Appendix 1

Overview of the Chosen System

1. System Components

The Nedap-Powervote[75] system as configured for use at elections in Ireland comprises the following elements:

Voting Hardware:

Portable Voting Machine (VM) with attached Control Unit

Ballot Module (BM)

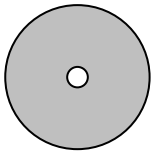
Voting and Counting Software:

Embedded Software on Voting Machine and Programming/ Reading Unit – "C code"

Integrated Election Management and Counting Software (IES) loaded onto PC from CD-ROM – "Delphi Code"

Election Management and Counting Hardware:

Programming/Reading Unit (PRU) and Personal Computer (PC)

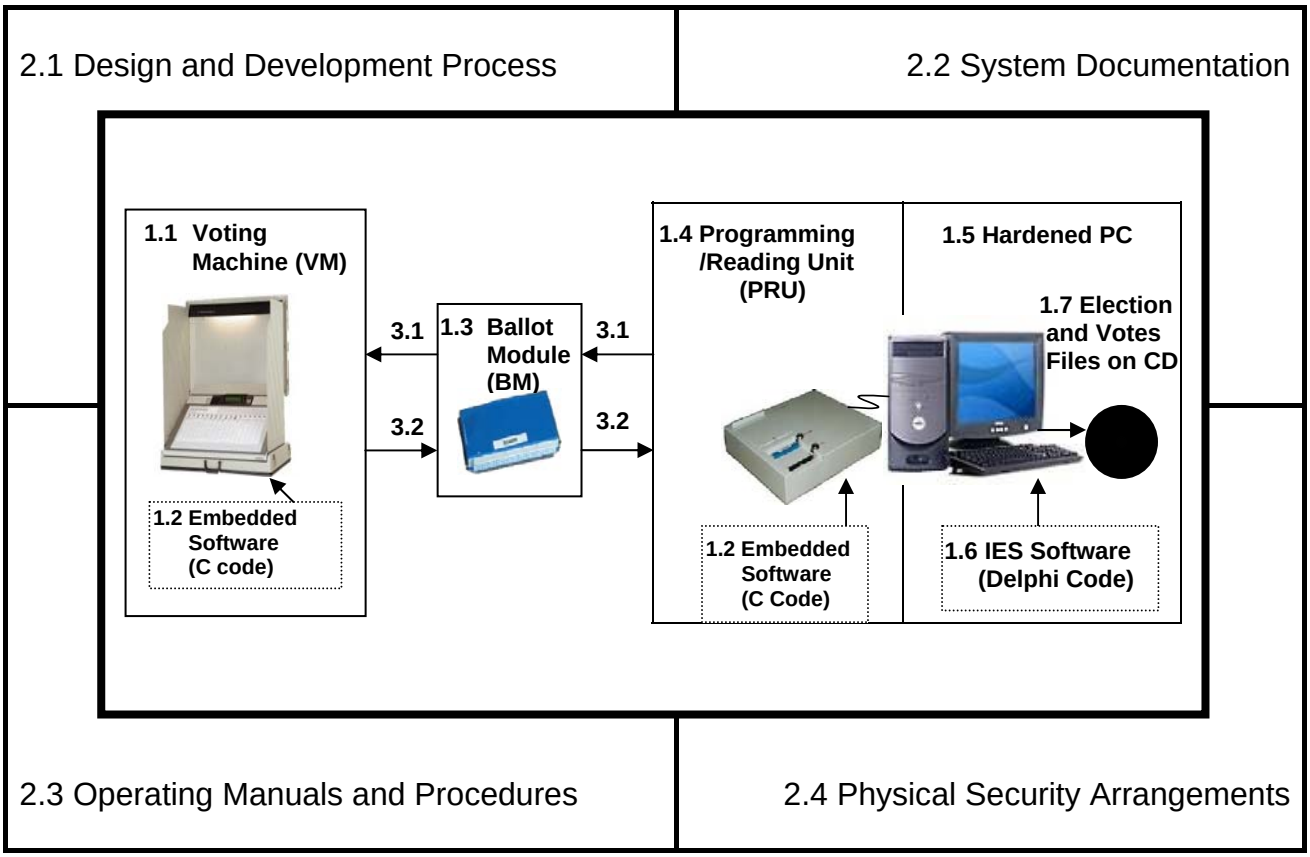


Compact Disc (CD)

[75] Nedap-Powervote: The voting machine, the programming/reading unit and the ballot module are manufactured in Holland and supplied by Nedap NV while the election management and counting software is produced in Holland and supplied by Powervote Ireland. Both companies have cooperated to provide the electronic voting system chosen for use at elections in Ireland.

