

Instruction Manual

Standardization of Electoral Roll Database

(Ver 1.0)

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Introduction

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.

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 : -

| S.No. | Activity | Period of Activity (From date to date) |
|-------|--|---|
| 1 | Obtaining/Developing a Unicode Conversion software | |
| 2 | <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> | |
| 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 | |

Process of Database Standardization

Database Standardization Process Details

In order to achieve uniformity across all India, it has been decided to optimize the existing database structure and data. For this purpose the database structure of State Chhatisgarh has been analyzed and it has been decided to adopt the same structure for all States / Union Territories. The description of the entire optimization processes are listed below : -

1. The no. of Control Tables and E-Roll Tables must be same across all India
2. The naming convention for the tables used must be the same
3. The field names of the above mentioned table must exactly match as per the new database structure
4. The data type of fields should be changed accordingly without loss of data
5. The States / UTs may need to include or exclude certain fields
6. The data optimization which may require concatenation of certain fields such as Unit_ID No. [Eg. Unit_ID data '1' may become '001']
7. To arrange the sequence of control table / e roll units as per the new standards. Eg. (Tehsil No must be given on District basis from 1 to N etc.)

Database Structure

Tables Description, Naming Conventions and Data Types

Important Instructions

The database structure, tables description and naming conventions and data types given in this manual are mandatory for all States / Union Territories. However, if some States / UTs wish to have additional tables or additional fields they may seek approval of the Commission for it. No additional tables and fields can be added without approval of the Commission.

There may be some variations for Metropolitan areas for which a separate instructions manual will be issued.

The details of proposed tables and their fields with Naming Conventions are listed below :-

Table No 1 : AC_List

| SNO | Field Name | DATA TYPE | Description / Remarks | Data Sample |
|-----|---------------------------------------|---------------|---|-----------------------|
| 1 | Ccode | bigint | Auto Generated Field Incremented by 1 | |
| 2 | ST_CODE | varchar(3) | State Code provided by Commission | S26 |
| 3 | OLD_AC_NO | int | For Pre delimitation Information (Optional) | |
| 4 | EPIC_PREFIX | varchar(3) | Unique combination of 3 alphabets given by Commission | ZXQ |
| 5 | AC_NO | int | No. to be given State Code wise | 1 |
| 6 | DIST_NO | varchar(2) | District_ID from Districts Table | 01 |
| 7 | AC_NAME (Old Name : ac_name_v1) | nvarchar(255) | Name in Vernacular Language Unicode | |
| 8 | AC_NAME_EN | nvarchar(255) | Name in English | |
| 9 | PC_NO | int | Parliamentary Constituency No. | 1 |
| 10 | DIST_NO2 (Old Name : no_of_dist) | int | No. of Disticts linked with this AC | 3 |
| 11 | AC_TYPE | varchar(3) | SC to be replaced by SCC and ST by STT | GEN, SCC, STT |
| 12 | pcname (Old Name : pc_name_v1) | nvarchar(255) | Parliamentary Constituency Name (Vernacular) | |
| 13 | pcname_En (Old Name : pc_name_en) | nvarchar(255) | Parliamentary Constituency Name in English | |
| 14 | pctype | varchar(3) | SC to be replaced by SCC and ST by STT | GEN, SCC, STT |
| 15 | ServicVotersPartNo | Int | For Service Voters Part No. | Total Parts in AC + 1 |
| 16 | PC_DIST_NO | varchar(2) | District ID of major District | 01 |
| 17 | ExtentOfAC | nvarchar(500) | Extent of the AC published in the Gazette Notification in vernacular language Unicode | |

Table No 2 : Blocks

| SNO | Field Name | DATA TYPE | Description / Remarks | Data Sample |
|-----|---|---------------|--|-------------|
| 1 | CCode | bigint | Auto Generated Field Incremented by 1 | |
| 2 | ST_CODE | varchar(3) | State Code provided by Commission | S26 |
| 3 | District_ID (Old Name : dist_no) | varchar(2) | Unique within State / UT | 01 |
| 4 | SubDivision_ID (Old Name : sub_div_no) | varchar(2) | | 01 |
| 5 | Block_ID (Old Name : block_no) | varchar(3) | No. to be given District ID wise | 001 |
| 6 | Block_Name (Old Name : block_name_v1) | nvarchar(255) | Name in vernacular language (Unicode) | |
| 7 | Block_Name_En | nvarchar(255) | Name in English | |
| 8 | Tahsil_ID | varchar(2) | Optional | 01 |

Note : Table 'Blocks' must be maintained in the database. If the concerned State/UTs does not have Block then the zero code (reserve for non existent entity) i.e. 000 must be there in the database.

Table No 3 : Panchayats

| SNO | Field Name | DATA TYPE | Description / Remarks | Data Sample |
|-----|--|---------------|---|-------------|
| 1 | ID | bigint | Auto Generated Field Incremented by 1 | |
| 2 | ST_CODE | varchar(3) | State Code provided by Commission | |
| 3 | UID | varchar(9) | Unique ID (2dt district_id + 3 dt block_id + 4 dt gram_panchayat_id) | 010090045 |
| 4 | District_ID (Old Name : dist_no) | varchar(2) | | 01 |
| 5 | Block_ID (Old Name : block_no) | varchar(3) | | 001 |
| 6 | Gram_Panchayat_ID (Old Name : pnchyt_no) | varchar(4) | No. to be given District wise | 0001 |
| 7 | Gram_Panchayat_En (Old Name : pnchyname_en) | nvarchar(255) | Name in English | |
| 8 | Gram_Panchayat_Hi (Old Name : pnchyname_v1) | nvarchar(255) | Name in vernacular language Unicode | |

Note : Table must be renamed to Panchayats (Existing Name : panchayat)

Note 2 : Table 'Panchayats' must be maintained in the database. If the concerned State/UTs does not have Panchayat then the zero code (reserve for non existent entity) i.e. 0000 must be there in the database.

