

# Software Security

## Med-O-Card Version 3.5 (regular)

1. March 2010

Please note that the new Med-O-Card Version 3.5 (regular) that we now use for the Marienhospital Bottrop Tests **has one new data security feature** that makes the card even more protected:

Already known and published Security Features:

### 1. **Hardware (WalleTex):**

- 8 GB Flash , separated in
  - 250 GB CD Rom
  - 1.2 GB Removable Partition
  - 6,5 GB Storage Place in 2 hidden Partitions (used 1. Partition for Meta Data and the other, larger for medical data)
- PKI
- AES
- Autorun
- Username & Password

### 2. **The software (Cepco)** of the card creates the following protection platform:

- Only the card software can read, write and access data and allow input/view of data.
- Only registered operators allow access. If an unknown computer wishes to access, it has to be set up as an operator first by the card owner
- Doctors and Hospitals can be assigned as TRUSTEES – once a patient has set a doctor as Trustee, the doctor does not have to call Username, Password, Pin or else from the card owner.
- Card Management Tools (Zugriff nur für den Karteneigentümer)
  - Operators Management (access rights permissions)
  - Owner Management (edit your own and your insurance data)
  - Emergency Data Management (set your personal emergency viewing authority)
  - Change Password
  - Install and Manage Links

- Export Back Up Data (encrypted object, cannot be read without the card)
- Import Back Up Data (must correspond with Username and Password and card)
- Medical Application is installed inside hidden Area
- Other Applications (Scholz, BDT-program accessing PVS, in future others) are installed in the removable partition as program, without data. (Data from any application is stored inside the hidden area).

At this point Cepco's Software Team crated a **NEW** security feature:

- In any former version of Med-O-Card malicious data could have been loaded on the removable partition. It could have waited there for the card being installed in a new PC. As long as the new operator would use only the Medical Application with data from the hidden area, such malware could not be activated. Still – it was a small open door.
- That door is now closed:
  - Whenever Med-O-Card is plugged in any operator's PC or Laptop, the Card's software checks, whether there is any data on the removable partitions except the permitted Third Party Applications (without its data).
  - Any Data that was not properly imported by the card's operating software is automatically erased. In other words – whatever is installed on the removable depository except the coded and permitted Third Party Applications is erased.
  - Computer Experts that would look know into the open depository would find there only applications and not data at all:
  - Generally, when a computer owner manipulates program data, the program would not work any more (i.e. if you remove from your Windows Application some folders, the entire program would stop to work). In such cases one would have to load any program again from a CD or by download data.
  - Not so with Med-O-Card: If some program got damaged or infected (accidental or malicious) all the card owner has to do is to take the card out from the PC and plug it in again (in the same or any other PC). The card's program now checks any changes that took place on the removable partition and removes such changes, loading again all application in clean version.

For further changes and new software additions please always check the latest Version.

During cart initialing the card's unique serial number is recorded at Med-O-Card's central data base.

We will add to that the name of the card user so we can detect and either block or reinstall a new card according to the card owners report: We will also install the card's version so we can

evaluate at any time whether an update did now work or whether the version was taken out of circulation and was replaced by a new card for operational considerations.

This software is not visible to any card user and is installed only at Med-O-Card's technical centers where cards are being issued. On this version of the card it is visible that two DB are installed and being protected by the card's program: The IDC-10 DB and the Medication DB. Both DB can be updated online and this new data will not be affected by the data-destruction mechanism as prescribed before.