to have committed and motivated observers.

During two video observation missions of Presidential Election in Russia in 2018, organized in Poland, observers were motivated by two main factors:

- Their willingness to develop their knowledge of the political situation in Russia, and
- Their ambition to increase their competences as observers through observation and analysis of election process in a number of polling stations.

During the mission, their wish to identify as many cases of election violations as possible, became another motivation factor.

After completing video observation in as many as 10 different election commissions, some observers expressed their opinion on the most important factors determining the efficiency of election video observation.

## 10.1. The sequence of election commissions under observation

Inexperienced observers should start their first observation in commissions where the election has been potentially falsified or in a commission located in the region where the likelihood of election violations is rather high (in our case it was the Northern Caucasus region). Low real turnout in such a region makes it easier to identify violations, like inflating the turnout. Additionally, selecting such an interesting region allows the observer to witness unusual situations such as children folk bands' concerts or voters dancing with members of the election commission. For an inexperienced observers, such colourful situations or a high degree of electoral fraud can be motivating to continue their journey into the world of election observation.

However, inexperienced observers tend to extrapolate what they have noticed in the commission they observed onto the entire country. In order to avoid that, such observers should observe commission with a much lower likelihood of potential fraud as their second one. It has to be noted that the turnout in „good" commissions is usually much higher what makes the observation more demanding (more voters = more difficult to count). On the other hand, this gives the observer the best opportunity to learn how the work of a transparent and professional election commission should really look like. Thus, the biggest reward for an observer monitoring the work of such a commission is when the observed turnout corresponds to the official data and no irregularities are identified. The choice of the third and the following election commissions is not of such significance and should reflect the objective of the election observation mission.

## 10.2. Methods of observation

Proper observation of polling stations should start 30 minutes before the opening of the station (enough to see the process before the start of the vote and to identify the commission members in order to distinguish them from voters) and finishing up to 60 minutes after closing (to see whether no one is voting after the closure of the polling station and whether no one is adding votes to the ballot box). The observation of vote counting should be limited to observers who know the language of the country where the observation is undertaken.

Each observer should be able to work out his/her own method of work adapted to the time available to him/her. The observer should be using the video acceleration function because not all parts of the recording should be viewed at a normal speed, especially in polling stations where only few voters can be noted or none at all.

One of the main advantage of video observation is its time flexibility. Some observers may prefer short daily observation, e.g. one hour every day, some may prefer to observe for longer time, i.e. for 3-4 hours but not every day. Regardless of the chosen method of observation, coordinators have to set a deadline for the completion of the work what would serve as additional motivation to complete the work on time. Observation of one polling station may take between four hours in the case of small commissions to even eight hours in polling stations with high number of registered voters.

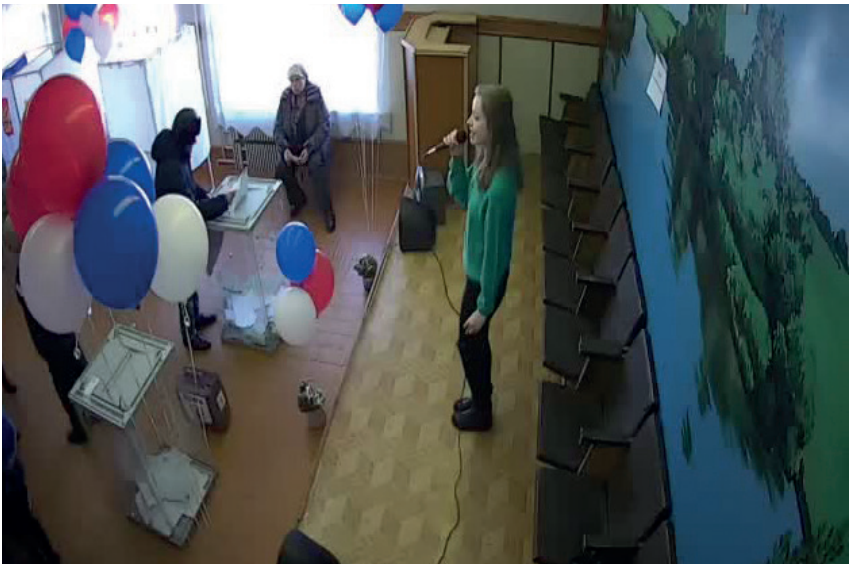
Observation results should be recorded in a systematic way, both in case of turnout and in the case of electoral violations. In case of turnout, it seems wise to report every 15-20 minutes, while in the case of electoral irregularities – the important thing is their exact description, identification of participants and the exact time of the incident.

## 10.3. Turnout analysis

The most significant irregularity observed during the Russian presidential election was the difference between the actual number of voters (counted) and the official, reported turnout. The methods of counting the turnout vary depending on the arrangement of the cameras in the polling station as well as the type of ballot boxes (standard ballot box, Optical scan voting system, Electronic voting machine).