Table No 4 : Divisions

| SNO | Field Name | DATA TYPE | Description / Remarks | Data Sample |
|-----|---|---------------|---------------------------------------|-------------|
| 1 | CCode | bigint | Auto Generated Field Incremented by 1 | |
| 2 | ST_CODE | varchar(3) | State Code provided by Commission | |
| 3 | Div_id (Old Name : division_no) | int | No. to be given State Code wise | 1 |
| 4 | Division_Name_Hi (Old Name : division_name_v1) | nvarchar(255) | Name in vernacular language Unicode | |
| 5 | Division_Name_En | nvarchar(255) | Name in English | |

Note : Table 'Divisions' must be maintained in the database. If the concerned State/UTs does not have Division then the zero code (reserve for non existent entity) i.e. 0 must be there in the database.

Table No 5 : Districts

| SNO | Field Name | DATA TYPE | Description / Remarks | Data Sample |
|-----|---|---------------|-------------------------------------|-------------|
| 1 | CCode | bigint | Auto Generated Field | |
| 2 | ST_CODE | varchar(3) | State Code provided by Commission | S26 |
| 3 | District_ID (Old Name : dist_no) | varchar(2) | No. to be given State Code wise | 01 |
| 4 | District_Name (Old Name : dist_name_v1) | nvarchar(255) | Name in vernacular language Unicode | |
| 5 | District_Name_En (Old Name : dist_name_en) | nvarchar(255) | Name in English | |
| 6 | div_id (Old Name : division_no) | int | | 1 |

Note : Table must be renamed to Districts (Existing Name : distlist)

Table No 6 : SubDivisions

| SNO | Field Name | DATA TYPE | Description / Remarks | Data Sample |
|-----|---|---------------|--|-------------|
| 1 | CCode | bigint | Auto Generated Field | |
| 2 | ST_CODE | varchar(3) | State Code provided by Commission | S26 |
| 3 | District_ID (Old Name : dist_no) | varchar(2) | | 01 |
| 4 | SubDivision_ID (Old Name : sub_div_no) | varchar(2) | No. to be given District ID wise | 01 |
| 5 | SubDivision_Name (Old Name : sub_div_nm_v1) | nvarchar(255) | Name in vernacular language Unicode | |
| 6 | SubDivision_Name_En (Old Name : sub_div_nm_en) | nvarchar(255) | Name in English | |

Note 1 : Table must be renamed to SubDivisions (Existing Name : SUBDIVS)

Note 2 : Table 'SubDivisions' must be maintained in the database. If the concerned State / UTs does not have SubDivision then the zero code (reserve for non existent entity) i.e. 00 must be there in the database.

Table No 7 : Tahsils

| SNO | Field Name | DATA TYPE | Description / Remarks | Data Sample |
|-----|---|---------------|--|-------------|
| 1 | CCode | bigint | Auto Generated Field | |
| 2 | ST_CODE | varchar(3) | State Code provided by Commission | S26 |
| 3 | District_ID (Old Name : dist_no) | varchar(2) | | 01 |
| 4 | SubDivision_ID (Old Name : sub_div_no) | varchar(2) | | 01 |
| 5 | Tahsil_ID (Old Name : tehsil_no) | varchar(2) | No. to be given District ID wise | 01 |
| 6 | Tahsil_Name (Old Name : tehsil_name_v1) | nvarchar(255) | Name in vernacular language Unicode | |
| 7 | Tahsil_Name_En (Old Name : tehsil_name_en) | nvarchar(255) | Name in English | |
| 8 | Block_ID | varchar(3) | Optional | 001 |

Note 1 : Table must be renamed to Tahsils (Existing Name : Tehsils)

Note 2 : Table 'Tahsils' must be maintained in the database. If the concerned State/UTs does not have Tehsil then the zero code (reserve for non existent entity) i.e. 00 must be there in the database.

Table No 8 : Ris

| SNO | Field Name | DATA TYPE | Description / Remarks | Data Sample |
|-----|--|---------------|-------------------------------------|-------------|
| 1 | CCode | bigint | Auto Generated Field | |
| 2 | ST_CODE | varchar(3) | State Code provided by Commission | S26 |
| 3 | District_ID (Old Name : dist_no) | varchar(2) | | 01 |
| 4 | Tahsil_ID (Old Name : tehsil_no) | varchar(2) | | 01 |
| 5 | RI_ID (Old Name : knngcrclno) | varchar(3) | No. to be given Tahsil wise | 001 |
| 6 | RI_Name (Old Name : knngcrclnm_v1) | nvarchar(255) | Name in vernacular language Unicode | |
| 7 | RI_Name_En (Old Name : knngcrclnm_en) | nvarchar(255) | Name in English | |

Note 1 : Table must be renamed to RIs (Existing Name : knngcrcl)

Note 2 : Table 'RIs' must be maintained in the database. If the concerned State/UTs does not have RI (Kannungo Circle) then the zero code (reserve for non existent entity) i.e. 000 must be there in the database.

