राजस्थान सरकार
निर्वाचन विभाग

क्रमांकः एफ.8(2)(26)निर्वा/2014/8942   जयपुर, दिनांकः 6-8-2014

प्रेषकः मुख्य निर्वाचन अधिकारी,
        राजस्थान, जयपुर।

प्रेषितिः जिला निर्वाचन अधिकारी,
        (कलक्टर) झुंझुनूं, भरतपुर, अजमेर एवं कोटा ।

        विषयः– विधानसभा निर्वाचन क्षेत्र 26–सूरजगढ़, 75–वैर (अजा), 102–नसीराबाद एवं
               190–कोटा दक्षिण के उप चुनाव–Multiple measures to keep a watch on
               polling prcess at Polling Stations to ensure free and fair elections –
               Micro Observers, Video camera, Still camera, Web casting etc.

महोदय,

        उपरोक्त विषयान्तर्गत मतदान दिवस के दिन मतदान केन्द्रों पर निगरानी रखने के संबंध में
आयोग के आदेश क्रमांक 464/INST/2014-EPS दिनांक 21.03.2014 की छाया प्रति सूचनार्थ एवं
आवश्यक कार्यवाही हेतु प्रेषित की जा रही है।

संलग्नः उपरोक्तानुसार।

                                                        भवदीय,

                                                   (पी.सी. गुप्ता)
                                            संयुक्त मुख्य निर्वाचन अधिकारी
                                                राजस्थान, जयपुर।

क्रमांकः एफ.8(2)(26)निर्वा/2014/ 8942   जयपुर, दिनांक 6-8-2014

        प्रतिलिपि निम्नलिखित को मय आयोग के आदेश की छाया प्रति सहित सूचनार्थ एवं
आवश्यक कार्यवाही हेतु प्रेषित है–
        1. पुलिस अधीक्षक, झुंझुनूं, भरतपुर, अजमेर एवं कोटा शहर।
        2. विधानसभा निर्वाचन क्षेत्र 26–सूरजगढ़, 75–वैर (अजा), 102–नसीराबाद एवं 190–कोटा
           दक्षिण के लिए रिटर्निंग ऑफिसर ।
        3. समस्त अधिकारीगण, निर्वाचन विभाग, राजस्थान, जयपुर ।

संलग्नः उपरोक्तानुसार।

                                            संयुक्त मुख्य निर्वाचन अधिकारी
                                                राजस्थान, जयपुर।

ELECTION COMMISSION OF INDIA
Nirvachan Sadan, Ashok Road, New Delhi - 110001

464/ INST/2014-EPS   Dated 21st March, 2014

To,

Chief Electoral Officers
of all States/ UTs

Sub: Multiple measures to keep a watch on polling process at Polling Stations to ensure free and fair elections – Micro-observers, Video camera, Still camera, Web casting etc. - reg.

Sir/ Madam,

The Commission has issued instructions, from time to time, on various measures to keep a watch on the polling process at Polling Stations, to ensure conduct of free and fair elections. These measures include use of Micro-observers, video cameras, still cameras and web-casting.

In view of the announcement of the General Elections to Lok Sabha, Legislative Assemblies of 4 States and Bye-elections to fill up the casual vacancies in 8 States, consolidated instructions are being issued, in supersession of all existing instructions, on the use of Micro-observers, video cameras, still cameras and web casting at Polling Stations, which are as follows:

1. **Critical Polling Stations must be covered at least by one of the measures to keep a watch on polling process –**

    a. Considering the limitation on availability of central Armed Police Forces (CAPFs), Commission has decided that critical Polling Stations shall at least be covered by one or more of the following measures to keep a watch on the polling process, as non-CAPF measures:
    i.   Micro-observer
    ii. Video camera
    iii. Still camera
    iv. Web casting

    b. Allocation of force to Polling Stations is done on the basis of sensitivity analysis. Even at those Polling Stations where CAPF is deployed, the measures given in (a) above can be put in place to keep a watch on the polling process.

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Micro-observers at Polling Stations –

a. **Category** of persons who can be appointed as **Micro-observers** – The following category of persons can be appointed as Micro-observers:

  I. Government of India employees, not below group-C.
  II. Employees of Central Public Sector Undertaking, not below group-C.

b. **Preparation of database of Micro-observers** - District Election Officer (DEO) will prepare a database of all Government of India and Central Public Sector Undertakings employees in the district. The database shall contain the name, designation and organization of the employee. The database will also have the elector details of the employee including the Assembly, Part and serial number in the electoral roll and the EPIC number. In addition to this, the postal address, telephone number, mobile number and email ID of the Micro-observers should also be included in the database.

c. **Sharing of Micro-observer database with other districts** - There may be a situation that some districts do not have adequate number of Government of India or Central PSU employees to be appointed as Micro-observers. DEO of such a district shall get the database of Government of India or Central PSU employees posted in neighboring districts, with the help of the Divisional Commissioner, in States which have a divisional commissioner system and with the help of CEO in other States. In case a Micro-observer has to go to another district on poll duty, arrangement for proper stay of such Micro-observers must be made. Similarly arrangements for their travel from the district of their work to the district of their poll duty must also be made by the DEO.