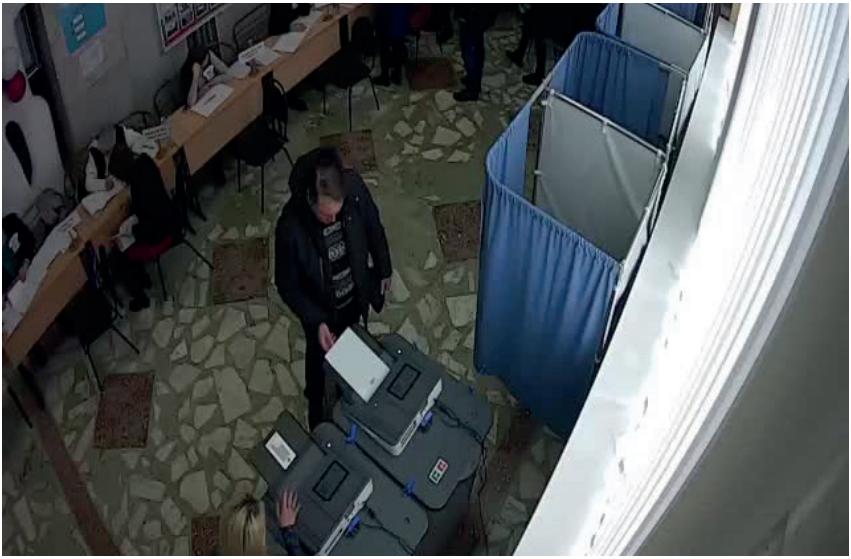
In case of a standard ballot box, the moment the voter casts the ballot paper into the ballot box should be considered as evidence of voting. In a situation when the view of the ballot box is somehow obstructed (big crowd, bad camera position), counting voters leaving the voting booths and going to the ballot box or counting voters who received the ballot paper from the election commission should be considered an alternative method of monitoring the turnout.

In case of optical scan voting systems, assessing the real turnout is even simpler because each voter must spend at least few seconds next to the ballot box before the machine accepts his/her ballot paper. One should be



An example of standard ballot-boxes

aware that this type of ballot boxes does not accept incorrectly placed ballot papers forcing the voter to re-insert the ballot paper, which may look like multiple voting. However, this type of ballot boxes prevents ballot stuffing.



An example of optical scan voting machines


An example of electronic voting machines

Monitoring turnout in polling stations where Electronic voting machines are installed seems to be the most difficult due to the fact that those devices are using magnetic chip cards. The absence of paper ballots makes it more difficult to prove that a vote has been cast. Such devices often break down and/or magnetic cards do not work which makes it impossible to cast the vote. In such situation voters usually try to vote using another device or as for their magnetic card to be replaced. As a result, the observer might become confused as it is difficult for him/her to assess whether the voter has already casted the vote or is still going to do so. In case of frequently broken machines and/or magnetic cards not working, the opportunity to falsify the vote increases. In addition, assistance provided by a commission member to the voter next to the machine additionally complicates the observation. The observer cannot be sure whether it is the voter who chose who to vote for or the election commission member did it when pressing different buttons on the machine's screen pretending to help the voter. In situation when such difficulties arise turnout can be monitored by counting the number of magnetic cards issued to voters.

## 10.4. Observation of ballot stuffing

The most common election process irregularity observed was ballot stuffing. It could only be observed in commissions where standard ballot boxes were installed. Ballot stuffing can practically be done by anyone present in the polling station: election commission members, observers, police officers or voters themselves. There are many situations when ballot stuffing can be detected:

1. Area around the ballot box. Apart from completely obvious cases, when ballot stuffing is not concealed, it can be detected via:
   a. seeing several ballot papers falling into the ballot box;
   b. seeing voters having problems with pushing a few folded ballot papers into the ballot box (often the holes in the ballot boxes are quite narrow what makes it difficult to push through more than one ballot paper);
   c. seeing unusual behavior of voters (covering the ballot box, looking sideways).
2. The area between the table of the election commission and the ballot box. The intention to stuff the ballot box can be discovered by observing:
   a. An unnatural movement of paper in the hands of the voter, indicating that he/she is holding more than one ballot paper;
   b. The process of filling out the ballot paper in the voting booth that takes much longer than it would for a single ballot paper;
   c. Filling in more than one ballot paper while in the field of view of the camera.
3. The table of the election commission. The work of the election commission members can be an indication of preparation for ballot stuffing:
   a. election commission members can put aside a pile of ballot papers in order to give them to the 'selected' voters or to co-workers;
   b. election commission members may also add prepared and filled out ballot papers to the ballot box after the polling station has been closed, i.e. when the ballot papers are taken out of the ballot boxes for counting.

## 10.5. Observing multipleand carousel voting

How to identify voters voting multiple times?

- In case of voters - attention should be paid to repetitive sightings of distinctive elements of clothing.

- In case of election commission members and observers - record of exact time when they voted should be kept.

Election carousels (a group of people moving between polling stations to cast votes multiple times) can be indicated by the following:

- Presence of an organized group of voters, often consisting of people of only one sex, in the polling station. Such unnaturally large increase in the number of voters in the polling station is particularly noticeable in the afternoon, when voters' activity is traditionally rapidly decreasing.
- Presence of a group of people casting their votes unnaturally fast (sometimes even forgetting to fill out their ballot papers) and leaving the polling station abnormally quickly.
- Previously described phenomena such as strange behavior of election commission members as well as groups of people hiding the ballot box from view of the camera

## 11. Recording uncovered violations

After the videos have been processed, it will be clear in which polling stations there have been instances of fraud, and in which there haven't. Many falsifications can be noticed: discrepancy between the real turnout and the official one, specific violations or even crimes, committed by the members of the commission. Such results need to be recorded in written form in order to present them to the public afterwards.