Table No 9 : PatwariCircleNos

| SNO | Field Name | DATA TYPE | Description / Remarks | Data Sample |
|-----|---|---------------|-------------------------------------|-------------|
| 1 | CCode | bigint | Auto Generated Field | |
| 2 | ST_CODE | varchar(3) | State Code provided by Commission | S26 |
| 3 | District_ID (Old Name : dist_no) | varchar(2) | | 01 |
| 4 | Tahsil_ID (Old Name : tehsil_no) | varchar(2) | | 01 |
| 5 | PatwariCircle_No (Old Name : ptwrcrclno) | varchar(3) | No. to be given Tahsil wise | 001 |
| 6 | PatwariCircle_Name (Old Name : ptwrcrcl_v1) | nvarchar(255) | Name in vernacular language Unicode | |
| 7 | PatwariCircle_Name_En (Old Name : ptwrcrcl_en) | nvarchar(255) | Name in English | |
| 8 | RI_ID (Old Name : knngcrclno) | varchar(3) | | 001 |

Note 1 : Table must be renamed to PatwariCircleNos (Existing Name : ptwrcrcl)

Note 2 : Table 'PatwariCircleNos' must be maintained in the database. If the concerned State/UTs does not have PatwariCircleNos then the zero code (reserve for non existent entity) i.e. 000 must be there in the database.

Table No 10 : NNN

| SNO | Field Name | DATA TYPE | Description / Remarks | Data Sample |
|-----|--|---------------|--|---|
| 1 | CCode | bigint | Auto Generated Field | |
| 2 | ST_CODE | varchar(3) | State Code given by Commission | S26 |
| 3 | District_ID (Old Name : dist_no) | varchar(2) | District No | 01 |
| 4 | NNN_ID (Old Name : town_no) | varchar(3) | No. to be given District wise | 001 |
| 5 | NNN_Name (Old Name : town_name_v1) | nvarchar(255) | Name in vernacular language Unicode | |
| 6 | NNN_Name_En (Old Name : town_name_en) | nvarchar(255) | Name in English | |
| 7 | NNN_Type (Old Name : town_type) | varchar(4) | NNGM * for MC, NPLK * for MUN and NPYT * for NAC | NNGM for Municipal corp, NPLK for Municipality, NPYT for Nagar Panchayat |

Note : Table must be renamed to NNN (Existing Name : Towns)

- * NNGM - Nagar Nigam
- * NPLK - Nagar Palika
- * NPYT - Nagar Panchayat

Table No 11 : Wards

| SNO | Field Name | DATA TYPE | Description / Remarks | Data Sample |
|-----|---|---------------|--|-------------|
| 1 | CCode | bigint | Auto Generated Field | |
| 2 | ST_CODE | varchar(3) | State Code provided by Commission | S26 |
| 3 | District_ID (Old Name : dist_no) | varchar(2) | | 01 |
| 5 | NNN_ID (Old Name : town_no) | varchar(3) | | 001 |
| 6 | Ward_No | varchar(3) | No. to be given Town wise | 001 |
| 7 | Ward_Name (Old Name : ward_name_v1) | nvarchar(255) | Name in vernacular language Unicode | |
| 8 | Ward_Name_En (Old Name : ward_name_en) | nvarchar(255) | Name in English | |

Note : Table must be renamed to Wards (Existing Name : ward)

Table No 12 : villages

| SNO | Field Name | DATA TYPE | Description / Remarks | Data Sample |
|-----|--|---------------|--|--|
| 1 | ccode | bigint | Auto Generated Field | |
| 2 | ST_CODE | varchar(3) | State Code provided by Commission | S26 |
| 3 | vlocation | varchar(17) | | 2 dt district_id + 2 dt tahsil_id + 3 dt ri_id + 5 dt patwaricircle_id + 4 dt village_id + 1 Urban / Rural |
| 4 | District_ID (Old Name : dist_no) | varchar(2) | | 01 |
| 5 | Urban_Rural | varchar(1) | | U for urban , R for Rural |
| 6 | Village_Id (Old Name : vill_sl_no) | varchar(4) | No. to be given Tahsil wise | 0001 |
| 7 | Village_Name (Old Name : vill_name_v1) | nvarchar(255) | Name in vernacular language Unicode | |
| 8 | Village_Name_En (Old Name : vill_name_en) | nvarchar(255) | Name in English | |
| 9 | Block_ID (Old Name : block_no) | varchar(3) | | 001 |
| 10 | Panchayat_ID (Old Name : pnchyt_no) | varchar(9) | | 2dt district_id + 3 dt block_id + 4 dt gram_panchayat_id |
| 11 | Tahsil_ID (Old Name : tehsil_no) | varchar(2) | | 01 |
| 12 | Patwari_ID (Old Name : ptwrcrclno) | varchar(3) | | 001 |
| 13 | halka | nvarchar(5) | Revenue Halka (Optional) | 00001 |
| 14 | RI_ID (Old Name : knngcrclno) | varchar(3) | | 001 |
| 15 | Policest_ID | varchar(5) | 2 Dist no + 3 Police Station No | 01001 |
| 16 | Postoff_ID | varchar(5) | 2 Dist no + 3 Post Off no | 01001 |
| 17 | veeran | varchar(1) | | V |
| 18 | ForestVillage | varchar(1) | 'Y' or 'N' | |
| 19 | Village_Voter_Capacity | int | No. of Voters in a Village | |
| 20 | Vlocation_PSDistance | varchar(17) | vlocation of Village where PS exists | |
| 21 | PSDistance_KM | float | PS Distance in KM | |

