

IN THE HIGH COURT OF MADHYA PRADESH PRINCIPAL SEAT
AT JABALPUR.

Writ Petition No.2506/09 (P.I.L.)


PETITIONERS :: Shailendra Pradhan & another.
Vs.
RESPONDENTS :: Election Commission of India
and others.

AFFIDAVIT

I, R.P. Pathak, aged about 59 years, son of Shri Parasram Pathak, Deputy Chief Election Officer in the office of Chief Election Officer, Madhya Pradesh, Bhopal (MP), do hereby make oath and state as under :-

1 : That I am the Officer Incharge of the case on behalf of respondents No. 1 & 2 in this case. The instant return has been drafted under the instructions of Election Commission of India and the same has been duly approved by the Election Commission of India, New Delhi. The contents of attached return from paras 1 to 11 are true to the knowledge as based on the informations received from records of the Election Commission of India and believed to be true.

2 : That the documents filed along with this return are the photocopy of the original received from the Election Commission of India. The same are attested by the counsel.

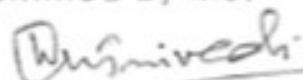

DEPONENT

VERIFICATION

I, R.P. Pathak, the above-named deponent, do hereby verify that the contents of paras 1 and 2 of the above affidavit are true to my personal knowledge and belief.

Verified and signed on this 5th day of October
2009 at Jabalpur (M.P.).

Identified by me.


Adv.


DEPONENT

ITEM NO. 21

COURT NO. 1

SECTION PIL

SUPREME COURT OF INDIA
RECORD OF PROCEEDINGS

WRIT PETITION (CIVIL) NO(s). 292 OF 2009 (For prel. hearing)

V.V.RAO & ORS.

Petitioner(s)

VERSUS

UNION OF INDIA & ANR.

Respondent(s)

(With application(s) for directions)

Date: 27/07/2009 This Petition was called on for hearing today.

CORAM :

- HON'BLE THE CHIEF JUSTICE
- HON'BLE MR. JUSTICE P. SATHASIVAM
- HON'BLE MR. JUSTICE CYRIAC JOSEPH

For Petitioner(s)

M/s. Sanjay Parikh, Jitin Sehni,
Mamta Saxena, A.N. Singh,
Anitha Shenoy, Advs.

For Respondent(s)

UPON hearing counsel the Court made the following

ORDER

Heard learned counsel for the petitioner.

The petitioners have alleged several questions regarding feasibility of using Electronics Voting Machines for the General Elections in this country. Petitioners would be at liberty to pursue the matter with the Election Commission. Without prejudice to the rights of the petitioners, the writ petition is disposed of.

(R.K. Dhawan)
Court Master

(Veera Verma)
Court Master

IN THE HIGH COURT OF JUDICATURE AT MADRAS

DATED : 12..08..2009

C O R A M

The Honourable Mr. H.L. GOKHALE, CHIEF JUSTICE

and

The Honourable Mr. Justice D. MURUGESAN

Writ Petition No.14146 of 2009

Pattali Makkal Katchi (PMK),
Rep. by its President G.K. Mani,
No.63, Nattu Muthu Naicken Street,
Teynampet, Chennai-18.

.. Petitioner

versus

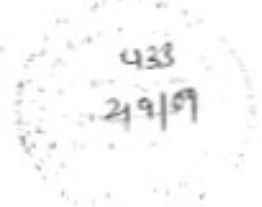
Union of India, rep. by its
Secretary to the Government,
Ministry of Home Affairs,
New Delhi-110 001.

- 2. The State of Tamil Nadu,
Rep. by its Chief Secretary,
Fort St. George, Chennai-9.
- 3. The Election Commission of India,
Rep. by its Chief Election Commissioner,
Nirvachan Sadan, Ashoka Road,
New Delhi-110 001.
- 4. The Election Commission of Tamil Nadu,
Rep. by its Chief Electoral Officer (CEO),
Fort St. George, Chennai-9.
- 5. The Electronic Corporation of India Ltd.,
Rep. by its Chairman/Managing Director,
Hyderabad, Andhra Pradesh-500 082.
- 6. Bherat Electronics Limited,
Rep. by its Chairmen/Managing Director,
Bangaluru, Karnataka State.

.. Respondents

62
15
JBT(JP)

SCS
219
RCC
S/S



Prayer : Petition filed under Article 226 of the Constitution of India praying for a writ of mandamus forbearing respondents 3 and 4 from using EVM in future elections on the basis of the report to be submitted by the expert committee and consequently revert back to the casting votes through ballot papers.

For Petitioner : Mr. K. Balu for Mr. M.R. Jothimaniyan
For Respondent-2 : Mr. Raja Kalifulla, Govt. Pleader
For Respondents-3 & 4 : Mr. G. Rajagopalan, Senior Counsel for M/s. G.R. Associates

O R D E R

(Delivered by the Honourable the Chief Justice)

Heard Mr. K. Balu, learned counsel appearing with Mr. M.R. Jothimaniyan for the petitioner; Mr. Raja Kalifulla, learned Government Pleader for the second respondent; and Mr. G. Rajagopalan, learned senior counsel for respondents 3 and 4.

2. The writ petition is filed by a political party represented by its President seeking a writ of mandamus to restrain respondents 3 and 4 from using the Electronic Voting Machines in future elections and to revert back to the casting of votes through ballot papers.

3. As far as this prayer is concerned, the respondent-Election Commission of India has taken a stand that the present system under which the voting is permitted is a foolproof system, though it is agreed that the machines that are used for the purposes of voting could be inspected by any person like the petitioner herein who wants to prove that the machines can be tampered with. The Commission has, in fact, written a letter to the petitioner on 22.7.2009 asking him to demonstrate the so called manipulation which can be done to the Electronic Voting Machines, in actual practice, in its premises under its observation. Initially, the Commission had offered to undertake this exercise between 3rd and 7th of August, 2009 so as to give an opportunity to the petitioner to show that the machines can be tampered with. However, for some reason or the other, this exercise could not be undertaken during the said period.