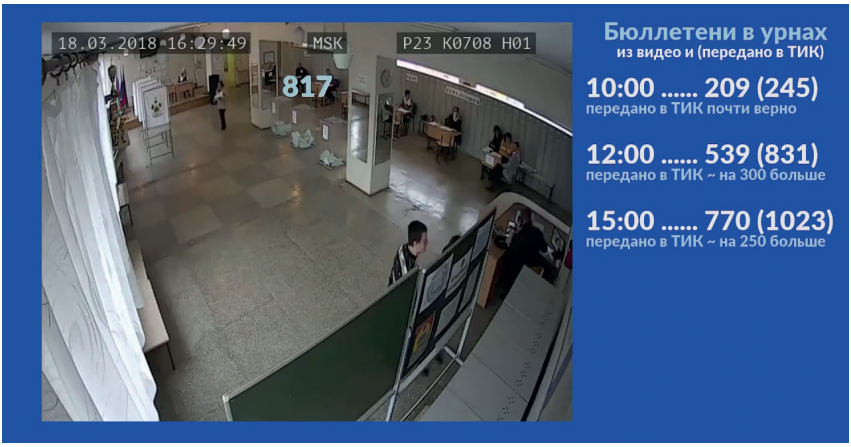
The easiest way to do so is to write an article where all the data obtained by volunteers will be summarized. A tabular or graphic comparison of official and observed data is transparent and clear.

However, it is videos that generate the greatest response from the public. Even one video can be a good confirmation of the accuracy of the study and an illustration of the method.

#### Turnout discrepancy

Try to imagine a video accelerated hundreds of times. There is a display, showing the number of ballots thrown into the ballot-boxes (real voting), this number is changing all the time when somebody casts a ballot, or every

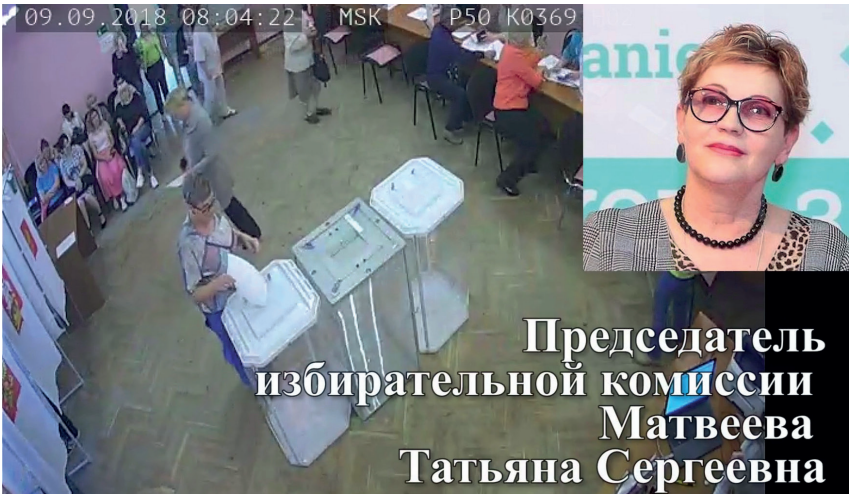
15 minutes. There is also another number – official numbers of votes. In honest polling stations these numbers should correspond with one another.




An example of the presentation of the found discrepancy (using python and ffmpeg)

## 11.1. Ballot-stuffing

Videos showing cases of ballot stuffing are the most spectacular ones. It is advisable to present them along with a description and choose only those moments when the fact of stuffing or multiple voting is clearly visible. That is, you need to capture the exact moment of casting the ballots into the ballot box.




An example of a video with ballot stuffing captured. The name of the member of the PEC was used in the description

### 11.2. "Carousel voting"

Multiple voting must be documented at the moment of casting the ballot into the ballot box. It is a common mistake when analysts show the same person going to different polling stations at different times. In fact, a violation is the fact of multiple voting, and not the physical presence at several polling stations, therefore it is important to always capture the irreversible moment of casting the ballot into the ballot box.

### 11.3. Rewriting the data

If the observer managed to see the numbers in the protocol or the results were announced and differ from the official ones, this can also be included in the video report. Sometimes commissions commit other violations, which are worth to capture in the video. In the past there has been one interesting situation observed: another protocol was hidden underneath the main one.

### 11.4. Programs for working with video

It is better to use video editors that do not require payment so it is easy to delegate work without being tied to a license. LightWorks editor has a rich functionality. For simple actions such as cutting, pasting, or overdubbing, ffmpeg can be used, administered from the command line. There are many other programs for editing video: Avidemux, Movavi Video Editor and others.

## 12. Distribution

Proofs and pieces of evidence found through video monitoring can be published separately, in small groups or in large studies.

**Single violations. Micro-investigations**
Publications revealing the violations committed during the election day are most often made by volunteers themselves. They have a number of advantages::

- The flow of small messages produces a good effect in social networks;
- Publishing his/her own micro- investigation motivates a volunteer
- Law enforcement agencies are required to respond to every violation;
- Falsification in a particular polling station should result in the annulment of the results
- Low labor intensity;
- In large studies it is hard to pay attention to every violation, so a lot of cases could be skipped by the reader.

Examples:
- "Ballot stuffing, March 18, 2018, Lyubertsy". The first recorded stuffing in the Presidential election of Russia in 2018 – https://www.youtube.com/watch?v=VvxhVJXlhsI
- "PEC №1058 of Makhachkala. Go till the end!". There was fivefold falsification of results – https://www.youtube.com/watch?v=zfEEhSbA1BI
- "The second forged protocol in Nagorny – PEC №1909 (Moscow)" – https://www.facebook.com/notes/1690789274338399/

**Small violation groups**

Such investigations are useful for demonstrating the level of electoral crime in a city, or among a group of people. They can be conducted by the volunteers.