d. **Micro-observers can be used on more than one poll day** - In case of multi-poll days' elections and in case of shortage of Micro-observers they can be used for poll duty on more than one poll day. The convenience, safety and logistics of movement must be taken into account while putting them on duty for more than one poll day.

e. **Randomization of Micro-observers** - The list of Polling Stations where Micro-observers are to be appointed shall be prepared by the DEO in consultation with the Observer, depending on the sensitivity analysis of Polling Stations and availability of Micro-observers. The available Micro-observers will then be randomized in the presence of Observer, among those Polling Stations. The conditions for randomization of Micro-observers will be the same as that of Presiding Officers, viz. they shall not be posted on duty in a Polling Station within the same Assembly Constituency, where they are enrolled as voters or where they are working. All efforts should,

however be made to put them on duty in the same Parliamentary Constituency where they are enrolled as voters, to enable them to exercise their franchise through EDC. They shall be informed about the exact Polling Station where they will be on duty only on the day of departure.

f. **Training of Micro-observers** - Micro-observers should be given a detailed training on the rules and procedures of the entire polling process. In addition, they must also be trained on the work of observation, which is expected of them, and the method of filling the report which they are required to submit. There should be at least two rounds of training for Micro-observers. They should be trained by the Observers. Illustrative training material for the Micro-observers is available on the ECI website under the link "Training Material at Sl. No. 14 Micro Observer".

g. **Logistics for Micro-observers** - The District Election Officer shall be responsible for providing logistics to Micro-observers. One Nodal Officer for Micro-observers shall be appointed for each district by the DEO. Micro-observers will reach the dispatch centers on their own. From the dispatch centers they will be sent with the polling team to the Polling Station. They will return to the receipt center with the polling teams. Each Micro-observer shall be given a photo identity card by the DEO to ensure his/ her access to the Polling Stations.

h. **Honorarium to Micro-observers** - Micro-observers shall be paid an honorarium of Rs 1000/- for each Poll day of duty. This shall be in addition to the admissible TA and DA, and the food allowance as per the norms of the State and their parent Department. The honorarium, TA, DA and food allowance should be paid by the Returning officer, in cash, to the Micro-observers at the receipt center itself.

i. **Exercise of franchise by Micro-observers** - Micro-observers are entitled to EDC or postal ballot like any other person on poll duty. The DEO shall send Form-12 and Form-12A to every Micro-observer along with the appointment order. Micro-observers shall be asked to bring the completed Forms on the first day of training. The completed forms shall be sent to the concerned Returning Officer by the DEO. The Returning Officer shall issue EDC or postal ballot depending on eligibility and ensure that it is delivered to the Micro-observer on the second training day. All instructions of the Commission on Postal Ballots and EDC for employees on poll duty shall also apply to Micro-observers.

j. **Micro-observers in multi-polling station locations** - In case the location at which a Micro-observer is put on duty has more than one Polling Stations, the Micro-observer shall be responsible for all the Polling Stations at that location. There is no need to post separate Micro-observers in

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Polling Stations at one location. The Micro-observer shall divide his time between Polling Stations and will visit all the Polling Stations within the same campus at frequent intervals. He shall make it known to the polling agents at each Polling Station that he is available in case they want to bring anything to his notice.

k. **Supervision of the work of Micro-observers** - General Observers will supervise the work of Micro-observers and shall be in close touch with them. Micro- observers shall report to the Observer alone and not to other election officials.

l. **Work to be done by Micro-observers on poll day** - Micro observers should reach the Polling Station at least one hour before the start of poll. They will do the following at the polling station -

   i. Assess the preparedness at the Polling Station.
   ii. Check the availability of Basic Minimum Facilities (BMF) at the Polling Station and certify, before the start of Polling.
   iii. Watch the mock poll and see that it is carried out as per the instructions of the Commission.
   iv. See that the votes in the CU are cleared after the mock poll and before the start of actual poll and that mock poll certificate is signed by the Presiding Officer.
   v. During the poll day he should regularly note down the important points for his report in the format given at Annexure-2.
   vi. It is made absolutely clear that in no case the Micro observer will act as Presiding Officer or the polling officer. His task is to observe that the election process is being carried out in a free and fair manner and there is no vitiation of poll.
   vii. During the process of observation on the day of the poll, the Micro-observer shall specially observe and note: -
   - Mock Poll Procedures,
   - Presence of Polling Agents and observance of ECI instructions with regards to them,
   - The observance of entry pass system and access to Polling Station,
   - Proper identification of electors in accordance with ECI guidelines,
   - Identification and recording procedures for the Absentee, Shifted and Dead voter's list (ASD list),
   - Application of indelible ink,
   - Noting down particulars of electors in register Form 17-A including the noting down of the alternate identity documents used for identifying the voter,
   - Secrecy of voting,
   - Conduct of polling agents, their complaints, if any, etc.