4. We may also note that in the meanwhile, another such writ petition was directly filed in the Apex Court and the petitioners therein had alleged several questions regarding feasibility of using the Electronic Voting Machines. The Apex Court in that case observed that those petitioners would be at liberty to pursue the matter with the Election Commission.

5. In the present case also, since the period earlier fixed by the Commission for giving the petitioner an opportunity to prove his case has expired, we asked the learned senior counsel appearing for the Election Commission whether another date can be fixed, which was also sought for by the learned counsel for the petitioner. The learned senior counsel has taken instructions and it is agreed between the parties that such an inspection would be conducted on 27th August, 2009 at the Election Commission's premises at Nirvachan Sadan, New Delhi at 11 a.m. The petitioner is expected to remain present on that date and point out whatever are the defects in the Electronic Voting Machines. In our view, this order and the proposed inspection of the machines will take care of the issue canvassed by the petitioner in the present writ petition and that will help in removing the shortcomings, if any, in the present system.

6. The writ petition stands disposed of with the aforesaid observations and directions.

ab

Sd/-
Asst. Registrar

/True Copy/

S. Bhannalal 24/8/09
Sub.Asst. Registrar

To

1. The Secretary to the Government,
Ministry of Home Affairs,
New Delhi-110 001.
2. The Chief Secretary,
State of Tamil Nadu,
Fort St. George, Chennai-9.
3. The Chief Election Commissioner,
Election Commission of India,
Nirvachan Sadan, Ashoka Road,
New Delhi-110 001.
4. The Chief Electoral Officer (CEO),
Election Commission of Tamil Nadu,
Fort St. George, Chennai-9.

5. The Chairman/Managing Director,
Electronic Corporation of India Ltd.,
Hyderabad, Andhra Pradesh-500 082.

6. The Chairman/Managing Director
Bharat Electronics Limited,
Bangaluru, Karnataka State.

+ 1 cc to M/S. G.R. Asso, in SR. 38421

+ 1 cc to Government pleader in Sr.38389

+ 1 cc to Mr. M.R. Jothimaniyan, Advocate in Sr.38470.

Writ Petition No.14146 of 2009

KST(CO)
EU 24.8.2009.

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By Spad...

ELECTION COMMISSION OF INDIA

NIRVACHAN SADAN, ASHOKA ROAD, NEW DELHI-110001

K. Ajay Kumar
Secretary

No. 51/8/16/9/2009-EMS (Vol.-VII)

Dated: 22nd July, 2009

R-3

To

1. Sh Shailendra Pradhan,
S/o Late Shri P.D. Pradhan,
Vill. Ahmedpur Kalan,
Hoshangabad Road, Bhopal,
Madhya Pradesh.
2. Sh Anil Chawla,
S/o Shri M.M. Chawla,
A-491, Shahpura, Bhopla-462039,
Madhya Pradesh.

Subject:- W.P. No.2506/09 (PIL) filed by you before, Hon'ble High Court of Madhya Pradesh Principal Seat at Jabalpur alleging tamperability of EVM.

Sir,

I am directed to state that it has been brought to the notice of the Commission that you hold the view that the EVMs used in Indian Election are tamperable and can be manipulated and programmed in such a way that it can record vote in an assigned manner to suit a chosen candidate..

As far as the EVMs used by the Election Commission of India in our elections are concerned, the Election Commission is sure of the non-tamperability of its EVMs. However, since the allegation made is grave in nature, to say the least, and the implications are serious, the Election Commission of India has decided to ask you to demonstrate the so called manipulation of the EVM used by the Election Commission of India in actual practice at its premises under its observation. You are requested to please indicate a time and date convenient to you within the next few days urgently.

Yours faithfully,


(K. Ajay Kumar)



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8/13/16/2

K-4

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Vill. Ahmedpur Kalan,
Hoshangabad Road,
BHOPAL (Madhya Pradesh)
Tel. : 09826029250 / 09425009260

**Shailendra Pradhan
Anil Chawla**

U.S. (K.A. B)

28 July 2009

To,
Election Commission of India,
Nirvachan Sadan,
Ashoka Road,
New Delhi - 110 001

Office of Secy
E.C. of India
New Delhi
Date: 28/7/2009
By: M-629

**Sub.: Reply to your letter no. 51/8/16/9/2009-EMS (Vol.-VII)/350
dated 22nd July 2009**

Sir,

We acknowledge the receipt of your letter referred above. Our reply is as follows:

1. Honourable High Court at Jabalpur has admitted our Writ Petition No. 2506 of 2009 and issued notice to you along with other respondents. It is strange that instead of replying to the notice issued by the Honourable High Court, you have chosen to write to us. This amounts to bypassing of the judicial process and may be treated as a contempt of the Honourable High court.
2. We request you to kindly follow the due process of law before the Honourable High court.
3. We shall like to clarify that in our petition we have not claimed any expertise or skill or experience in tampering of electronic voting machines, which would obviously be a criminal activity. We are public spirited citizens and not criminals.
4. A copy of this reply as well as your letter is being submitted to the Honourable High Court at Jabalpur.

U.S. (K.A. B)
P-10

Thanks & Regards,


Shailendra Pradhan


Anil Chawla

10/1
20/1/09

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ELECTION COMMISSION OF INDIA

NIRVACHAN SADAN, ASHOKA ROAD, NEW DELHI-110001

K.N. Bhar
Under Secretary

No. 51/8/16/9/2009-EMS (Vol.-VII) 89-830 Dated: 31st July, 2009

R-5

To

1. Sh Shailendra Pradhan,
S/o Late Shri P.D. Pradhan,
Vill. Ahmedpur Kalan,
Hoshangabad Road, Bhopal,
Madhya Pradesh.
2. Sh Anil Chawla,
S/o Shri M.M. Chawla,
A-491, Shahpura, Bhopla-462039,
Madhya Pradesh.