Table No 13 : Post_off

| SNO | Field Name | DATA TYPE | Description / Remarks | Data Sample |
|-----|---|---------------|--|-------------|
| 1 | CCode | bigint | Auto Generated Field | |
| 2 | ST_CODE | varchar(3) | State Code provided by Commission | S26 |
| 3 | District_ID (Old Name : dist_no) | varchar(2) | | 01 |
| 4 | Postoff_ID | varchar(5) | 2 Dist no + 3 Post Off no | 01001 |
| 5 | Postoff_No | int | No. to be given District wise | 1 |
| 6 | Postoff_Name (Old Name : POSTOFF_NM_V1) | nvarchar(255) | Name in vernacular language Unicode | |
| 7 | Postoff_Name_En (Old Name : POSTOFF_NM_EN) | nvarchar(255) | Name in English | |
| 8 | PostOffPin | int | | 492001 |

Table No 14 : Policest

| SNO | Field Name | DATA TYPE | Description / Remarks | Data Sample |
|-----|---|---------------|--|-------------|
| 1 | CCode | bigint | Auto Generated Field | |
| 2 | ST_CODE | varchar(3) | | S26 |
| 3 | District_ID (Old Name : dist_no) | varchar(2) | | 01 |
| 4 | Policest_No (Old Name : POLICESTNO) | int | No. to be given District wise | 1 |
| 5 | Policest_ID | varchar(5) | 2 Dist no + 3 Police Station No | 01001 |
| 6 | Policest_Name (Old Name : POLICESTNM_V1) | nvarchar(255) | Name in vernacular language Unicode | |
| 7 | Policest_Name_En (Old Name : POLICESTNM_EN) | nvarchar(255) | Name in English | |

Table No 15 : sec_detail

| SNO | Field Name | DATA TYPE | Description / Remarks | Data Sample |
|-----|--|---------------|---|---------------------------|
| 1 | CCode | bigint | Auto Generated Field | |
| 2 | ST_CODE | varchar(3) | State Code provided by Commission | S26 |
| 3 | Ac_No | int | | 1 |
| 4 | Part_No | int | | 1 |
| 5 | Section_No | int | No. to be given Part No wise | 1 |
| 6 | Section_ID | varchar(8) | 3 dt AC No + 3 dt PART_NO + 2 dt Section_No | 01010101 |
| 7 | Section_Name_Hi (Old Name : area_id_v1) | nvarchar(500) | | |
| 8 | Section_Name_En (Old Name : area_id_en) | nvarchar(500) | | |
| 9 | District_ID (Old Name : dist_no) | varchar(2) | | 01 |
| 10 | Urban_Rural | varchar(1) | | U for urban , R for Rural |
| 11 | NNN_id (Old Name : Town No) | varchar(3) | | 001 |
| 12 | Ward_id (Old Name : ward_no) | varchar(3) | | 001 |
| 13 | Vlocation | varchar(17) | 2 dt district_id + 2 dt tahsil_id + 3 dt ri_id + 5 dt patwaricircle_id + 4 dt village_id + 1 Urban / Rural | |
| 14 | Block_id (Old Name : block_no) | varchar(3) | | 001 |
| 15 | Panchayat_ID (Old Name : panchyat_no) | varchar(9) | 2dt district_id + 3 dt block_id + 4 dt gram_panchayat_id | |
| 16 | Postoff_ID (Old Name : postoff_no) | varchar(5) | 2 Dist ID + 3 Post Off No | 01001 |
| 17 | Policest_ID (Old Name : policest_no) | varchar(5) | 2 Dist ID + 3 Pol Stn No | 01001 |
| 18 | Section_Voter_Capacity | int | No. of Voters in a Section | |

Note : Table must be renamed to sec_detail (Existing Name : Sections)

Table No 16 : NewPartList

| SNO | Field Name | DATA TYPE | Description / Remarks | Data Sample |
|-----|---|---------------|-------------------------------------|---|
| 1 | CCode | bigint | Auto Generated Field | |
| 2 | ST_CODE | varchar(3) | State Code provided by Commission | S26 |
| 3 | AC_No | int | | 1 |
| 4 | Part_No | int | No. to be given AC wise | 1 |
| 5 | Part_Name_Hi (Old Name : ps_name_v1) | nvarchar(500) | Name in vernacular language Unicode | |
| 6 | Part_Name_EN (Old Name : ps_name_en) | nvarchar(500) | Name in English | |
| 7 | FVT_Type (Old Name : fvtm_type) | varchar(1) | | F for forest, V for Village, T for Town |
| 8 | PSBuildings_ID (Old Name : ps_locn_no) | varchar(6) | 3 dt ac_no + 3 dt PS building_no | |
| 9 | PSBuilding_Detail | nvarchar(500) | | Room No 105, South Block |
| 10 | PSBuildings_ID_OLD | varchar(6) | Optional | Pre Delimitation Purpose |
| 11 | Part_Voter_Capacity | int | No. of voters in a part | |
| 12 | VillagesInPart | int | Optional - No. of villages covered | |
| 13 | MainVillage | varchar(17) | vlocation of Main Village | 2 dt district_id + 2 dt tahsil_id + 3 dt ri_id + 5 dt patwaricircle_id + 4 dt village_id + 1 Urban / Rural |
| 14 | District_ID (Old Name : dist_no) | varchar(2) | | 01 |

Note : Table must be renamed to NewPartList (Existing Name : ac_parts)