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viii. If the micro-observer feels that the poll is being vitiated for any reason, he will immediately bring it to the notice of General observer through any means of communication available to him including mobile phone, police wireless etc.

m. **Report to be submitted by Micro-observer** - After the poll process is over, the Micro-observer will submit a report to the General Observer in the format as enclosed at **Annexure-1**. He shall hand over the report to the General Observer at the collection center in a sealed envelope. He shall also orally brief the General Observer on anything of importance that had happened during the day. General Observers will go through the report submitted by Micro-observers and can seek any further clarifications required.

n. **Micro-observers to remain present at the time of scrutiny** - Micro-observers reports shall also be taken into consideration at the time of scrutiny after poll for taking a decision on re-poll or disciplinary action against any delinquent polling staff. Micro-observers should remain available at the time of scrutiny, for the General Observer to seek any clarifications, if required.

3. **Use of Video Cameras and Still Cameras on the Poll day at Polling Stations-**

   a. **Use of video camera and still cameras at Polling Stations** - Video cameras shall be used at as many Polling Stations as possible to keep a watch on the proceedings. Still cameras shall be used at all those polling stations, where Micro-observers, video cameras or web casting is not being used. In this manner, all critical Polling Stations shall be at least covered by some method to keep a watch on the proceedings.

   b. **Inventory of cameras** - DEOs shall prepare an inventory of all video and still cameras available in the district, which can be used on the poll day at Polling Stations.
      i. An inventory of all video and still cameras available in all Government Departments shall be prepared. All video and still cameras available in all Government Departments shall be made available to the DEO.
      ii. In addition, DEO shall also hire video and still cameras from the market and shall fix the hiring charges, based on prevailing market rates.
      iii. Private videographers or photographers hired by the DEO should not belong to any political party and should not be known sympathizers or supporters or close relatives of any of the contesting candidates or leaders of any political party and should not have been hired by any political party or contesting candidate.

iv. The DEO can also use video and still cameras owned by Government Employees and shall fix the hiring charges for them as well. These may be a little less than the hiring charges for video and still cameras hired from the market.

v. In case video or still cameras are hired from Government Employees, the employee from whom the camera is hired shall also be used for videography/photography using that camera. In these cases, the instructions for randomization of employees on poll duty shall also apply.

vi. In case video or still camera is hired from a Presiding Officer or Polling Officer, it can be used in the polling station where they are on put duty. However, another polling officer will be appointed to handle the camera, so that the Presiding Officer of the Polling Station concerned shall be able to do his/ her work uninterruptedly.

vii. In case there is a shortage of video or still cameras in any district, they shall be taken from the neighboring district, and the Divisional Commissioner or the CEO will facilitate such sharing of video cameras between districts.

c. **Method of placing cameras** - Cameras shall be placed in such a manner that they can record the voters in the queue, and the proceedings in the Polling Station, including the process of identification of voters, application of indelible ink etc. It **must be ensured that secrecy of voting is not violated by the camera in any manner.**

d. **What should be recorded by the camera** - The videographer/ photographer shall make sure that all important events such as mock poll, sealing of EVMs, signing by polling agents on the seals of EVMs, etc. are properly recorded. Any untoward incident at the Polling Station must also be recorded. Specially the following must be recorded: -
   i. Attempts of intimidation of voters.
   ii. Attempts of inducement / bribing of voters.
   iii. Canvassing within 100 metres of Polling Stations.
   iv. Positioning of voting compartment
   v. Basic Minimum Facilities (BMF) at the Polling Station
   vi. Presence of polling agents
   vii. Mock Poll.
   viii. Clearing of Mock Poll.
   ix. Sealing of EVMs.
   x. Process of identification of voters.
   xi. Voters in queues.
   xii. **The length of queue at the time fixed for close of poll.**
   xiii. Any dispute of any nature at the Polling Station.
   xiv. Visit by Sector Officers, Observers and other electoral functionaries or any important person including the candidates.

xv. Replacement of EVM, if any.

xvi. Any incident at the Polling Stations.

xvii. All video and photography should be done with date and time recording so that the real time and date can be verified.

Note: The list above is illustrative and not exhaustive.

e. **Retention of video/still photo recording** - The recording made by video and still cameras shall be kept in video tapes, CDs, Pen drives or other storage devices in the safe custody of District Election Officer. These recordings shall be retained till the period of filing of Election Petitions is over, and in case an election petition is filed, till the final disposal of the Election Petition.

f. **Copies of recording to be given** - Copies of video and still photo recording should be given on demand, free of cost to candidates and on payment of a fee of Rs 100/- per CD to any other person.

g. **Training of videographers/ photographers** - Videographers/ photographers should be trained by the Returning Officer on how videography/photography should be done and what event must be covered. The videographers/ photographers must be told that the principle behind the scheme is to record critical events which are likely to vitiate the poll and not to just videotape or photograph in a routine manner only to fill the cassette or camera memory.

h. **Food for videographers/photographers** - Food shall be provided to videographers and it shall be ensured that the videographers/ photographers DO NOT accept the hospitality of any contesting candidate or political party or their workers. All video teams should be under the personal supervision and guidance of a senior election officer.

i. **Video recording/ photographs to be seen and videographers/ photographers to be available at the time of scrutiny** - If videography/ photography has been done at a Polling Station, it shall be viewed by the RO and Observer at the time of scrutiny, in case of any complaint with respect to that Polling Station. Videographers/ photographers shall remain available at the time of scrutiny so that the RO and Observer can seek any clarification, if they feel it necessary.