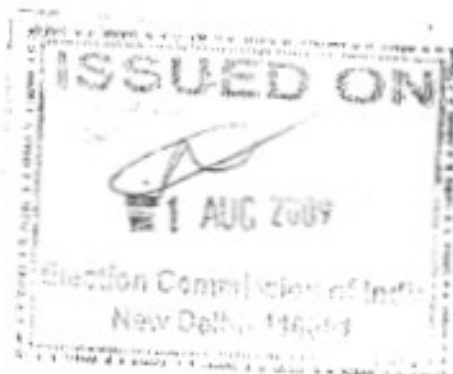
Subject:- W.P. No.2506/09 (PIL) filed by you before Hon'ble High Court of Madhya Pradesh Principal Seat at Jabalpur alleging tamperability of EVM.

Sir,

I am directed to refer your letter dated 28/7/2009 and to state that the Commission is of the view that this opportunity offered to you is in consonance with the order dated 27.7.2009 of the Honb'le Supreme Court of India in Writ Petition No. 292 of 2009-VV Rao & Ors Vs Union of India & Ors, and hence in no way it is contempt of the Honb'le High Court of Madhya Pradesh. Since you have raised the issues on the efficacy of ECI-EVM, the Commission has decided to facilitate the demo by you of the alleged tamperability of the ECI-EVM as claimed by you, between 3rd and 7th August, 2009.

Please treat this as urgent since the allegation raised by you are of serious nature.

Yours faithfully,




(K.N. Bhar)



By Speed Post

ELECTION COMMISSION OF INDIA

NIRVACHAN SADAN, ASHOKA ROAD, NEW DELHI-110001.

K.N. Bhar
Under Secretary

No. 51/8/16/9/2009-EMS (Vol.-VII)/945-946 Dated: 25th August, 2009

To

1. Sh Shailendra Pradhan,
S/o Late Shri P.D. Pradhan,
Vill. Ahmedpur Kalan,
Hoshangabad Road, Bhopal,
Madhya Pradesh.
2. Sh Anil Chawla,
S/o Shri M.M. Chawla,
A-491, Shahpura, Bhopla-462039,
Madhya Pradesh.

Reference:: Commission's letter of even number dated 31st July, 2009.

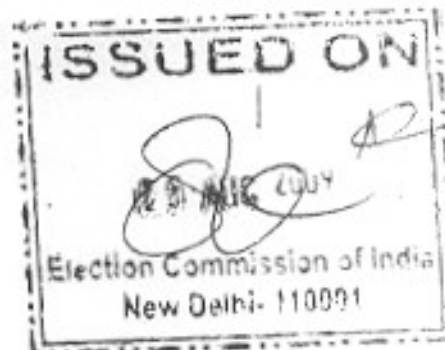
Subject:- W.P. No.2506/09 (PIL) filed by you before Hon'ble High Court of Madhya Pradesh Principal Seat at Jabalpur alleging tamperability of EVM.

Sir,

I am directed to refer to your letter dated 03/8/2009 and to state that the Commission is not bearing the expenses for travel, boarding and lodging in respect of persons called for demo/discussion of EVM tamperability.

Yours faithfully,

(K.N. Bhar)



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R-7

F/E

REPORT OF THE
EXPERT COMMITTEE FOR TECHNICAL
EVALUATION OF THE ELECTRONIC
VOTING MACHINE

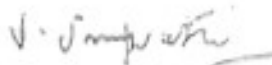
APRIL 1990

REPORT OF THE EXPERT COMMITTEE
FOR THE TECHNICAL EVALUATION
OF THE ELECTRONIC VOTING MACHINE (EVM)

The Committee constituted for the technical evaluation of the Electronic Voting Machine (EVM), vide Govt. Order No. DOE/CCI/EVM/89 dated April 10, 1990 (Annexure 1), met formally on 23rd April, 1990, and again on 25th April, 1990. The Committee had the benefit of Technical presentations by M/s. BEL and M/s. ECIL, the two Manufacturers of the EVM. The Committee also met Shri Peri Sastry, Chief Election Commissioner, Smt. V.S. Ramadevi, Secretary, Legislative Dept., Ministry of Law & Justice, Shri Ganesan, Adviser, Electoral Reforms Commission, Shri S. Ravi, Joint Secretary, DOE and Shri G.S. Veradan, Addl. Director, DOE. One unit of EVM was taken to IIT Delhi Laboratory for detailed evaluation. The Committee also examined various documents presented to it by the Manufacturers. These documents are enclosed as Annexures. Based on the above deliberations, the Committee is pleased to submit the enclosed Report. The committee wishes to place on record its indebtedness to the Department of Electronics for all the assistance that it extended to the Committee for the early completion of its task.


Dr. C. Rao Kasarbada


Prof P.V. Indiresan


Prof S. Sampath

REPORT OF THE EXPERT COMMITTEE
FOR THE TECHNICAL EVALUATION OF THE
ELECTRONIC VOTING MACHINE

1.0 Background of Electronic Voting Machine

Over the last ten years the Election Commission of India, from time to time has put forward the idea of introducing the Electronic Voting Machine in the election process in India. Towards this end, the Election Commission induced two major industrial enterprises namely M/s. Electronics Corporation of India Ltd., Hyderabad and M/s. Bharat Electronics Ltd., Bangalore to design and develop suitable versions of the Electronic Voting Machine for introduction in our elections. With the approval of the Govt. of India, in 1982, the machines were introduced in 11 Constituencies and put to use and on the whole the systems worked satisfactorily. The design of the Electronic Voting Machine has since gone through several iterations and an advanced version has become available from both M/s. Electronics Corporation of India Ltd., and M/s. Bharat Electronics Ltd. The Election Commission was most anxious to introduce the machine in the electoral process in the general elections in 1989. Due to apprehensions articulated by leaders of political parties, the decision to introduce the Electronic Voting Machine was deferred by the Election Commission.