Examples:
- "There were falsifications in every polling station in Roshal, Moscow region" — https://www.golosinfo.org/ru/articles/143198
- "How I identified the people I know among falsifiers in the Balashikha election" — https://vk.com/@8966917-svoi-sredi-chuzhih-chuzhoi-sredi-svoih

# Appendices

## A.1. The organizational process of video broadcasting

Video broadcasts are usually organized by electoral commissions. Their goal is to enhance the credibility of the electoral process, increase their transparency, subdue protests, and legitimize the results. Video broadcasting helps to quickly and conclusively prove or deny any information about possible violations, as well as to take measures to eliminate them.

Our recommendations are based on the assumption that electoral commissions work in good faith, and their members adhere to these objectives and seek to make video broadcasting as effective and useful as possible.

When writing guidelines, we were analysing the experience of organizing broadcasts in Russia (in 2012, 2016, 2018), Ukraine (2012), Armenia (2017, 2018) and Azerbaijan (2018).

## A.1.1. Recommendations to the organizers

What you need to remember while organizing video broadcasts from polling stations.

**1. The quality of the video stream**

You always need to strive for a balance between image quality and system capacity. It is also important to take into account the capabilities of the video recording and transmission system of a polling station, the broadcast collection system at the central website, and the computer capacity of the end user - the citizen watching the broadcast. This balance should be estimated during testing.

Video with a resolution 640x480 and a frame rate of 24 fps provides sufficient quality to monitor the process of voting in a polling station without any problems. For example, broadcasting with such parameters was conducted at the Russian presidential election in 2018.

A video resolution 1920 × 1080 (known as FHD or "Full HD") and a frame rate of 60 fps, which was used in St. Petersburg in 2014, caused problems, connected to channel overload. This quality, in our opinion, is unnecessary.

It seems crucial for us to take into account the number of recordings. They must be stored for their further analysis by the members of commission, political actors and independent observers. The quality of the video determines the size of the files, the amount of storage required, and therefore the storage cost.

**2. "Watermark"**

Watermark is a kind of marker covertly embedded in a noise-tolerant signal such as audio, video or image data. It is a useful feature that simplifies the indication of the location of a polling station and time of broadcast. In Russia, the marker line was placed in the upper part of the video, which included the current time, region code, commission number and a camera number. There were no such watermarks in Armenia in 2017, which complicated the identification of the commission and the further analysis of incidents.

**3. Audio track**

It is essential to cover not only broadcast, but to provide the audio signal as well. Audio does not overload the channel. It provides additional opportunities for understanding and monitoring the voting process.

**4. IP blocking**

During 2018 election Russia was blocking foreign IPs. It is difficult to explain why it was done, as the goal was transparency of elections. On the other hand, bypassing IP blocking is not technically difficult, moreover, there are several different ways to do so. This approach discredits the organizers of the broadcasts.

**5. IP Blocking for observation of many polling stations**

In the 2018 presidential election in Russia, there were reports of blocking users, if they watched several polling stations in a row. Such restrictions are a senseless obstacle for public engagement. It is obvious that a citizen should be able to study videos from any polling stations and as many as he likes.

**6. Time delay**

There were cases when the delay in broadcasting was misleading to observers. For example, during sealing of ballot-boxes or closing procedures. Delays in transmission should be minimized and indicated in the description.

**7. Location of cameras**

The following areas in a polling station should be visible for online observer:

- Location for voting
  As a rule, it is an area near ballot boxes or electronic devices for voting.
- An area where a voter receives their ballot (usually – the table of commission)
- An area where there will be counting of ballots
  It is usually the centre of a polling station.
- Enlarged protocol form (Russia)
  It is necessary that protocols are placed in the areas visible for cameras

**7.1. Mistakes during locating the cameras**

- ...concerning the maintenance of the principle of secrecy of the vote
  There are cases when the camera was placed directly above the voting booth, which could violate the secrecy of the vote.
- ...concerning the visibility of every ballot box
  There were cases when some of the ballot boxes were invisible for the cameras, which led to errors in the independent turnout estimation. In

such cases, possible violations will not be recorded, which makes the broadcast pointless.

**8. Precautions against sabotage**

There were cases when fraudsters used a variety of tricks to prevent the broadcasting:

- They placed balloons or flowers in front of the cameras in such a way that nothing could be seen. Most often, such actions are used to block the broadcast temporarily. After violations have been committed, they put these objects in a different place. There should be punishments specified in the regulations of the commissions for blocking the view of cameras even for a short period of time.
- The cameras were turned away in such a way that instead of voting process there was a wall or a ceiling. It is also necessary to introduce punishment for such actions and make sure that the camera is fixed rigidly and reliably before the day of voting.
- They disconnected cameras from the electrical system. It is necessary to provide a regulation that will state that cameras can be switched off only by authorized persons. For unjustified disconnection there should be punishment introduced. Equipment for video broadcasting should include uninterruptible power supply (UPS) devices.
- They turned the light off in the moments of ballot stuffing, and then turned it back. There is infrared illumination in the cameras in Russia, which made it possible to record violations even in this case. So that is why IR illumination should be a requirement when purchasing cameras.
- They turned off the broadcast. It is technically possible to sabotage the broadcast by blocking the channel. In this case there should be parallel recording provided.

**9. Access to broadcasts and recordings**

In terms of transparency of the electoral process, it is pointless to install cameras and not to provide access to them for political contestants and citizens at the same time, as, for example, it has happened in Azerbaijan. The election process is public. Observation of it is provided by the legislation of the vast majority of countries. Online observation is no different from the direct observation at the polling station, and should not be restricted.