Table No 17 : PSBuildings

| SNO | Field Name | DATA TYPE | Description / Remarks | Data Sample |
|-----|---|---------------|---|----------------------------------|
| 1 | CCode | bigint | Auto Generated Field | |
| 2 | ST_CODE | varchar(3) | State Code provided by Commission | S26 |
| 3 | AC_No | int | | 1 |
| 4 | PSBuildings_No | int | No. to be given AC wise | 1 |
| 5 | PSBuildings_ID (Old Name : ps_locn_no) | varchar(6) | | 3 dt ac_no + 3 dt building_no |
| 6 | PSBuilding_Name (Old Name : locn_bldg_v1) | nvarchar(500) | Name in vernacular language Unicode | |
| 7 | PSBuilding_Name_En (Old Name : locn_bldg_en) | nvarchar(500) | Name in English | |
| 8 | PSLocn_No_SectionID (Section_ID from sec_detail) | varchar(8) | 3 dt AC_No + 3 dt Part_no + 2 dt Section_No - Must be a valid Section ID from Sec_Detail Table | 0100101 |
| 9 | AC_No_Old | int | Pre Delimitation Information (Optional) | 1 |
| 10 | PSBuildings_No_old | int | | 1 |
| 11 | PSBuildings_ID_old | varchar(6) | | 3 dt ac_no + 3 dt building_no |

Note : Table must be renamed to PSBuildings (Existing Name : ps_locn)

Note : The instructions regarding METROs Unit will be issued to the concern States / UTs in due course of time.

Table No 18 : AC01PART001 (The elector details are maintained Part wise)

| Sno | Field Name | Data Type | Field Descriptions / Remark |
|-----|----------------|---------------|--|
| 1 | ccode | bigint | Auto Generated Number (Incremented by 1) |
| 2 | FormNo | nvarchar(15) | 4 dt year + 3 dt AC_no + 3 dt Part_no + 1 Character + 4 dt formno |
| 3 | AC_NO | int | Assembly Constituency No. (AC_No) |
| 4 | PART_NO | int | Part No. from NewPartList Table |
| 5 | SLNOINPART | int | Unique serial no for elector in the part |
| 6 | HOUSE_NO | nvarchar(10) | House No of elector . Size is limited to 10 chars because this number is printed in Electoral Roll column. |
| 7 | SECTION_NO | int | Section No. from sec_detail |
| 8 | FM_NAME | nvarchar(50) | First Middle Name of the Elector in Vernacular Language Unicode |
| 9 | LASTNAME | nvarchar(50) | Last Name of the Elector in Vernacular Language Unicode |
| 10 | RLN_TYPE | nvarchar(1) | Type of Relation i.e F for Father M for Mother O for other H for Husband |
| 11 | RLN_FM_NM | nvarchar(50) | First Middle of the Relative in Vernacular Language Unicode |
| 12 | RLN_L_NM | nvarchar(50) | Last Name of the Relative in Vernacular Language Unicode |
| 13 | IDCARD_NO | nvarchar(18) | 10 dgt New ID Card no. but the old ID Card Nos might have length 18 apprx. |
| 14 | STATUSTYPE | nvarchar(1) | N for New Entry, |
| 15 | E_DETAIL | nvarchar(1) | E for Expired, S for Shifted |
| 16 | SEX | nvarchar(1) | M for Male , F for female, O for Other |
| 17 | AGE | int | from 18 to 120 |
| 18 | JPGIMAGE | image | Image in binary |
| 19 | mflag | bit | true if Record is Modified. And The modified entry is kept in the MOD table. Other wise false. |
| 20 | dflag | bit | true if Record is Deleted. |
| 21 | Fm_NameEn | nvarchar(50) | First Middle of Elector in English |
| 22 | LastNameEn | nvarchar(50) | Last Name of Elector in English |
| 23 | Rln_Fm_NmEn | nvarchar(50) | Relative Name in English. |
| 24 | Rln_L_NmEn | nvarchar(50) | Relative Last Name in English. |
| 25 | DOB | smalldatetime | Date of Birth like 08-10-1980 |
| 26 | YearOfDOB | nvarchar(4) | Year of Dob like 1980 |
| 27 | slnoinpart_old | int | serial no before Integration |
| 28 | MPhotoUserID | nvarchar(30) | User ID of the User who has inserted / updated the photo. |
| 29 | MPhotoEDate | datetime | photo insertion / modification date time. |
| 30 | DelPhotoUserID | nvarchar(30) | User ID of the User who has deleted the photo. |
| 31 | DelPhotoEDate | datetime | photo deletion date time. |
| 32 | dbupdatedate | datetime | Record Last Updated. |
| 33 | FormNo_Old | nvarchar(255) | Formno of Previous Revision Year. |

Note :

1. There should be AC wise database and Part Wise Tables.
2. For example if AC no is 1 then Database Name AC_001 and Part Table AC001PART001
3. For Addition List Table Name AC001PART001AD
4. For Modification List Table Name AC001PART001DEL
5. For Modification List Table Name AC001PART001MOD
6. For Summary Roll Printing Temporary Table AC001PART001SUP