The Electoral Reforms Committee is of the view that the Electronic Voting Machine should be evaluated in an objective manner from the technical point of view with special reference to the possibility that the Electronic Voting Machine can be tampered with. Accordingly, at the request by the Electoral Reforms Committee, the Department of

Electronics constituted an Expert Committee to carry out the envisaged technical evaluation. This Report is the outcome of this evaluation.

2.0 MANUFACTURERS PRESENTATION

M/s. Bharat Electronics Ltd., and M/s. Electronics Corporation of India Ltd., made a presentation on the operational, technical and manufacturing aspects of the Electronic Voting Machine to the Experts Committee.

The agencies also conducted a mock poll before the Committee. The possible physical methods of tampering were also demonstrated highlighting the security of the design.

The details of the presentation are enclosed in Annexures III and IV.

3.0 EVALUATION OF ELECTRONIC VOTING MACHINE

3.1 There are three major points to be considered in evaluating the Electronic Voting Machine that has been developed and manufactured in the country.

- a. Does it meet all the needs of Election Commission?
- b. Is the design stable and tamper-proof?
- c. Is the manufacturing quality of a high enough standard to provide adequate reliability?

3.2 As regards the first question, the Election Commission is the only agency which can provide the answer. As for the third question, it is evident, from an inspection of the machines, that they are indeed of exceptionally high quality. As regards the second question, the following points need to be considered:

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- a. Can the system be altered at site?
- b. Can the system be replaced by a different mechanism?
- c. Can the system be tampered with while in operation?

The Committee addressed itself to these three questions.

3.3 The System consists essentially of three components

- a. the Control Module
- b. the Balloting Unit; and
- c. The inter-connecting cable between the two Units.

The Committee has looked into the possibility of tampering in respect of each one of these three components.

3.4 With regard to the nature of the design and the difficulty involved in tampering, it is noted that the program imbedded in the device is completely fixed and unalterable, and therefore, there is no means or access by which the system can be modified from outside.

3.5 In view of the above, the only way by which the System can be tampered with is to replace it entirely by a new one. Though this is theoretically feasible, by a simple physical inspection of the equipment, this can be ruled out.

3.6 It is feasible to modify the Balloting Unit alone. However, it cannot be done in such a way that it can escape physical inspection.

3.7 This leaves the question of tampering, with the inter connecting cable. This tampering could happen in two ways. One may attach a device on top of the cable. This requires skilled operation and will naturally be visible to all the

voters. At the same time, the Committee has seen the Polling booth arrangements that have been finalised by the Election Commission. The Committee notes with satisfaction that the entire cable is in the public view all the time, any such a tampering becomes self-evident. Further, in case any such device has been attached to the cable, it will leave tell-tale punch marks which can be recognised easily. Therefore, this probability also is ruled out by the Committee.

Another method by which the system may be interfered with is to insert a device between the cable and the connector situated inside the Polling Unit. This can be avoided by a simple administrative precaution at the time the Polling Unit is sealed. The Presiding Officer may be asked to exhibit the cable to all the Polling agents and get their certificate to make sure that no device has been inserted between the cable and the socket. Once the cable is inserted and the Machine is sealed, this kind of tampering is impossible.

3.8 In this manner, the Committee has looked into all possibilities of tampering with the Machine and has come to the conclusion that there is no way of altering the results of the polls provided due security precautions are enforced. In case for any reason the Unit has been tampered, it immediately gives an indication that the system has malfunctioned and this remains as a permanent record on the Machine which can be checked and cross-checked at any time later.

3.9 In view of all these factors, the Committee unanimously certified that the system is tamper-proof in the intended environment. For these reasons, the Committee recommends that the system may be accepted and put to use.

3.10 Any system of this nature requires proper preventive maintenance. Hundreds of thousands of the units are to be used in any major election and in between they will be stored for long periods of time. During this period due to attack by vermin, rats, fungus or due to mechanical damage, the system might malfunction. Therefore, as a preventive measure, the Committee recommends that before every election the manufacturers may be asked to check (this can be done very fast through a very simple exerciser) and ensure that all the units are functioning as designed. Incidentally, this method will check, what is called 'the signature of Machine' and thereby the Manufacturers will be able to certify that the Machine is identical to what they had supplied and it has not been replaced by any other.

3.11 In brief, the Committee recommends that the System may be accepted subject to the following precautions:

1. It is ensured in every polling booth that the cable is visible all the time.
2. After the polling, the cable and Balloting unit is physically inspected for any mechanical damage.
3. At the time of the insertion of the cable, it is formally recorded by the Presiding Officer and the polling agents that no device has been inserted between the cable and the connector.
4. All the instruments are checked as a matter of preventive maintenance and as a matter of abundant caution, to ensure that they are working satisfactorily and according to the original embedded programme.

4.0 Issues raised by various Organisations and related Technical problems

The issues that arise from the use of Electronic Voting Machines are as under:

- i) The Machine may not function properly
- ii) The Machine may be damaged upsetting the Polling process.
- iii) The Machine could be tampered with, and design may not be secure ('Trojan Horse').
- iv) The Machine denies the candidates the right to recount.
- v) The Voting machines are biased against the poor.

These issues are examined in detail in the following paragraphs.

4.1 Machines may not function properly

This is a question of reliability. The reliability of the equipment depends on the design, selection of components, procurement and inspection of components, Manufacturing process, storage and re-inspection mechanisms.

The resultant failures may be catastrophic or non-catastrophic in nature. The design has been perfected over a long period. The Manufacturers have confirmed the usage of approved components with due derating for reliable operation. A Committee consisting of representatives of Standards And Quality Assurance Establishment (SQAE) of Department of Defence, the Directorate of Standards, Testing and Quality Control (STQC) of the Department of Electronics, and Representatives of Election Commission, reviewed total quality assurance aspects of the Machine through the Manufacturers. The former two were also involved in the acceptance testing.