4. Use of Web Casting at Polling Stations –

a. **Meaning of webcasting** - Web casting simply means live streaming of video on the Internet. It does not involve use of complicated technology. All that is needed is a video camera connected to the Internet.

i. Any video camera including a webcam capable of being connected to the Internet can be used for web casting.

ii. Camera can be connected to the Internet through a computer, either desktop or laptop.

iii. IP cameras with direct connection to the Internet are also available. These days, which may be used.

iv. Many mobile devices with built-in Internet connectivity also have cameras. These include mobile phones, tablet computers etc. They can also be used for web casting.

b. **Identification of locations for webcasting** - Commission desires that web casting should be done from as many Polling Stations as possible. Efforts should be made for webcasting from all Polling Stations where Internet connection is possible. For this purpose, DEOs should check the availability of Internet connection through a landline or mobile broadband connection at each Polling Station.

c. **Process of setting up webcasting at Polling Stations** -

i. A temporary landline or mobile broadband connection should be taken in all · Polling Stations where connectivity for such an Internet connection is possible. Other webcasting infrastructure should then be provided to all such Polling Stations where Internet connection is taken.

ii. Desktop or laptop computers can be borrowed from schools or Government offices, wherever available for a few days for use at the Polling Stations for webcasting. Most Polling Stations are located in school buildings, where computers have been provided under various Government and Non-Government programmes. These computers can be used on the poll day for the purpose of webcasting. In case computers are not available at the Polling Station building itself, they can be borrowed from other Government departments or taken on rent for a few days.

iii. Cameras should then be provided and connected to the computers, having Internet connection, at Polling Stations.

iv. If mobile devices with cameras and Internet connection are available, they can be provided to Polling Stations for webcasting. Such mobile devices can also be hired for a few days.

v. Some CEOs have suggested that they have access to IP cameras, which do not require connection with computers for webcasting. These IP cameras if available can also be used.

d. **Preparation for live streaming** - Live streaming of video from Polling Stations will require that the computer, mobile device or the IP camera at the Polling Station is configured for live streaming of video on some website. Many websites allow free live streaming of videos. These include YouTube, You Stream etc. The method of configuration for live streaming

of these websites is given in **Annexure-2**. It may be noted that no payment of fee etc. is required for this purpose.

e. **Preparation of the CEO website for webcasting** - A special webpage should be prepared on the website of each CEO for the public to access the webcasting of Polling Stations of that State/ UT. The link to this webpage will be prominently displayed on the homepage of the CEO's website. This page will have hyperlink to the webpage of each Parliamentary/ Assembly Constituency. The Constituency webpage will have hyperlinks to the webcasting pages of Polling Stations. The hyperlink to the Polling Station webcasting will redirect the user to the webcasting website which could be YouTube, YouStream or any other free video streaming website.

f. **Checking of the webcasting preparation before poll day** - Preparation of the website of CEO, and configuration of computers including taking of Internet connections at Polling Stations should be completed **at least 3 days before the poll**. Live test of webcasting from Polling Stations should be carried out **at least 2 days before the poll** to ensure that nothing goes wrong on the poll day.

g. **Recording of video in case of webcasting** - In all cases where webcasting is done, the video of the entire day's proceedings must be recorded. This can be done locally on the computer in the concerned Polling Station or on the server of the CEO, centrally or both. In either case the Polling Station wise recording of the entire day's proceeding must be kept in the server of the CEO and should be available to the RO and Observer for viewing at the time of scrutiny on the next day after the poll in case of any complaint with respect to that Polling Station.

h. **Webcasting to be available in Public Domain** - The purpose of webcasting is to make the polling process transparent. All webcasting should therefore be put in public domain. Wide publicity should be given to the fact that webcasting can be seen by members of the public and also by political parties, candidates and their agents. It should also be publicised that if any person notices any violation of rules and procedures on the webcast, he/she can make a complaint to the Returning Officer/Observer. Arrangements should be made for an immediate inquiry on all such complaints. Polling Stations for which complaints have been received shall also be kept for scrutiny by RO and Observer, on the next day after the poll.

i. **Additional Staff for Webcasting** –
   i. **In the CEO office** - No additional staff would be required at the CEO office. The IT team of the CEO office should prepare the CEO website in advance and should train the team of the DEOs for webcasting.

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ii. **In DEO Office/RO Office** - Depending on the number of Polling Stations from which webcasting is planned, one or more IT personnel will be needed in the office of DEO/RO. For this purpose, IT manpower available in Government offices in the district should be borrowed and trained in advance.

iii. **In the Polling Stations** - One additional polling officer will be needed in Polling Stations where webcasting is done. This polling officer should have some background in IT and should be trained in the process of webcasting.

iv. **Sector Officers** - All Sector Officers must be trained in webcasting. They should be fully involved in the preparation for webcasting and live checking of webcasting, **two days before the poll**.

j. **Training** – Training of all Officers/ Staff associated with webcasting is very important. All Sector Officers, Presiding Officers and polling officers of the Polling Stations where webcasting is planned must be trained in webcasting. The district IT staff should also be properly trained.