Table No 19 : AC01PART001AD

| Sno | Field Name | Data Type |
|-----|-----------------------|---------------|
| 1 | FormNo | nvarchar(255) |
| 2 | AC_NO | int |
| 3 | PART_NO | int |
| 4 | SLNOINPART | int |
| 5 | HOUSE_NO | nvarchar(10) |
| 6 | SECTION_NO | int |
| 7 | FM_NAME | nvarchar(50) |
| 8 | LASTNAME | nvarchar(50) |
| 9 | RLN_TYPE | nvarchar(1) |
| 10 | RLN_FM_NM | nvarchar(50) |
| 11 | RLN_L_NM | nvarchar(50) |
| 12 | IDCARD_NO | nvarchar(18) |
| 13 | STATUSTYPE | nvarchar(1) |
| 14 | E_DETAIL | nvarchar(1) |
| 15 | SEX | nvarchar(1) |
| 16 | AGE | int |
| 17 | JPGIMAGE | image |
| 18 | mflag | bit |
| 19 | dflag | bit |
| 20 | Fm_NameEn | nvarchar(50) |
| 21 | LastNameEn | nvarchar(50) |
| 22 | RIn_Fm_NmEn | nvarchar(50) |
| 23 | RIn_L_NmEn | nvarchar(50) |
| 24 | DOB | smalldatetime |
| 25 | YearOfDOB | nvarchar(4) |
| 26 | slnoinpart_old | int |
| 27 | MPhotoUserID | nvarchar(30) |
| 28 | MPhotoEDate | datetime |
| 29 | DelPhotoUserID | nvarchar(30) |
| 30 | DelPhotoEDate | datetime |
| 31 | dbupdatedate | datetime |
| 32 | ccode | int |
| 33 | FormNo_Old | nvarchar(255) |
| 34 | EPIC_edited_on_edate | datetime |
| 35 | EPIC_edited_by_userid | nvarchar(30) |
| 36 | EPIC_edited_by_DS | image |

Table No 20 : AC01PART001DEL

| Sno | Field Name | Data Type |
|-----|--------------------|----------------|
| 1 | UNIQID | nvarchar(255) |
| 2 | ST_CODE | nvarchar(3) |
| 3 | AC_NO | Int |
| 4 | PART_NO | Int |
| 5 | SLNOINPART | Int |
| 6 | SLNOINPARTTEXT | nvarchar(10) |
| 7 | HOUSE_NO | nvarchar(10) |
| 8 | SECTION_NO | Int |
| 9 | SECTION_NAME | nvarchar(255) |
| 10 | FM_NAME | nvarchar(50) |
| 11 | LASTNAME | nvarchar(50) |
| 12 | RLN_TYPE | nvarchar(1) |
| 13 | RLN_FM_NM | nvarchar(50) |
| 14 | RLN_L_NM | nvarchar(50) |
| 15 | IDCARD_NO | nvarchar(18) |
| 16 | STATUSTYPE | nvarchar(1) |
| 17 | E_DETAIL | nvarchar(1) |
| 18 | SEX | nvarchar(1) |
| 19 | AGE | Int |
| 20 | IMGFILENAME | nvarchar(100) |
| 21 | JPGIMAGE | image |
| 22 | HNO | int |
| 23 | SLNO | decimal(10, 4) |
| 24 | mflag | bit |
| 25 | dflag | bit |
| 26 | pflag | bit |
| 27 | shiftaddress | nvarchar(255) |
| 28 | siflag | bit |
| 29 | vlocation | nvarchar(50) |
| 30 | vlocationEHNS | nvarchar(10) |
| 31 | address | nvarchar(255) |
| 32 | addressEn | nvarchar(255) |
| 33 | Fm_NameEn | nvarchar(50) |
| 34 | LastNameEn | nvarchar(50) |
| 35 | RIn_Fm_NmEn | nvarchar(50) |
| 36 | RIn_L_NmEn | nvarchar(50) |
| 37 | Section_NameEn | nvarchar(255) |
| 38 | DOB | smalldatetime |
| 39 | YearOfDOB | nvarchar(4) |
| 40 | slnoinpart_old | int |
| 41 | slnoinpartText_old | nvarchar(10) |
| 42 | MPhotoUserID | nvarchar(30) |
| 43 | DSignature | image |
| 44 | MPhotoEDate | datetime |

| | | |
|----|-------------------------|--------------|
| 45 | DelPhotoUserID | nvarchar(30) |
| 46 | DelPhotoEDate | datetime |
| 47 | identification_no | nvarchar(12) |
| 48 | HOUSE_NOEN | nvarchar(50) |
| 49 | EPIC_edited_on_edate | datetime |
| 50 | EPIC_edited_by_userid | nvarchar(30) |
| 51 | EPIC_edited_by_DS | image |
| 52 | EPIC_prepared_on_edate | datetime |
| 53 | EPIC_prepared_by_userid | nvarchar(30) |
| 54 | EPIC_prepared_by_DS | image |
| 55 | formno | nvarchar(50) |
| 56 | CCode | int |
| 57 | dbupdatedate | datetime |