The equipments have also gone through climatic tests prescribed in the Quality Assurance (QA) manuals. The Committee noted that the failure rates during the trial period are insignificant.

In addition, the catastrophic failure may occur because of failure of the Microcontroller Chip, in which case re-polling may be necessary. The cases of non-catastrophic failure can be catered to by the redeployment of a spare Machine. Similarly the Ballot Unit can also be replaced with a time loss of utmost 15-20 minutes in case of a catastrophic failure.

4.2 Machines may be tampered with

This seems to be major issue of concern. The contents of 'Annals of Democracy' an article, that appeared in New Yorker on November 7, 1988, as well as a press clipping on the same lines 'Dangers of Fraud in Computer voting' have been noted by the Committee.

The major advantage of the Electronic Voting Machine developed in India is the fixed programme nature of the system. The programme is permanently fused and hence cannot be tampered with even if it can be accessed. Even then, as a matter of abundant precaution, the instruments' signature may be tested by the suppliers before a poll to check that they have not been replaced. Since the presently discussed Electronic Voting Machine is a different type of equipment, the possible methods of tampering are different and have already been highlighted in the Section 3.0.

4.3 The Machine may be damaged upsetting the poll process

The damage is understood to be physical damage and the technical consequences of such physical damage are as under:

1. Ballot Unit damage

Physically strong and agile people or mentally deranged people may damage the Ballot Unit which is stationed a little away from the Polling Officer.

- i) in case of catastrophic damage (break in the Ballot Unit into pieces using hammers etc.), the Ballot Unit could be replaced without affecting the poll upto that point.
- ii) in case of attempted damage by making one of the switches stuck, apparently disabling the other switches, a link-error alerts the Poll Officer who can set right the mechanism; in the event he can not set right the mechanism replacement as alternative is available.

2. Cable Unit Damage

No wrong information gets recorded. The cable can be replaced.

3. Control Unit damage

If the Control Unit is damaged, the poll could be continued with a second Control Unit, since the poll information upto the point is safely stored in the memory. However it should be noted that Control Unit

damage is equivalent to snatching the Ballot box. and suitable administrative procedures may be followed, including repoll as per Election Commission norms.

4.4 *The Machine denies the right to Recount*

On the contrary, the whole process is stored in the memory, and can be dumped through a Printer to get the detailed picture of voting. With the added administrative procedures of the Election Commission to maintain a register of the voters in the sequence of their voting, not only the process of recount is possible but also verification of the recount against any possible tampering is also possible.

4.5 *Bias against the poor*

While the comment on the bias against the poor as reflected in certain articles has been noted, the experience of the Election Commission in trials so far does not confirm the same. This is mainly because the equipment is simple and in fact even simpler than stamping the conventional Ballot paper to which the voter is already accustomed.

5.0 Advantages of Electronic Voting Machine

The Committee noted the following advantages of the Electronic Voting Machine, as they emerged in various discussions:

- possible reduction of time between the time of withdrawal of nominations and the commencement of Polling, resulting in considerable saving in matters relating to maintenance of law and order, candidates' expenditure on campaigning etc.
- considerable saving in printing of stationery and transportation of large volume of Election material.

- discouraging booth capture by limiting the number of votes that can be cast in an hour to no more than 300 in a booth, thus allowing time for the Law and Order Machinery to take appropriate remedial action.
- the procedure for mock poll incorporated into the system generates confidence in the voting community on the operation of the system.
- the system eliminates invalid voting, which in several cases is understood to be comparable to the difference between the winning candidate and losing candidate.
- the counting time is drastically reduced, and eliminates mischief at counting, as well as eliminates the possible building up of tension/disorderly scenes during the counting process due to the short time in which the counting will get completed with the introduction of the Electronic Voting Machine.
- the entire process of voting is recorded in sequence and is available for analysis by the Election Commission at a later date against any contingency.
- Possibility of the introduction of Mobile Polling Booths to facilitate fuller participation of people in the election process.

6.0 Recommendations

1. Sample electrical check of the Control Unit and the Ballot Unit prior to the Polling. The diagnostic check to be prescribed by the Manufacturers so as to ensure that the embedded programme has not been tampered with.
2. Inspection of the Ballot Unit/Control Unit as well as the cable at the time of the insertion of the Ballot paper by the Returning Officer with suitable aids to ensure that duplicate equipments are not used.
3. Ensuring, in every Polling Booth, that the inter-connecting Cable is visible at all times.
4. Ensuring, in every Polling Booth, that no device is inserted between the Cable-Connector and the Control Unit.
5. Carrying out on a sample basis, recounting of votes in certain booths at an appropriate administrative level, to act as a deterrent against potential mischief-makers so as to generate a climate of confidence about the infallible nature of electoral process.

7.0 Conclusions

The Committee after a review of the material presented to it has come to the following conclusions:

- i) The basic Electronic Voting Machine developed by M/s. Bharat Electronics Limited (BEL) and M/s. Electronics Corporation of India Limited (ECIL) under the over-all aegis of the Election Commission and the Department of Electronics is a secure system.

The security emanates from two very important basic factors:

- a) The fixed programme nature of the software which is fused into the processor which is effectively unalterable.

- b) The faithful recording of all events in the processor and the possibility of recalling the same with the added administrative procedures prescribed by the Election Commission which make available the sequence of voters voting- rendering it possible to verify the recorded vote in case of any doubt with regard to possible tampering.

- ii) With the provision of non-volatile memory, any physical interruption leads to the retention of all information upto that point.

- iii) With the system as designed by the above agencies with built-in security, the Election Commission and the Government only need to ensure the security of the equipment, to safeguard the sanctity of the electoral

process. The Committee further recommends that certain procedural safeguards as stated in Section 6.0 should be implemented.

- iv) The Committee wishes to place on record the high level of accomplishments of the Engineers and Scientists of M/s. Bharat Electronics Limited and M/s. Electronics Corporation of India Limited in developing an Electronic Voting Machine using the latest technology.