### 9.1. Access to the broadcast on voting day

Access is provided on several websites of the CEC or on the websites of electoral commissions. In Russia there are several possibilities for online observation:

- Access for ordinary citizens. Users can choose any commission and watch it in real time after providing some details about them (sometimes they are not obliged to provide any details at all).
- Access for electoral commissions and political contestants. The organizers provide special access to these categories of citizens in order to resolve the possible conflict situations and control the work of commissions. This type of access allows to rewind the recording back and study what happened in the commission at a particular moment.

### 9.2. Access to video broadcast recordings

During the voting day the live broadcast is being recorded. At the end of the voting, all stakeholders should get access to these recordings. In terms of transparency any restrictions here are unacceptable. Attempts to conceal what has already been made public discredits the organizers of the broadcast and undermines the credibility of the election.

### 9.3. Access to videos for citizens

On voting day as well as after it, citizens have the right to observe and study the voting process. Such access could be provided on request or on in the public domain of a relevant website.

In Russia, in 2012, when the first broadcast during the presidential election was organized, citizens could receive 30 minutes recordings on request. After 2012, the access to the archive of videos was in fact restricted.

### 9.4. For political contestants and members of electoral commissions

Participants in election and election commissions of different levels should have direct and unlimited access to the recordings. This helps to resolve any disagreement, confirm or deny reports of violations, and monitor how commissions follow the rules and procedures.

### 10. Storing the recordings

The recordings retention period shall not be less than the maximum limitation period or limitation of criminal prosecution for violations of the

electoral legislation. It should not be linked to the deadlines for contesting the election results.

## A.2. Artefacts and pieces of evidence. What can we learn from online observation?

The data collected by the volunteers can be presented in a variety of ways.

**1. Simple tables**

The results of each calculation are recorded in the table and described in detail. It is essential that for each case of violation there are data and details. The disadvantage is the lack of clarity and understanding of the real level of fraud. As a rule, absolute cumulative figures depend on the number of the recordings watched, and not only on the level of falsification in the array under study.

Example:

- The table of falsifications https://tatobservers.ru/analiz-vyborov-2018-goda/analiz-vyborov-2018-godatablica-falsifikaciy/

**2. Expanded Gabdulvaleev diagram**

The results can be presented graphically. For example, by sorting the data of the numbers of the region, then the numbers of TECs and then the PECs, we get an approximate administrative-geographical sorting.

If we show in such a chart unverified official data, confirmed and denied, as well as a real turnout, then the graphics that we obtain, will demonstrate the level of fraud and their prevalence in the studied region. The demonstrativeness of such diagrams depends on an even distribution of the sample.

**3. Screenshots**

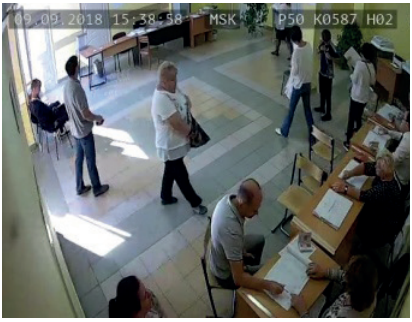
Multiple voting is well seen by screenshots if it is clear that:

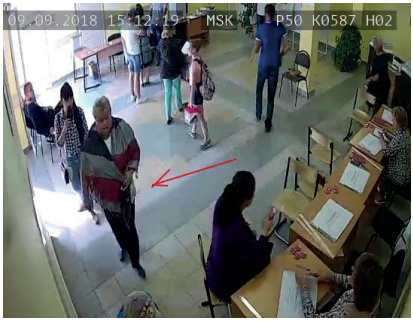
- It is one and the same person on them;
- The location or time of action varies;

- actions are significant in terms of voting (forging signatures, receiving and casting a ballot).

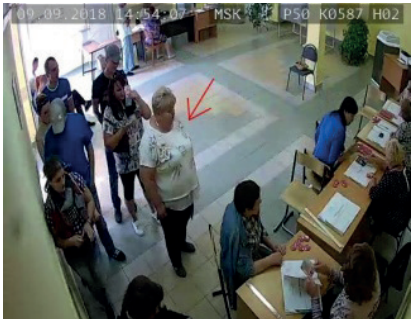
### 3.1 Examples of unsuccessful screenshots

The photo below shows that the woman came to the polling station with criminal motives in mind, but not a single action significant for voting was recorded. (PEC 587, election of the Governor of the Moscow Region in 2018).

