

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

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No. 23/2009-ERS

Dated 6<sup>th</sup> January 2010

To,

The Chief Electoral Officers of  
All States and Union Territories (except Bihar)

Subject: - Revision of Electoral Rolls with reference to 01-01-2010 as the qualifying date – Integration and Standardization of the database- reg.

Sir/Madam,

Electoral Rolls are maintained by the Election Commission of India under statutory provisions. For the last many years Electoral Rolls are maintained in a computerized Electoral database all across the country. The Commission has, from time to time, issued guidelines for a uniform structure of the database. However, there is no uniformity in the database so far.

**Present Status**

At present, in most States and UTs the Electoral Database is kept at the district level. In some cases it is kept even with the vendors. In most States/UTs it is maintained in MS Access, while in some cases it is on a primitive technology like FoxPro and in some other cases on advanced RDBMS like Oracle or Sql Server. The database is not kept in bilingual form in some of the States/UTs, despite instructions of the Commission. In most cases Unicode fonts are not used. The database structure not being uniform in the country, makes it almost impossible for the different databases to talk to each other. As a result of this, the present status is as follows: -

1. Citizens have access to PDF format Electoral Rolls on the CEO websites, which do not allow any search facility, or checking of duplicates.
2. In most cases bilingual electoral rolls are not available.

3. There is no provision for making on-line applications for inclusion, deletion or modification of names.
4. Citizens have no way to track the status/ stage of processing of the application submitted by them.
5. There is no effective monitoring mechanism for the CEO or for the Commission to check what happens to the applications.
6. There is no provision of a National Search or National de-duplication.
7. Though in most States the Commission now publishes Photo-electoral rolls, yet there are photo mismatches as the photographs are not kept in the database, but are kept separately and are only matched at the time of printing.
8. There is a mismatch with EPIC as the EPIC database in most cases is different from the electoral database.

It is obvious from the above that improvement is needed in the Electoral Database urgently. This improvement can only be made at the time of revision of Electoral Rolls. Year 2010 is ideal for this purpose as there is only one major election (Bihar in November 2010) due this year. If improvement in Electoral Database is desired many pre-revision activities will be needed and these activities will have to start almost immediately.

### **Stages in the Improvement of Electoral Roll**

Improvement in Electoral Rolls has to be done in two stages. These are:-

1. Standardization and bringing about uniformity in the Electoral Rolls throughout the country.
2. Having an Integrated Electoral Database with on-line database management system.

Having a standardized and uniform database throughout the country is a pre-requisite for creation of Integrated Database. The process and the work flow which needs to be followed, is described below.

### **Process of Work Flow for bringing about standardization and uniformity in Electoral Database**

This will involve two separate actions: -

- A. Standardization of Control tables (Master tables)

## B. Standardization of Electoral Data (E-details table)

**A. Standardization of Control Tables** – The Commission's Computer and Electoral Rolls Sections have designed a mechanism, along with NIC, so that the existing control table data can be imported into a common standard Control Table (Master Table) database. We have had detailed discussions on this aspect with the CEOs as well. The software for this can be downloaded from the ECI website and standardized control tables can be populated. The actual work of population of these tables will take at least a month of sustained effort by the CEOs. The work of conversion of fonts to Unicode, transliteration into English, checking of spellings and error correction will have to be done before data exporting. CEOs will also have to check and certify that the control tables have been linked to each other correctly.

**B. Standardization of Electoral Data** – This will involve the following steps: -

- 1. Conversion of font to Unicode** – At present, very few States/UTs have their data in Unicode fonts. It is important that all data is in Unicode font which will be necessary for a Multilanguage interface and display of information on the web. These days standard software is available for conversion of fonts to Unicode for most Indian languages. Wherever such software is not freely available, the CEOs will have to get custom software developed. Simultaneously, CEOs will also have to upgrade their Electoral Roll Updation software, Photo Roll printing software and EPIC making software to allow the use of Unicode fonts.
- 2. Transliteration into English** – To comply with instructions of the Commission to have bi-lingual database in all States/UTs, they will have to use standard transliterations software to transliterate regional language information into English. Where standard transliteration software is not available the CEO will have to get it developed for his/her State/UT.
- 3. Merging of Photographs into the Elector Table** – At present most States/UTs do not have photographs merged in the elector tables. This creates mismatches at the time of printing. The CEOs will have to develop a software to merge the photographs as binary data into the elector table (e-detail table) itself, so that once the photographs are properly matched, there will be no chance of further mismatch of

photographs. Further, the Roll Updation software, EPIC making software and Photo roll printing software will have to be modified to use the merged binary data of photographs.