CEOs may ensure implementation of the above listed non-CAPF measures and monitor them.

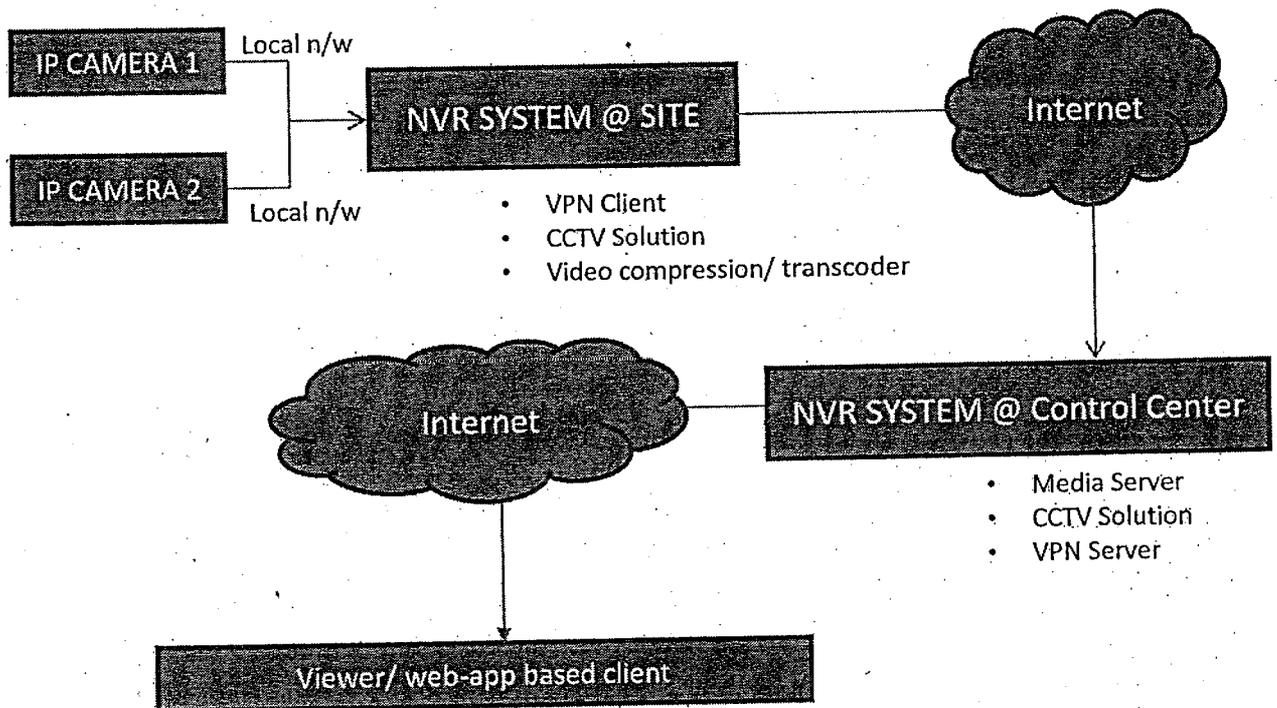Yours faithfully,

(SUMIT MUKHERJEE)
SECRETARY

Format for Report of Micro-Observers

1. Whether mock poll has been conducted in presence of Micro-observer?
2. Whether data of mock poll from the ballot unit was cleared and the EVM count was set to zero after the mock poll and before the beginning of real poll? .
3. How may polling agents and of which political party, were present during the mock poll?
4. Whether Basic Minimum Facilities (BMF) were available at the Polling Station?
5. Whether more than one polling agent from the same political party was present inside the polling station at any time?
6. Whether polling agents were allowed to note the serial numbers of balloting unit and control unit and green paper seal?
7. Whether the entry pass system was enforced properly? Whether any unauthorized person was inside the polling station at any point of time?
8. Whether marking of indelible ink on left forefinger was done properly?
9. Whether the identification document particulars were being filled up meticulously in Register of Voters (Form 17-A)?
10. Whether the list of votes issued with Postal Ballot was available with the Presiding Officer & Polling Agents? Did any person already issued Postal Ballot appeared to vote again in person? Whether any person cast a vote on the basis of EDC?
11. Whether events were recorded from time to time as and when they occur in the Presiding Officer Diary?
12. Whether the Presiding Officer or Polling Officer was going towards voting compartment or giving any undue instructions to the voters?
13. Whether the scrutiny of voters in the Absentee, Shifted and Duplicate list was done meticulously by the Presiding Officers in accordance with ECI Guidelines?
14. Whether copies of accounts of votes recorded in Form-17C were given to the polling agents?
15. Whether voting compartment was properly placed to ensure secrecy of vote?
16. Whether sealing of voting machine was done according to instructions?
17. Whether any complaint by polling agent, election agent or any political party was received? If yes it's substance.
18. Any other incident or issue that you would like to highlight.