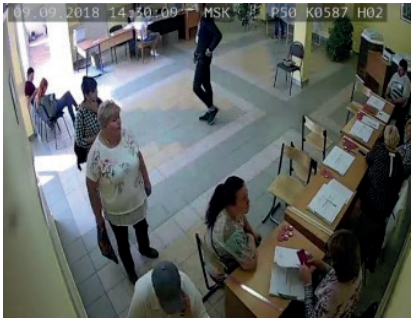


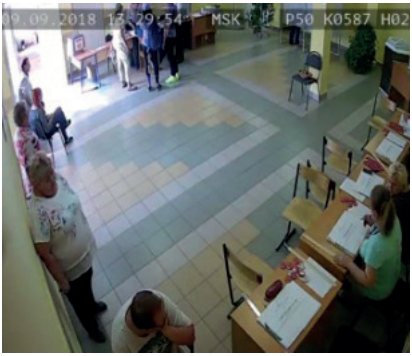



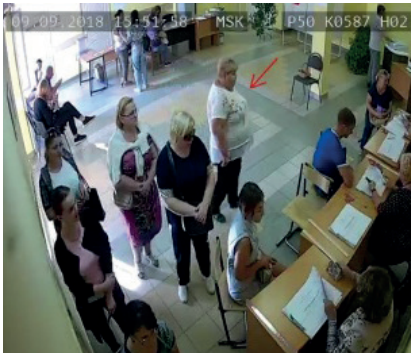






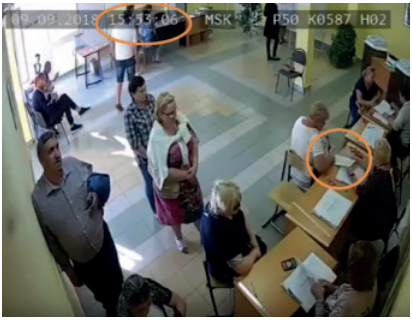


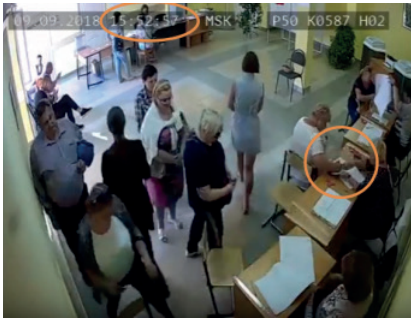



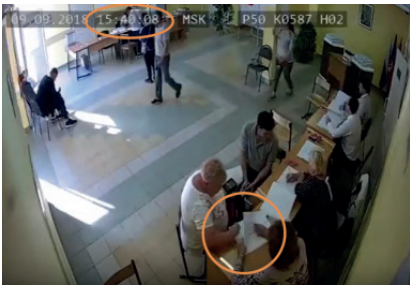



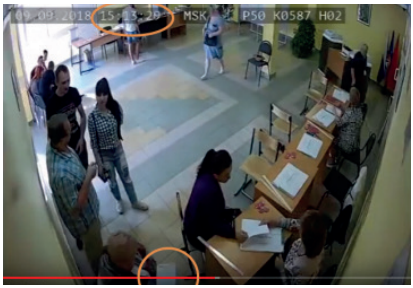

### 3.2 Well-executed Screenshots

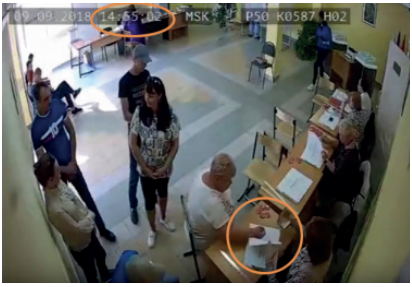
The same crimes on the same official video could be recorded differently. Different times and actual criminal acts are visible: forgery of the signature, illegal issuance of ballots.

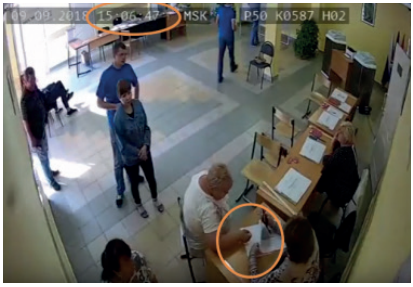


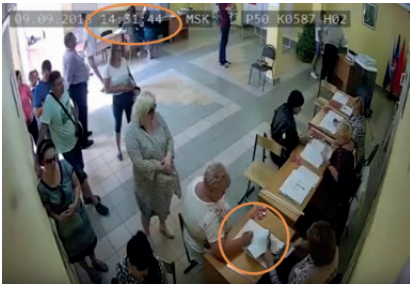





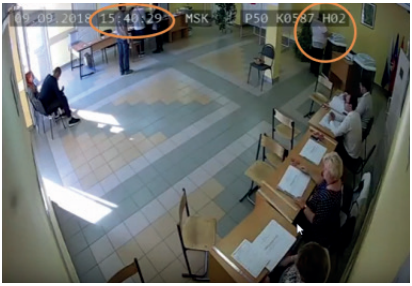



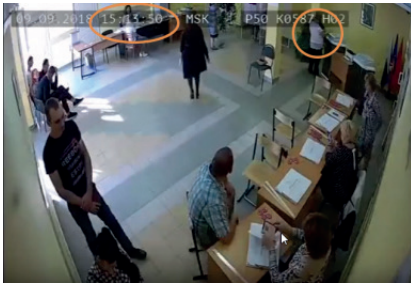



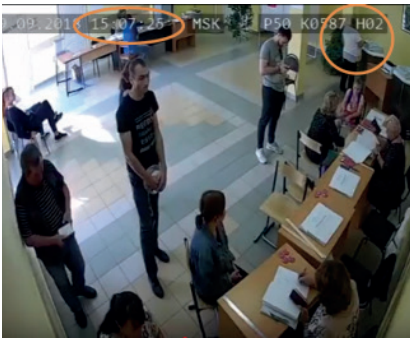



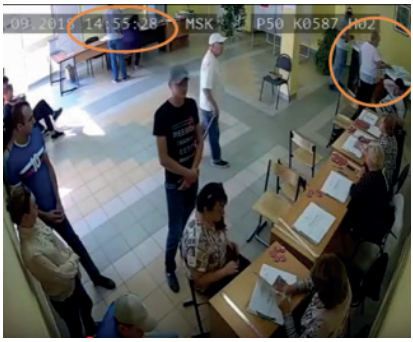



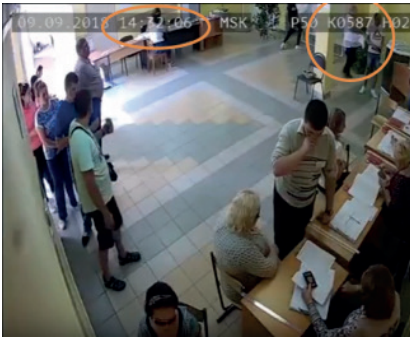

The illegitimate vote:

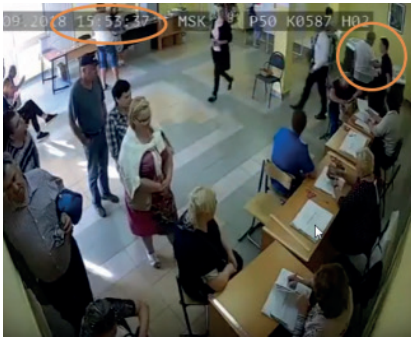




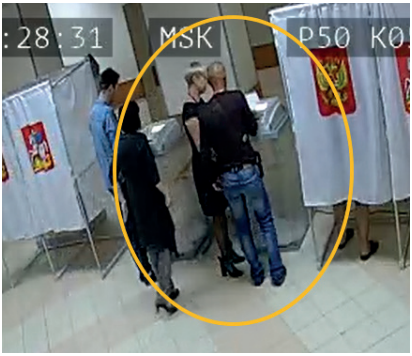



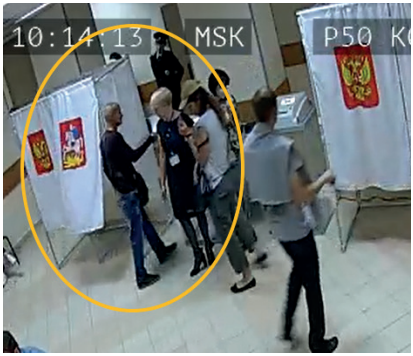

Screenshots help to demonstrate:

Illegal signing, process of issuing and receiving of ballots. The multiplicity of such actions already speaks of their criminal nature. The crime is committed by both sides: a member of the commission and an alleged voter.

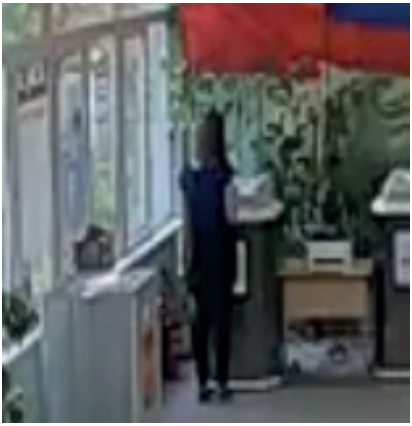


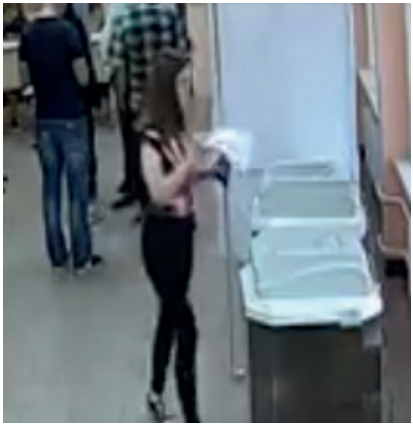
Multiple voting on the same PEC at different times




Multiple voting at different polling stations

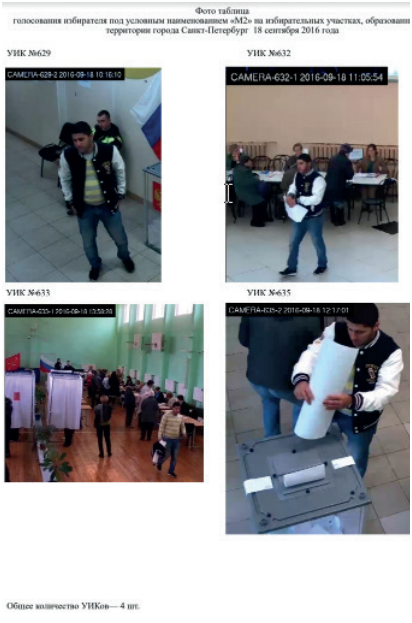


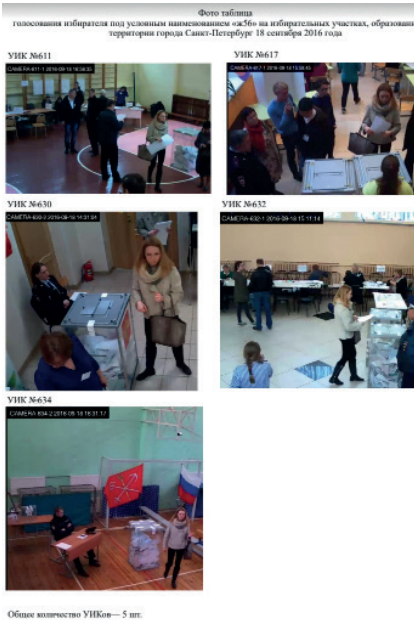




### 4. Photo-tables

An interesting method was used by video observers in St. Petersburg, which consisted of making photo-tables with images of dozens of "carousel riders" who committed hundreds of violations.




https://goo.gl/txcXXD (photo-table with a man)
https://goo.gl/gl743s (photo-table with a woman)

**5. Screenshot of an enlarged form of the protocol**

Sometimes a screenshot of an enlarged form of the protocol can be used to demonstrate falsification by comparing the results on it with published official data.