Table No 21 : AC01PART001MOD

| Sno | Field Name | Data Type |
|-----|-----------------------|---------------|
| 1 | FormNo | nvarchar(255) |
| 2 | AC_NO | int |
| 3 | PART_NO | int |
| 4 | SLNOINPART | int |
| 5 | HOUSE_NO | nvarchar(10) |
| 6 | SECTION_NO | int |
| 7 | FM_NAME | nvarchar(50) |
| 8 | LASTNAME | nvarchar(50) |
| 9 | RLN_TYPE | nvarchar(1) |
| 10 | RLN_FM_NM | nvarchar(50) |
| 11 | RLN_L_NM | nvarchar(50) |
| 12 | IDCARD_NO | nvarchar(18) |
| 13 | STATUSTYPE | nvarchar(1) |
| 14 | E_DETAIL | nvarchar(1) |
| 15 | SEX | nvarchar(1) |
| 16 | AGE | int |
| 17 | JPGIMAGE | image |
| 18 | mflag | bit |
| 19 | dflag | bit |
| 20 | Fm_NameEn | nvarchar(50) |
| 21 | LastNameEn | nvarchar(50) |
| 22 | RIn_Fm_NmEn | nvarchar(50) |
| 23 | RIn_L_NmEn | nvarchar(50) |
| 24 | DOB | smalldatetime |
| 25 | YearOfDOB | nvarchar(4) |
| 26 | slnoinpart_old | int |
| 27 | MPhotoUserID | nvarchar(30) |
| 28 | MPhotoEDate | datetime |
| 29 | DelPhotoUserID | nvarchar(30) |
| 30 | DelPhotoEDate | datetime |
| 31 | dbupdatedate | datetime |
| 32 | ccode | int |
| 33 | FormNo_Old | nvarchar(255) |
| 34 | HOUSE_NOEN | nvarchar(50) |
| 35 | EPIC_edited_on_edate | datetime |
| 36 | EPIC_edited_by_userid | nvarchar(30) |
| 37 | EPIC_edited_by_DS | image |

Table No 22 : AC01PART001SUP

| Sno | Field Name | Data Type |
|-----|----------------|---------------|
| 1 | FormNo | nvarchar(255) |
| 2 | AC_NO | int |
| 3 | PART_NO | int |
| 4 | SLNOINPART | int |
| 5 | HOUSE_NO | nvarchar(10) |
| 6 | SECTION_NO | int |
| 7 | FM_NAME | nvarchar(50) |
| 8 | LASTNAME | nvarchar(50) |
| 9 | RLN_TYPE | nvarchar(1) |
| 10 | RLN_FM_NM | nvarchar(50) |
| 11 | RLN_L_NM | nvarchar(50) |
| 12 | IDCARD_NO | nvarchar(18) |
| 13 | STATUSTYPE | nvarchar(1) |
| 14 | E_DETAIL | nvarchar(1) |
| 15 | SEX | nvarchar(1) |
| 16 | AGE | int |
| 17 | JPGIMAGE | image |
| 18 | mflag | bit |
| 19 | dflag | bit |
| 20 | Fm_NameEn | nvarchar(50) |
| 21 | LastNameEn | nvarchar(50) |
| 22 | RIn_Fm_NmEn | nvarchar(50) |
| 23 | RIn_L_NmEn | nvarchar(50) |
| 24 | DOB | smalldatetime |
| 25 | YearOfDOB | nvarchar(4) |
| 26 | slnoinpart_old | int |
| 27 | MPhotoUserID | nvarchar(30) |
| 28 | MPhotoEDate | datetime |
| 29 | DelPhotoUserID | nvarchar(30) |
| 30 | DelPhotoEDate | datetime |
| 31 | dbupdatedate | datetime |
| 32 | ccode | int |
| 33 | FormNo_Old | nvarchar(255) |

Table No 23 : AC001PART001ServiceVoters

| Sno | Field Name | Data Type |
|-----|----------------|---------------|
| 1 | ST_CODE | nvarchar(3) |
| 2 | DIST_NO | int |
| 3 | AC_NO | int |
| 4 | PART_NO | int |
| 5 | FM_NAME_EN | nvarchar(200) |
| 6 | LASTNAME_EN | nvarchar(100) |
| 7 | RLN_TYPE | nvarchar(1) |
| 8 | RLN_FM_NM_EN | nvarchar(200) |
| 9 | RLN_L_NM_EN | nvarchar(100) |
| 10 | EPIC_NO | nvarchar(16) |
| 11 | SEX | nvarchar(1) |
| 12 | DOB | datetime |
| 13 | SRVC_CATY | nvarchar(1) |
| 14 | SERVICE_NO | nvarchar(10) |
| 15 | DESPADR_L1 | nvarchar(255) |
| 16 | DESPADR_L2 | nvarchar(255) |
| 17 | DESPADR_L3 | nvarchar(255) |
| 18 | HOUSADRJ_1 | nvarchar(255) |
| 19 | HOUSADR_L2 | nvarchar(255) |
| 20 | DIST_NAME_EN | varchar(30) |
| 21 | TEHSIL_NO | int |
| 22 | TEHSIL_NAME_EN | nvarchar(100) |
| 23 | FVTM_TYPE | nvarchar(1) |
| 24 | FVTM_NO | int |
| 25 | FVTM_NAME_EN | nvarchar(100) |
| 26 | slnoinpart | int |

Note 1 : Sample Table Name - 3 dt AC_no + 3 dt Part_no (Max Parts plus 1) + ServiceVoters

Note 2 : Example for AC 1 and Part 1 Table Name would be AC001PART001ServiceVoters

List of Large, Medium and Micro States / Union Territories Categories

All States have been divided into 3 groups : Large, Medium and Micro : -

- Large States have more than 100 internal users
- Medium State have between 50 to 100 internal users
- Micro States have less than 50 users

The detailed tabular break of all states is given below : -

Micro State

1. Andaman & Nicobar Island
2. Chandigarh
3. Dadra & Nagar Haveli
4. Goa
5. Lakshadweep
6. Mizoram
7. Puducherry
8. Sikkim

Medium State

1. Jammu & Kashmir
2. Assam
3. Himachal Pradesh
4. Uttranchal
5. Tripura
6. Meghalaya
7. Nagaland
8. Manipur
9. Arunachal Pradesh
10. Delhi
11. Chattisgarh
12. Haryana
13. Jharkhand