**4. Printing of Working Copies** – As the software for font conversion and transliteration is not error free, therefore, the errors need to be corrected manually after thorough checking of the Roll, before the Roll is finally printed. Thus, a working copy of the rolls should be printed before undertaking the work of font conversion, transliteration and photo merging. Another working copy should be printed after completion of this work. The two working copies will need to be carefully compared and errors identified and corrected, using the roll updation software. Following things can be done to ensure that all corrections are carried out:

- i. **Use of BLOs** – Working copies should be given to the BLOs and they should be asked to do door-to-door survey and make corrections, including corrections of any spelling mistakes, photo mismatches etc. If a photograph is wrong then the correct photo should be obtained and merged in the database.
- ii. **Use of BLAs** – Working copies may also be given to the BLAs of National and State recognized political parties, and they should also be asked to point out errors.
- iii. **Reading out in Gram Sabha and Ward Sabha** – Rolls may be read out in the Gram Sabha and Ward Sabha to find out any errors.
- iv. **Publication at the notice board** – Rolls may be published at the notice board of all polling stations to invite claims and objections.
- v. **Publication of booth wise pamphlets and distribution with newspapers etc.**

**5. Making corrections in the Rolls based on the errors found in the working copies** – These corrections will have to be done by the process of manual editing for which the CEOs will have to develop software. Errors in the transliterated English language entries should also be corrected during this process.

6. Once these errors are corrected a standardized and uniform electoral data table will become available for use during the process of summary revision.

**The process of standardization and bringing about uniformity in the rolls is also fraught with some danger.** The biggest problem would be that as soon as the fonts are converted to Unicode the present database updation, Photo roll printing and EPIC creation software will become non-usable. Thus, CEOs must modify their database updation software, photo roll printing software and EPIC creation software to make them Unicode compliant. CEOs must also keep a copy of the original database with existing fonts till the Unicode compliant software has been stabilized, to prepare for any eventuality and use the original database if there are problems. **The original non font converted, non transliterated and non photo merged database and original software being used at present must be kept readily available in the safe custody of the CEO till the Commission has granted permission to destroy them after the new database and software has been stabilized.**

### **Creation of an Integrated Electoral Database**

The ultimate objective would be to create and maintain an integrated database for citizen services and better electoral roll maintenance. This will also require an on-line electoral database management system to be put in place simultaneously, else, the integrated database will not remain current and will be of no use. The advantages of having a centralized database are well known and are enumerated below: -

1. On-line applications
2. On-line applications tracking
3. Monitoring by the DEO, CEO and the Commission
4. Total transparency
5. National search
6. National de-duplication

However, there are many pitfalls of an integrated database which must be considered in detail. The issue of making the integrated database and on-line ERMS is under active consideration of the Commission and soon guidelines will be issued in consultation with NIC. Meanwhile, the CEOs may please complete the task of standardization of database as detailed above.

### **Schedule of activities**

States and Union Territories may decide to undertake this work either in one or two phases. It must be noted that a Parliamentary Constituency will not be broken into two phases. CEOs were directed in an earlier letter to inform the Commission about phasing for their State/UT. The schedule of activity will be for the entire State/UT if the entire State/UT is being taken up in one phase. If two phases are proposed, the schedule of activities will be for the first phase. It may please be noted that these activities have to be completed before summary revision of Electoral Rolls with 1-1-2010 as the qualifying date is undertaken. Since the draft publication for summary revision is likely to be in May 2010, these pre-revision activities need to be completed by the end of April 2010. Please submit the schedule of activities in the following format: -

<b>S.No.</b>	<b>Activity</b>	<b>Period of Activity (From date to date)</b>
1	Obtaining/Developing a Unicode Conversion software	
2	<b><u>Making a copy of Elector Database and keeping the original in safe custody to be used in case the Unicode version does not work properly</u></b>	
3	Print a working copy of the roll for comparison after font conversion, transliteration and photo-merging	
4	Upgrading the Elector Database Updation software, Photo Roll printing software and EPIC creation software to make it Unicode compliant	
5	Conversion of the font to Unicode	
6	Obtaining/Developing a Transliteration Software to transliterate vernacular languages data into English	
7	Transliteration of vernacular Language	

	data into English to make the Elector Database bilingual	
8	Developing a software to merge Photographs as binary data into the Elector Table (E-detail Table)	
9	Merge Photographs as binary data into the Elector Table (E-detail Table)	
10	Integrate all supplements with the Mother Roll to prepare a Draft Roll	
11	Print Working Copy of the Roll for comparison with the working copy printed before font conversion, transliteration and photo-merging	
12	Distribute Working Copy of the Roll to BLOs, BLAs, and make it available to voters by various means including distribution of pamphlets with newspapers	
13	Door to Door survey to detect errors in the working copy and make corrections therein	
14	Edit the Elector Database to update it and carryout corrections made in the working copy in the Computerized database	
15	Printing of the Draft Roll for Draft Publication	

The Proposed schedule should reach the Commission latest by 11<sup>th</sup> January, 2010.

Yours faithfully,

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