(Signature of Micro Observer)
Name (in full) :
Designation :
Phone No. :
Date & Time :

1. CCTV - IP Camera based Web-Casting of Polling Booth

IP CAMERA 1 — Local n/w

IP CAMERA 2 — Local n/w → NVR SYSTEM @ SITE — Internet

- VPN Client
- CCTV Solution
- Video compression/ transcoder

Internet — NVR SYSTEM @ Control Center

- Media Server
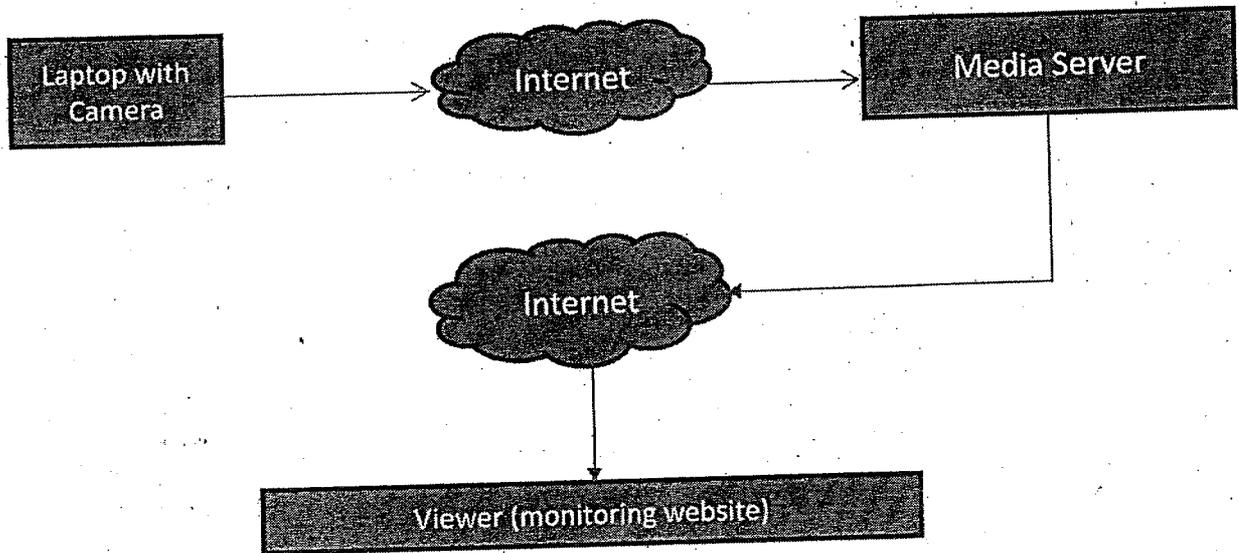- CCTV Solution
- VPN Server

Viewer/ web-app based client

- NVR @ Polling booth push Video feeds to Media Server on NVR @ CONTROL CENTER through Static IP on Internet.

- Static IP with 512 kbps is required at all polling station to access the camera and do live streaming

- Controlling of cameras – these commands need to be relayed back from CCTV solution in control center to cctv solution on polling booth

2. Laptop Based Web-Casting of Polling booth

It is required to implement live Webcasting solutions. Poll booth will have a laptop. Selected Agency will provide a streaming encoder that does live streaming from laptops' Camera.