- v) The Committee unanimously recommends the use of the Electronic Voting Machines with out further loss of time.



S. RAVI
JOINT SECRETARY
TELE: 61 1320

**MOST IMMEDIATE
BY HAND TODAY**

GOVERNMENT OF INDIA
DEPARTMENT OF ELECTRONICS
414 ANAND BHAVAN, (4th Floor)
LOK NAYAK BHAVAN, (3rd Floor)
414 ANAND BHAVAN, KHAN MARKET,
NEW DELHI-110003
TEL. Nos. 31-45103 & 31-44528
Gram: DEPTTELETRON

SECRET

D.O. No: DOE/CCI/EVM/89

DATE: April 11, 1990

Dear Prof. Sampath.

The Electoral Reforms Committee in its meeting held on 31.3.90 suggested to Secretary, Department of Electronics that the Electronic Voting Machine developed by M/s ECIL and M/s BEL should be objectively evaluated by a Group of Experts in particular from the point of view of rigging, that is to say, whether the machine could, at any point of time, be tampered with. It has, therefore, been decided to form a Committee of three experts comprising of a distinguished council member of the Institution of Electronics & Telecommunication Engineers, a distinguished Prof. of IIT and the Director of Electronics Research & Development Centre, Trivandrum.

It has further been decided to request you as a Council Member of the IETE to be the Chairman of the Expert Group. Prof. P.V.Indiresan of IIT Delhi and Dr. Rao C.Kasarabada Director, ER&DC, Trivandrum, are the other members.

The Committee may submit its report to the Department of Electronics preferably by 24.4.90 or latest by 30th of this month so as to enable the Government to take a decision in the matter before a Bill is introduced in the Parliament in May 1990. Secretarial assistance to the Committee will be provided by the New Delhi Centre of the Appropriate Automation Promotion Programme of Department of Electronics.

With regards.

Yours sincerely,

S. Ravi
(S. Ravi)

Prof. S. Sampath,
Chairman, R.A.C.
Defence Research & Development Organisation,
Ministry of Defence, Sena Bhavan,
New Delhi.

Copy to:

1. Smt. V.S. Rama Devi, Secretary, Legislative Department, Ministry of Law & Justice, New Delhi.

Copy also to:

2. Shri B.S. Prabhakar, Managing Director, ECIL, Hyderabad
3. Capt. S. Prabhala, Chairman & Mg. Director, BEL, Bangalore

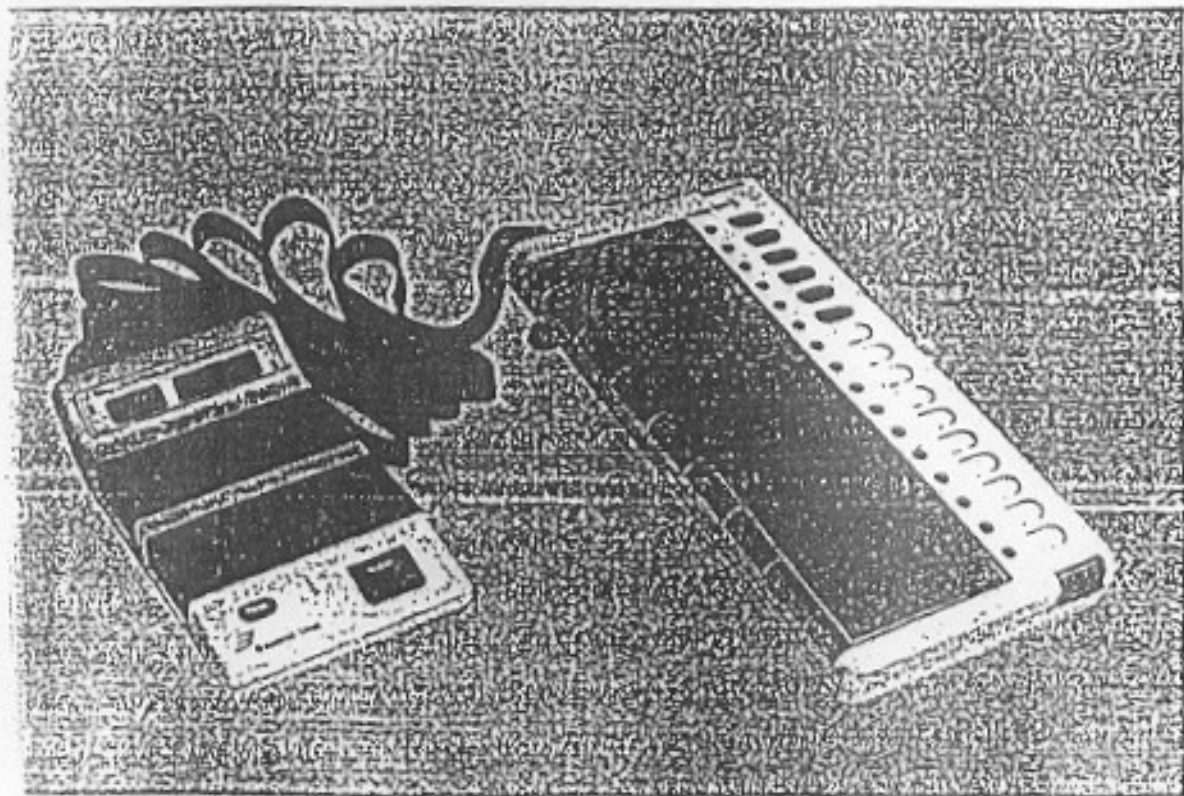
- They are requested to provide all assistance to the Committee in their work.

(S. Ravi)

55



E V M MANUAL



ELECTION COMMISSION OF INDIA

1990

58

R-8

BY SPEED POST

ELECTION COMMISSION OF INDIA
NIRVACHAN SADAN, ASHOKA ROAD, NEW DELHI-110001.