Large State

1. Kerela
2. Karnataka
3. Orissa
4. Punjab
5. Tamil Nadu
6. Gujarat
7. West Bengal
8. Rajasthan
9. Madhya Pradesh
10. Maharashtra
11. Bihar
12. Uttar Pradesh
13. Andhra Pradesh

Minimum Hardware Requirement at State and District Level

Server Hardware Categories

| Server Description | Category Code | Assumptions |
|------------------------------------|----------------------|--|
| Quad CPU, Quad Core, 128 GB RAM | Category – A | RAID 1 HDD, Dual Fibre Channel Support (except for where indicated) |
| Quad CPU, Quad Core, 64 GB RAM | Category – B | Network Cards and other details will be known after creation of detailed network diagram |
| Quad CPU, Quad Core, 32 GB RAM | Category – C | |
| Quad CPU, Quad Core, 16 GB RAM | Category – D | |

- All CPU are Quad Core 64 bit (Intel x86_64)

District Level (Indicative Only)

| Server Role | Software | Qty | Hardware | Qty | Remark |
|--|--|----------|--|----------|--|
| ERMS-CS Application and Database | Windows Server Standard | 2 | 2 CPU, 64 GB RAM, 250 GB RAID 1 DRIVES | 2 Server | SAN not required. CAL are assuming 20 operators |
| Server | (OS) _ | | | | |
| | SQL Server 1 Server Standard (DB) | 1 server | | | |
| | SQL Server 20 CALs | 20 | | | |
| | Windows 20 CALs | 20 | | | |
| | | | | | |

Note : All CPUs are Quad Core 64 bit (Intel x 86 64)

State Level (Indicative Only) x 13 Large States

| Server Role | Software | Qty | Hardware | Quantity | Remark |
|---|-------------------------|---------------|-------------|-----------|-----------------------------|
| ERMS Database and Reporting | Windows Server Standard | 2 | Category –A | 2 Servers | SAN Storage required |
| | SQL Standard | (2 servers) | | | |
| | SQL Server CAL | ** | | | |
| ERMS Application and Access Control (AD) | Windows Server Standard | 2 | Category –A | 2 Server | SAN connection not required |
| | Windows Server CAL | ** | | | |

Note : Indicative server count can be increased after SRS / FRS.

State Level (Indicative Only) x 13 Medium States + 5 Micro States
(except A&N, D&D and Lakshdweep)

| Server Role | Software | Qty | Hardware | Quantity | Remark |
|---|-------------------------|---------------|-------------|-----------|----------------------|
| ERMS Database and Reporting | Windows Server Standard | 2 | Category –C | 2 Servers | SAN Storage required |
| | SQL Standard | (2 servers) | | | |
| | SQL Server CAL | | | | |
| ERMS Application and Access Control (AD) | Windows Server Standard | 2 | | | |
| | Windows Server CAL | | | | |
| | | | | | |

Note : Indicative server count can be increased after SRS / FRS.

- All CPU are Quad Core X64bit

State Level (Indicative Only) x 4 Micro States (Internal users < 100)

(A&N, D&D and Lakshdweep)

| Server Role | Software | Qty | Hardware | Quantity | Remark |
|-----------------------|-------------------------|-------------------|-----------------|-----------------|-----------------------------|
| Micro - States | Windows Server Standard | 8 (1 DB, 1 web) | Category –D | 8 Servers | SAN connection not required |
| | SQL Server Standard | 4 Server | | | |
| | SQL Server CAL | | | | |

Note : Indicative server count can be increased after SRS / FRS.

- All CPU are Quad Core X64bit

Disaster Recovery Site

Every State must have a disaster recovery site at State level which should have the same configuration as the main State / UT site.

Manpower Requirement at Initial Stage

| Level | Task Details | Manpower Required in no. | Resources Details |
|-----------------------|--|-----------------------------|--|
| District Level | Initiation and Maintenance of proposed architecture | 1 | This person can also be borrowed from the District NIC center on a part time basis |
| State Level | Initiation and Maintenance of proposed architecture | For Large States - 3 | 1 DBA, 1 System Analyst, 1 Network / Hardware Support Staff, 3 to 4 Programmers |
| | | For Medium States - 2 | 1 DBA, 1 Network / Hardware Support Staff, 2 to 3 Programmers |
| | | For Micro States - 1 | This person can also be borrowed from the District NIC center on a part time basis, 1 to 2 Programmers |

- Note :** 1. Programmers should be well versed in .NET Technology
(VB.NET, ASP.NET 3.5 and Web Services)
2. DBA should be well versed in SQL Server 2005 / 2008

Resources

While some resources are available on the ECI website for use by all States / Union Territories, others will have to be procured by the States / Union Territories themselves.

1. **Resources for Font Conversion**

Resources for conversion of fonts of some Indian languages into Unicode are as the following URL :

<http://164.100.34.138/controltablelinks>

2. **Control Table Exporting**

<http://164.100.34.138/controltablelinks>

3. **User Manuals of Control Table exporting and Unicode Conversion**

<http://164.100.34.138/controltablelinks>

4. A Software for Roll Updation and Photo Roll Printing, after font conversion has been developed by Chhattisgarh. This software will run smoothly if the database structure, table structure, field names and data types given in this manual are adhered to. This software is freely available from the Election Commission. If you require this software you can send one dot net programmer to ECI. We will explain the code and give the software to him. Further customization of software including change of language of labels etc can be done in the States / UTs.

5. There shall be a resource page on ECI website on which the above said software and user manuals will be updated time to time.