Video feeds will be monitored from central location using Internet at a speed as low as 150 kbps, with the high latency. This would make it easier for the Election Commission to monitor disturbed areas or suspicious establishments in city for the search of antisocial elements. Intelligent streaming encoder will stream the live video through the Internet directly to the control center.
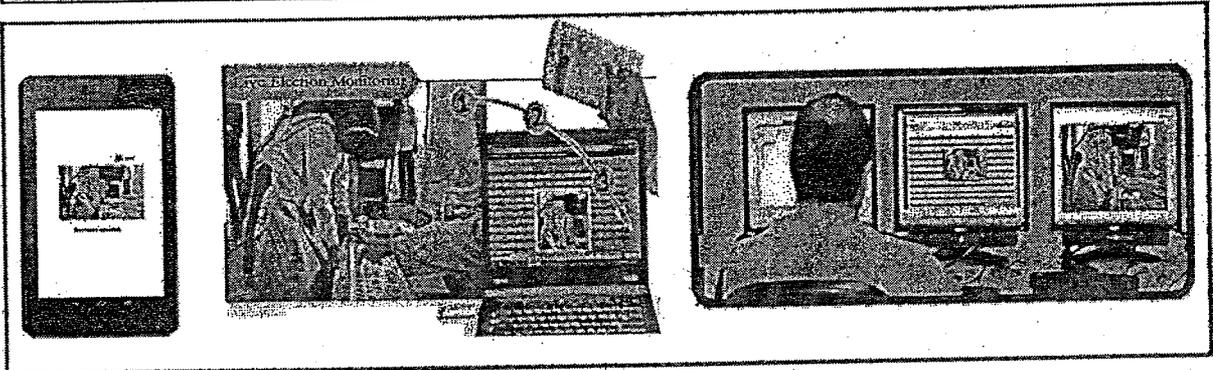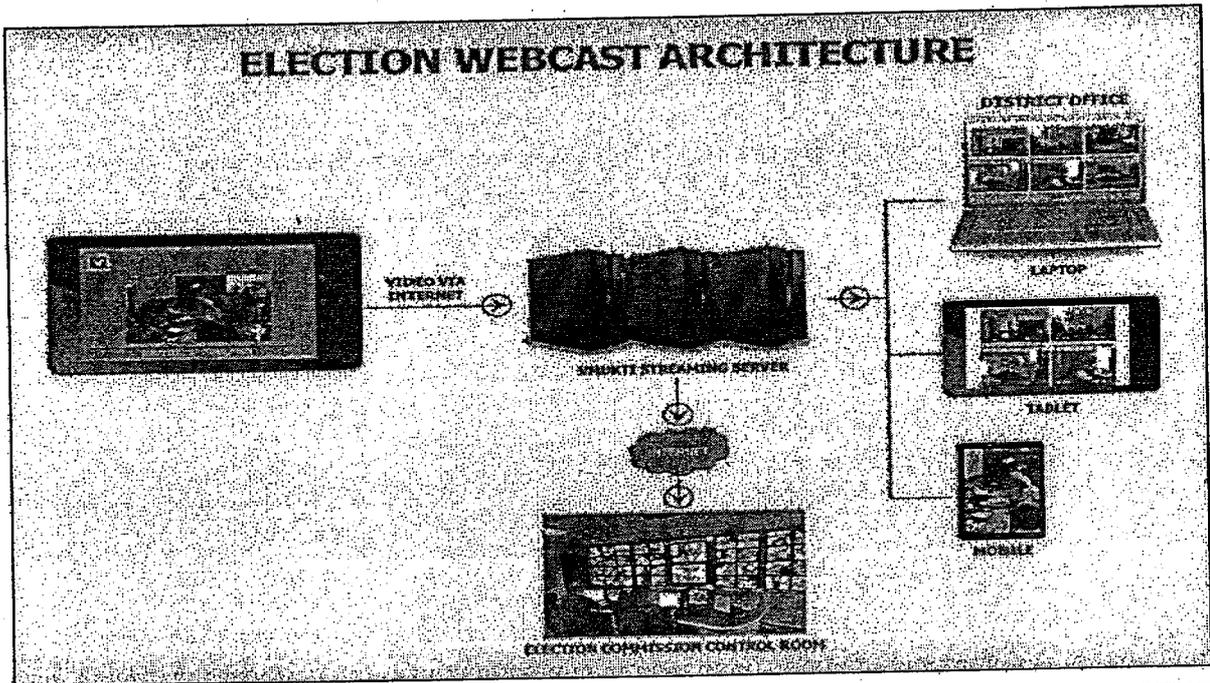

Laptop with Camera → Internet → Media Server → Internet → Viewer (monitoring website)

Laptop with following specification is required at all Polling Stations

Item Description	Details
Processor	Dual core or Higher Processor
Memory	1 GB RAM
Hard Disk	256 GB Drives (for local recording)
Ports	2 USB , RJ45 Ethernet Port , Wi-Fi Client Port
Video Input (Web Cam)	USB Camera or Internal Camera
OS Support	Windows 7 Ultimate/Home Premium (32 bit)

Pre-configured TABLETS are available in the market. It can be used in Polling Stationwith compact live video streaming tablets and Cameras' feeds will be monitored from central location live using internet at a speed as low as 100 kbps over broadband or SIM card connectivity, with the high latency and without any proprietary other hardware requirement.