K.N.BHAR
UNDER SECRETARY

No.51/8/7/2008-EMS (Inst.-I)

Date: 11/08/08

To,
The Chief Electoral Officers of
All the States and Union Territories

Sub: Use of EVM in the elections- additional transparency measures

Sir,

The Election Commission of India used the Electronic Voting Machines (EVM) on an experimental basis for the first time in 1982 in an election in Kerala. After that the use of EVM was gradually increased and finally the universal use of EVM in the country became a reality in the year 2004 when EVM was used in all polling stations in the General Election to the Lok Sabha. The efficacy of EVM has stood the judicial scrutiny and the independent studies made on the use of EVM have also confirmed the voters' satisfaction about the use of EVM in elections.

The Election Commission of India, from time to time, has been issuing instructions on various measures to be taken at the time of preparation of EVM for use in the elections (vide no 51/8/7/2007-PLN-IV 12th October, 2007); protocol for first level checking of EVMs before elections (vide 51/8/16/4/2007, dated 12th October, 2007) and on protocol for security measures for EVMs (vide 464/OBS/EVM/2007 PLN-IV, 12th October, 2007). The Handbook for Returning Officers (at elections where electronic voting machines are used) published by the Commission provides detailed instructions on the various aspects of the EVM management.

As an additional measure that aims at greater transparency, the Commission has decided to introduce a randomization protocol for the deployment of EVM in various assembly constituencies/ assembly segments and has issued the following instructions to be followed meticulously without any deviation:-

1. STORAGE

As a general policy, the Commission desires that all EVMs available within a district shall be stored at the district headquarters under the direct control of the District Election Officer. It may be possible that due to want of storage space the EVMs may be stored in a decentralized manner in different locations. Even in such cases, for the purpose of first level checking and randomization procedure proposed to be introduced through this instruction, all EVMs available in the district shall be brought to the district headquarters under proper escort.

2. FIRST LEVEL CHECKING

- a. The first level checking as prescribed in the earlier instructions shall from now onwards be carried out only by the BEL/ECIL engineers, as the case may be, only at the district head quarters. For coordinating all activities connected with the first level checking, the DEO shall nominate a nodal officer at his level and intimate the name of such officer to the CFO. The first level checking will be done by following the existing instructions and procedures.
- b. For the purpose of tracking various steps taken in the process of first level checking, randomization and deployment of EVM, an adhesive label (pre-printed sticker) will be prepared and kept ready for use. (This can be organized centrally by the CFO or the DEO can print at their level as per the decision of CFO in this regard). A sample model of such label is given in Annexure 1.

3. NUMBERING OF EVMs

As soon as the first level check is over the sticker will be pasted on the back side of the CU and the checking- engineer will put his signature indicating the date in the relevant slot provided in the sticker. This would mean that the CU is in order in every respect. The unique machine number of the control unit (CU) will be also indicated in the relevant slot in the sticker; besides, a running serial number will also be allotted to the CU and will be indicated in the relevant slot. Simultaneously, the representative of DEO duly authorized for this purpose will also put his signature in the relevant space. After this, CU shall be stored with due precaution and care. In case of any CU found to be defective during checking, such CUs shall be isolated and kept separately for follow up action for rectification of defect. The above procedure will also be applicable for the Balloting Units which will be verified, signed and numbered in the above manner.

4. DATABASE

A database of the CUs and BUs verified and certified will be prepared separately and kept in readiness for randomization. The data base structure will contain details of CUs and BUs indicating the machine number (original number given by the manufacturer as inscribed on a metallic plate at the back side of the CU/BU as the case may be.) The CUs/ BUs so verified shall be kept under proper lock and key.

5. SCHEDULE FOR RANDOMIZATION OF EVM

The DEO will fix up a schedule, which should in any case be fixed before the start of training of polling personnel, for randomization of CUs/ BUs for distribution to ACs in the presence of the representatives of recognized political parties. The randomization will be done in such a way that the CUs /BUs are randomly selected by grouping them to match the poll day requirement including the reserve required for each constituency. Again, the surplus CUs/BUs shall also be randomly grouped and distributed AC wise for the purpose of training (for the training of the polling staff as well as for the purpose of voter awareness). A sticker of different color shall be affixed at the front side of the CUs/ BUs set aside for training purpose

clearly indicating ".....(Name of State/UT along with year): Training CU/ BU". While randomizing the CUs/ BUs the DEO shall take the number of polling stations in each constituency into account.

6. ALLOCATION OF ID

After AC wise grouping of CUs/ BUs is done in the above manner, a 'current ID' shall be assigned to each of CU/ BU in the relevant slot provided in the sticker. The 'current ID' would mean 'the AC no followed by a new running serial number for that AC'. For example if AC No 56 is allotted 280 CUs and BUs the current ID for the CUs would be from '56/CU/001' to '56/CU/280'. Similarly the current ID for BU would read '56/BU/001 to 56/BU/280'.

7. DISTRIBUTION OF LIST & EVM TO RETURNING OFFICER

- The randomized list of CUs and BUs allotted to each AC for use at polling stations as well as the training EVMs shall be prepared separately and signed by the DEOs representative and the R.O and that list shall be handed over to all representatives of the recognized political parties. Even if a representative is not available at the time of randomization the list shall still be sent to the party office and a receipt obtained.
- Thereafter, the R.O of the constituency, shall take charge of the CUs/BUs randomly allotted to his constituency. The CUs/BUs meant for use at the election shall be separately taken to R.O's strong room under proper escort and will be guarded. The training EVMs shall be distributed to the relevant officers for the training purpose. At the time of sealing the strong room, the representatives of political parties can remain present and they can also affix their seal on the lock.