**6. Demonstration of violations with the help of video**

**6.1 Short videos**

With the help of short videos, it is possible to show stuffing, attacks on the observer and "misrecording". The possibilities of screenshots are limited, more than that they can be found unreliable. With the help of the video you can show how events were developing during some period of time. It is almost impossible to forge a video.

Example: multiple voting at different PECs during the election of the Governor of the Moscow Region in 2018.

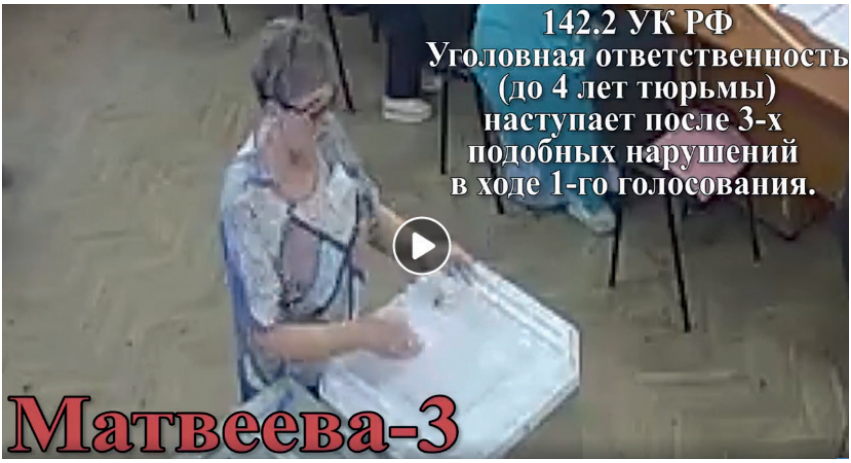

https://youtu.be/Y4POm2WjGIE

Example: an observer is being beaten at PEC 1125 in the Republic of Dagestan in the presidential election of Russia in 2018.


https://youtu.be/3DPo2G_MeJE

**6.2 Short Investigative videos**

A short video with freeze frame shot, close-up pictures, names of fraudsters and references to the articles of the Criminal Code.




https://www.facebook.com/watch/?v=886709021674691

**6.3 Analysis of the video material frame-by-frame**

In some cases, the evidence of a violation appears in the frame for a fleeting second. Therefore, it is possible to detect and demonstrate a crime only by analysing the video frame by frame.

Example: PEC 268 in the Kemerovo Region, Russian presidential election 2018

https://www.youtube.com/watch?v=i8WGtvJoRJo

### 6.4 "Stereo" Videos

It is a kind of videos that show the voting of the same people at different times made by “Observers of St. Petersburg”.


https://www.youtube.com/watch?v=PN1p1dguLkQ

Illegal voting. PEC №1613, St. Petersburg, the presidential election in Russia in 2018.

### 6.5 Video Verification

"Invisible" (undetectable but deductible) violations. They can only be detected by the "logical inference" method, i.e. deduction. It is difficult to demonstrate such methods to the public quickly, but there are attempts to make verification videos. The viewer will understand that a crime has occurred in 30-40 minutes, although he will not be able to see the actual moment of the crime.

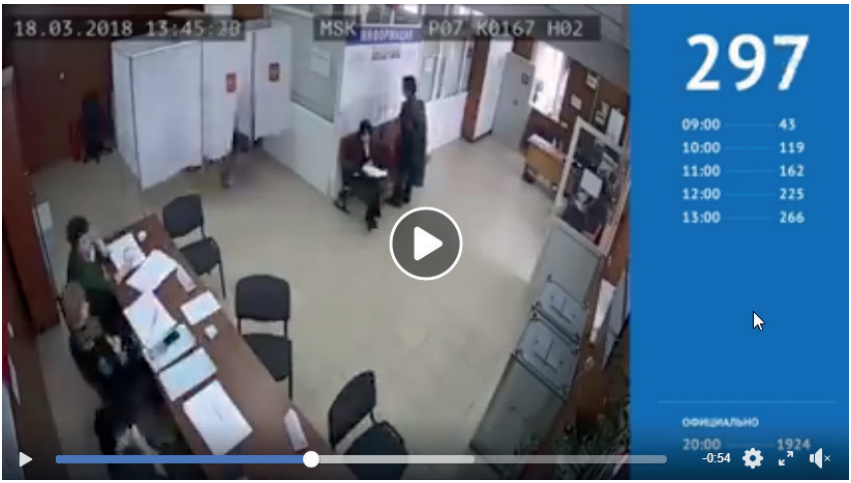

https://www.youtube.com/watch?v=5mB1RuJDLeQ

It is useful to provide links to official results so that the viewer can finally be convinced that the crime has taken place.

### 6.6 Illustrative Videos

It is a kind of videos that show the work of video observers. They are not so suitable for demonstrating violations as the speed is too fast for that. But such videos are useful for motivating and mobilizing volunteers, because they are short and demonstrative.

An example of an illustrative video:




https://www.youtube.com/watch?v=sAOB-_Uaveg

## Disclaimer



www.odpowiedzialnapolityka.pl

www.observersinaction.eu

OBSERVERS IN ACTION

Political Accountability Foundation

EU-RUSSIA CIVIL SOCIETY FORUM
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