This would make it easier for the Election Control Room administrator to monitor disturbed areas or suspicious establishments in city for the search of antisocial elements.
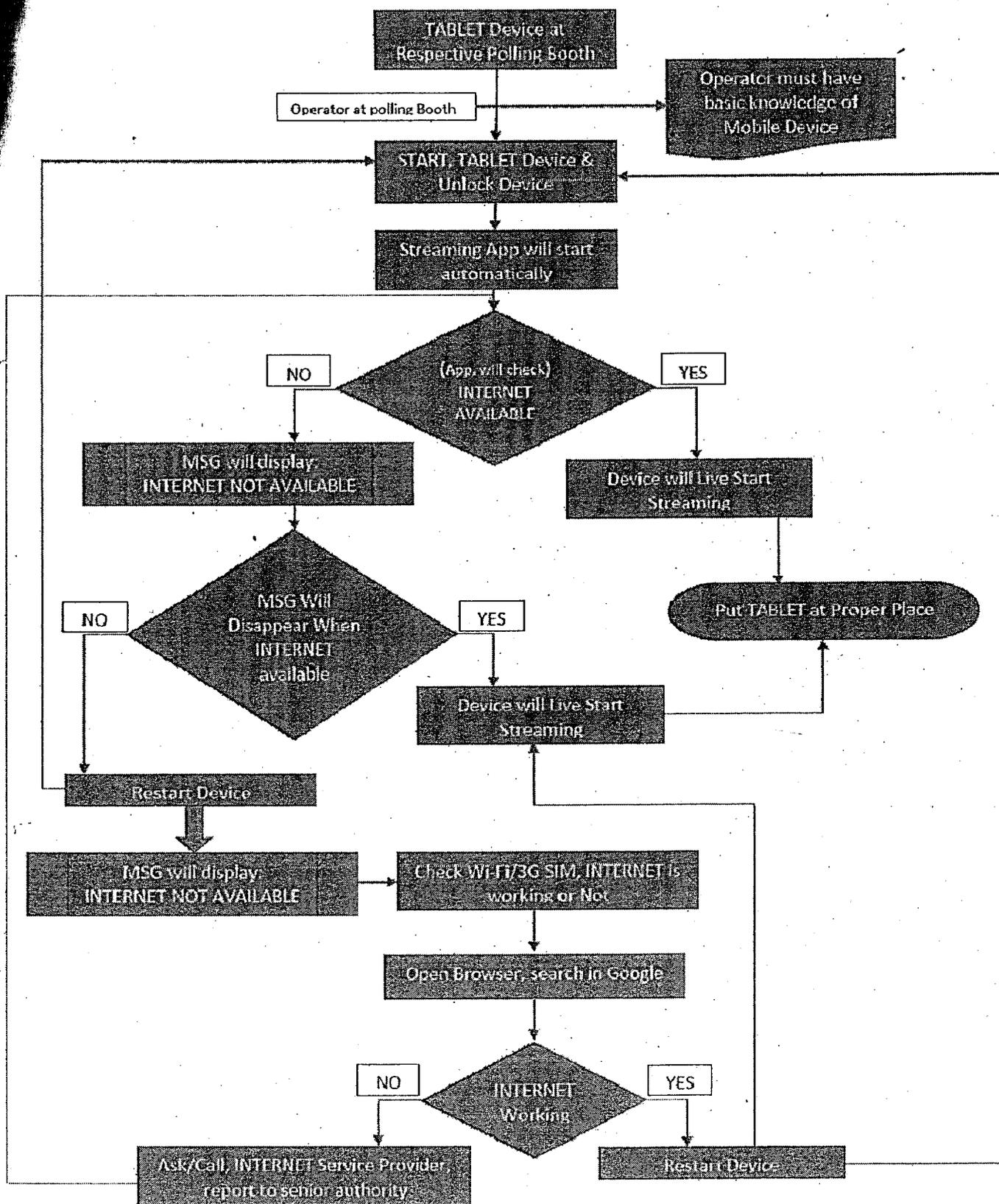
Some of the key features of TABLET based streaming are as below.

- Administrative auto monitoring system with secured Video Streaming Surveillance Tablets to monitor each Election Polling Booth.
- Preconfigured TABLETS, only just deliver to all polling booths
- Load sharing cloud CDN setup to ensure 100% video stream availability.
- Dedicated customer support by the technical team.
- Patent pending video streaming technology for high quality video of each Election Polling Booth at low bandwidth.
- Only 100 kbps Upload speed, Wi-Fi on SIM INTERNT Connectivity is required
- Already installed and easy to use cloud based solution to all Election Polling Booth.

Benefits of Tablet based Streaming

Sr. No.	Tablet	Laptop	CCTV / IP Camera
1	Lighter in weight	Heavier in weight	Heavier in Weight
2	Compatible, Reliable and Advanced.	Complex handling and placement	Complex Handling and mounting
3	Require lesser space	Require more space to operate it	Require enough space to put NVR / DVR
4	Easy/Auto functioning	Functioning through Remote Access	Required access by dedicated/ Static IP with High connectivity to function at all polling booth
5	Least Human interference to operate it,	Experts handles the execution	Expert require to operate/set every Camera
6	No extra Hardware required	Additional hardware require	Additional hardware require
7	Pre-installed automatic application in all devices	Complex installation	Not possible to have pre-configured CCTV camera
8	Can be placed or hang on wall.	Require furniture like table to place it.	Need strong mounting to hold Camera and furniture/Infrastructure for other hardware
9	Only 100 kbps is enough to do live stream from polling booth	Required 256 kbps at least	Required high bandwidth based of Camera
10	Local View is available in polling booth with assuto streaming feature	Local view is available but auto streaming complex	No local view possible in CCTV without any extra display setup
11	Easy to operate and easy to manage cost effective solution	Complex in management as required to have remote access of all polling booths	Costly Solutions, require only experts to operate and hard to manage

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Flow diagram showing streaming done by TABLET

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Web-Casting of Polling Booth
Using YouTube Live Platform for live webcasting form Poll Booths

YouTube Workflow

- Create a new YouTube Channel
    - Complete G+ sign up using your gmail account
    - Follow steps here to create a new channel
      https://support.google.com/youtube/answer/1646861?hl=en

- Verify your YouTube channel and enable Live streaming feature from here

- Create a new Live event by clicking here (help center article)
    - Naming Convention
        - Title
        - Description
    - Visibility: Unlisted or Public
    - Category: "News and Politics" or "Non Profit"
    - Select Quick Ingestion "Hangouts on Air" option

- Click on "Make it live"

- A new window will popup and will say "Off Air"

- Now go to top of this screen and click on bandwidth icon to set it at "Low"

- Click on "Start Broadcast" to go live

Tech Ops

https://support.google.com/plus/answer/1216376?hl=en

- Windows or Mac Laptop; preferably a dual core processor and 2-4 GB RAM
- A superior quality webcam, preferably 3-5 MP

Cataloguing individual Poll Booth live streams

- Create a web applicaiton where in operator can submit YouTube channel name, YouTube Video URL along with State, PC, AC, Poll Both ID