2. The Voting Machine

3. System Context



1. Hardware and Software Components

1.1 Voting Machine (VM)
1.2 Embedded Software (C code)
1.3 Ballot Module (BM)
1.4 Programming/Reading Unit (PRU)
1.5 Hardened PC
1.6 IES Software (Delphi Code)
1.7 Election and Votes Files on CD

2. Context

2.1 Design and Development Process
2.2 System Documentation
2.3 Operating Manuals and Procedures
2.4 Physical Security Arrangements

3. Election Data

3.1 Election Configuration
3.2 Votes

4. System Operation[76]

The system is typically set up for use by returning officers and voters at elections in the following manner:

Setting up an Election

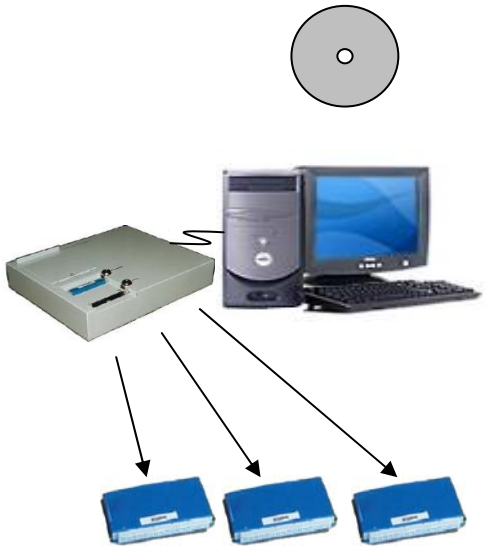
Before Election Day:

(1) The programming/reading unit is connected to the personal computer at the offices of the Returning Officer or elsewhere.

(2) The Returning Officer loads the integrated election software programme from the compact disc onto the personal computer and configures the integrated election software with details of the election. Copies of a replica "ballot paper" containing the election details are printed for placing on the panel of each voting machine in the constituency.

(3) Each ballot module to be used in the constituency is inserted into the programming/reading unit in turn and is configured with the election details and with the details of the polling station and centre at which it is to be used.

The ballot modules and the replica "ballot papers" are delivered to the polling centres. The appropriate ballot module is inserted into each voting machine and the ballot paper is placed under the transparent cover of the front panel of the voting machine.



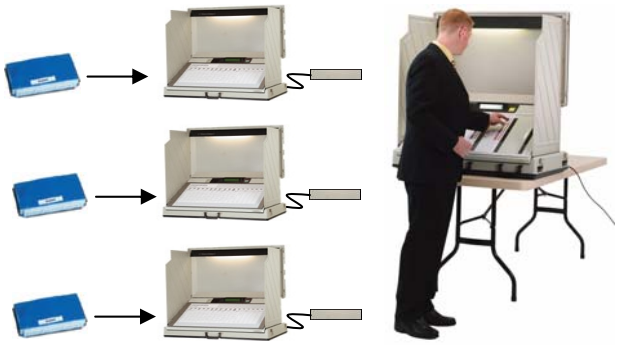
Conducting a Poll (Voting)

On Election Day:

(1) The voting machines are set up as polling booths. The machine is activated for each voter by a polling clerk via the attached control unit.

(2) As voters cast their votes on the voting machines, the votes are automatically recorded on the ballot modules.

At the end of polling, backup copies are made of the votes stored in the voting machines. The ballot modules are removed from the voting machines and sent to the count centre.



Counting the Votes

On or after Election Day:

(1) Each ballot module used in the constituency is inserted in turn into the programming/reading unit and the votes it contains are transferred into the integrated election software running on the personal computer to be counted (or onto a compact disc to be counted later).

(2) Votes are counted using the integrated election software on the personal computer.

(3) The results are announced after each count and are printed out in tabular form.


Declaration of result
Co. Meath-Navan LEA

[76] Confirmed by the Department of the Environment, Heritage and Local Government, December 2004.