8. PREPARATION OF EVM

- On the day fixed for preparing the CUs/BUs for use in the election, the R.O will ensure that the preparation of CUs/BUs is done invariably in the presence of the candidate or his agent or authorized representative and in the presence of observer as per the existing instructions. Now, the R.O will do the second randomization of the CUs/ BUs to allot the CU/ BU to specific polling stations. After that he will write the PS No to which the CU/BU has been randomly allotted in the slot provided for it in the adhesive label. The remaining CUs/BUs (not allotted to any specific PS) shall be kept as 'Reserve' for use if needed. Such CUs /BUs shall be marked as 'R' - meaning 'Reserve' in the slot meant for PS No.
- At this stage, the CU and BU randomly earmarked PS wise as above shall be identified by matching the PS no and kept in pair by tugging them together. Any candidate/ agent present at the preparation hall may choose to get the CU/BU again checked by the master trainers/ technical personnel if available through a 'mock poll cum result verification' in order to satisfy himself about the functioning of the EVM. The R.O should also, as a proactive measure, do a random verification of at least 10% of such CU-BU pairs to test the working status of the EVMs.

- c. Then a Polling Station wise list indicating the Current ID and machine number of the CU/BU allotted to each PS will be prepared and signed by the R.O. The R.O will also prepare a separate list of CUs/BUs marked as 'R' indicating the current ID and machine number. Both the above lists will be signed by R.O and copies shared with the candidates/ agents/ representatives and their signature shall be obtained as the token of receipt.
- d. As per the existing instructions two types of address tags - one for use on CU and another on BU have been prescribed. From now on wards, the tag shall also contain the current ID no (as mentioned in the sticker- read para 7 above). The address tag attached to reserve CU/ BU shall indicate the 'Reserve' status of the unit. The tagging of address tag shall also be done at this stage itself - in the presence of candidates/ agents/ observer. All the CUs/ BUs allotted to Polling Stations as above as well as the reserve machines shall be kept in the strong room in the presence of candidates/ agents. They can also be allowed to affix their seal on the lock of the strong room.

9. DISPERSAL OF EVMs FOR ACTUAL POLL

- a. When the EVMs are taken out of the strong room for dispatch the usual precaution of informing the date and time of opening of strong room in writing to the candidates/ agents shall be followed.
- b. At the time of dispatch the Presiding Officers shall be advised to compare the machine number inscribed on the metal label and the adhesive sticker and also verify the PS no indicated on the sticker compared with PS no mentioned in the address tag before accepting the EVM. Discrepancy if any shall be brought to the notice of the officer in charge of dispatch arrangement and be reconciled.
- c. The candidates may be advised to share the current ID and machine number of the EVM (both CU/ BU) allotted to the specific PS with their polling agent/ agents appointed by them so that they are in a position to inspect the EVM for their satisfaction before the commencement of mock poll on the poll day. The Presiding Officers shall be advised to display the sticker containing the machine number and current ID etc., to the agents present before the commencement of the mock poll. It is relevant to note that as per the existing instructions the presiding officer is supposed to mention the number of CU/ CUs used; serial numbers of CU/CUs used; numbers of BU/BUs used and serial numbers of BU/BUs used at the polling station in the Presiding Officer's Diary (refer: Chapter XXVIII, Para 1 of Handbook for Presiding Officers- At elections where electronic voting machines are used, 2004). This instruction shall be scrupulously followed.

10. REPLACEMENT OF EVM DURING POLL

In case of replacement of CU or BU due to reason at any polling station the sector officer or any authorized officer who effects such replacement shall prepare a special report indicating the machine number and current ID of the existing CU/BU and new CU /BU separately. The officer shall also mention in the special report, the reason for deployment of the spare CU/BU and the time of such replacement, votes polled in the replaced machine at that point of time and leave one copy of the special report with the Presiding Officer while retaining a copy to be handed over to the R.O..

11. RECEPTION OF EVMs AFTER POLL.

The machines shall be escorted back after the poll is over to the reception centres under proper escort. After all formalities are completed, the EVMs shall be kept in strong room and the room sealed in the presence of the candidates/their agents and observer.

12. REPOLL

- a. In case of repoll, the EVM required for repoll shall be drawn from the reserve list and the CU/BU number shall be informed to the candidates/agents in writing. Care shall be taken to ensure that the address tag on the CU and BU clearly mentions it to be the EVM for use in the repoll indicating the date and PS no..
- b. After repoll, for the storage of the repolled EVM, the strong room shall be re-opened in the presence of the candidates/ their agents and observer. This repoll EVM should be placed together with the old EVM which was used earlier in the original poll. A tag 'Not to be counted' shall be put prominently on the old EVM and another tag 'Repoll EVM - to be counted' shall be put on the new repoll EVM. RO shall put signature on both the tags.

13. COMMUNICATION TO POLITICAL PARTIES/ CANDIDATES

The political parties/candidates should be advised in writing to properly train their counting agents and that they should bring (for tallying purpose) their copies of Form 17-C which shows the machine numbers used at the polling station and was handed over to them at the close of the polling by the presiding officer. Besides, the candidates have also been given a consolidated list of polling station wise list of CUs used during the polls (Read Para 12 above). This along with the additional information given by RO in writing to the candidates regarding the machine numbers of CUs used as replacement and the CUs used during repoll will give a complete picture of the all the EVMs used at polling stations. In order to further facilitate, additionally, the RO shall paste the EVM deployment account indicating the CU numbers of EVM used polling station wise in the relevant counting hall itself for everyone to see.


14. VIDEOGRAPHY OF THE EVENTS

All the stages enumerated above shall invariably be fully covered with videography and records kept properly.

- 15. The above instructions should be complied with without any deviation and brought to the notice of all concerned, viz. the political parties, contesting candidates, all field officers concerned and the Observers.
- 16. The receipt of the letter may kindly be acknowledged.

(Hindi version follows)

Yours faithfully,



(K.N.BHAR)

ANNEXURE-1

Name of the State/UT:				
Name of the election:				
District Name:				
Control Unit No.		District Running Srl.No.		
Current ID				
First Level Check			CU Randomization 1	
Date	Rep.BEL/ ECIL	Rep. D.E.O	Date	Rep D.E.O/ R.O
Randomization 2 Date	Deployment Status	Polling Station No.		R.O./ARO.