



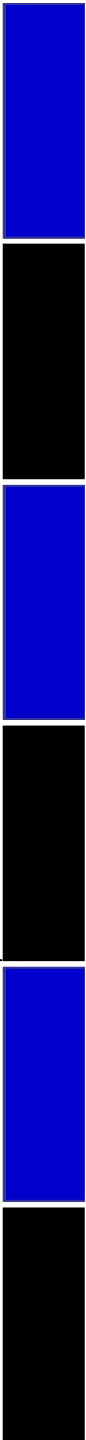
mdoc

medical documentation online

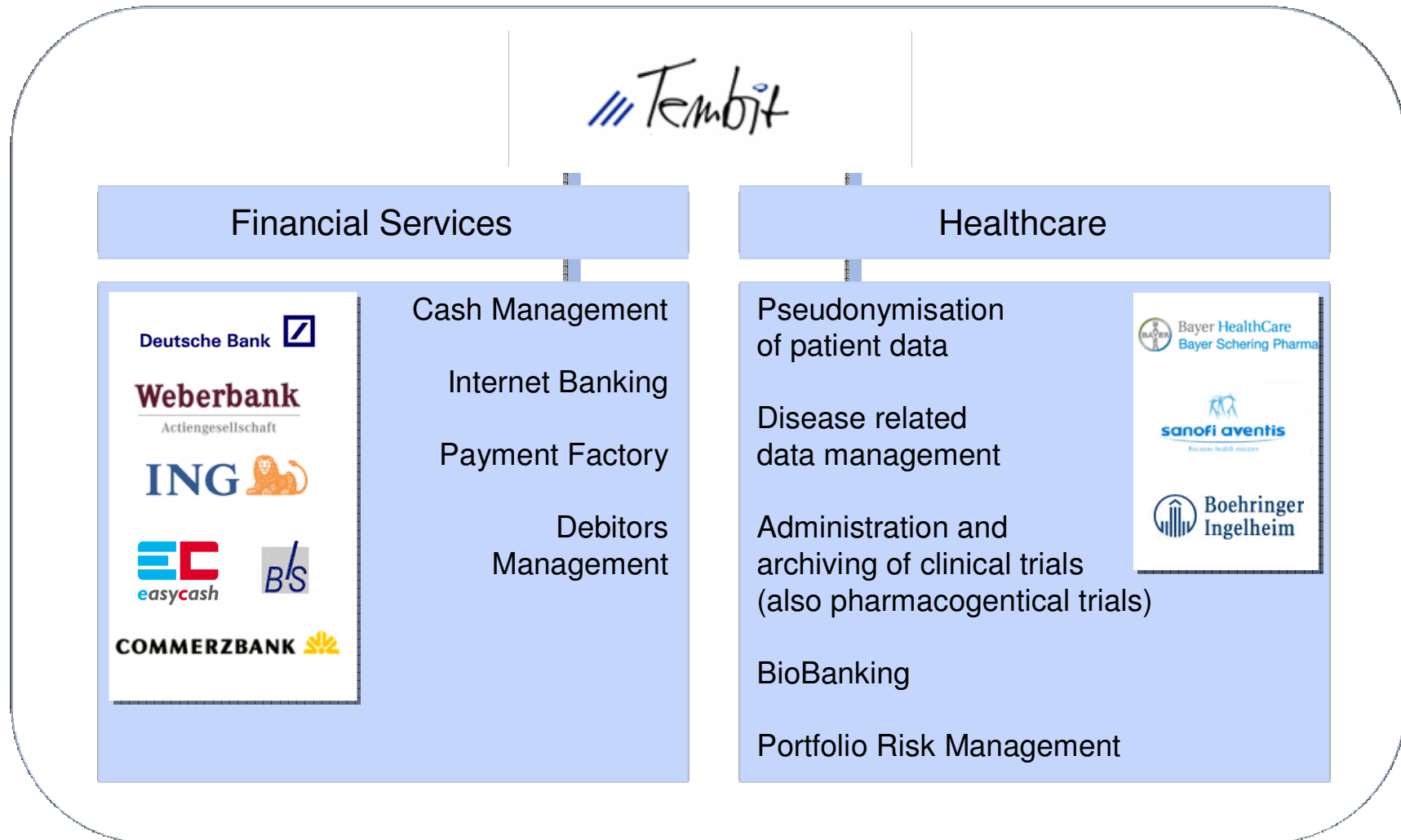
generic data management at clinics.



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Sofia, May 2010

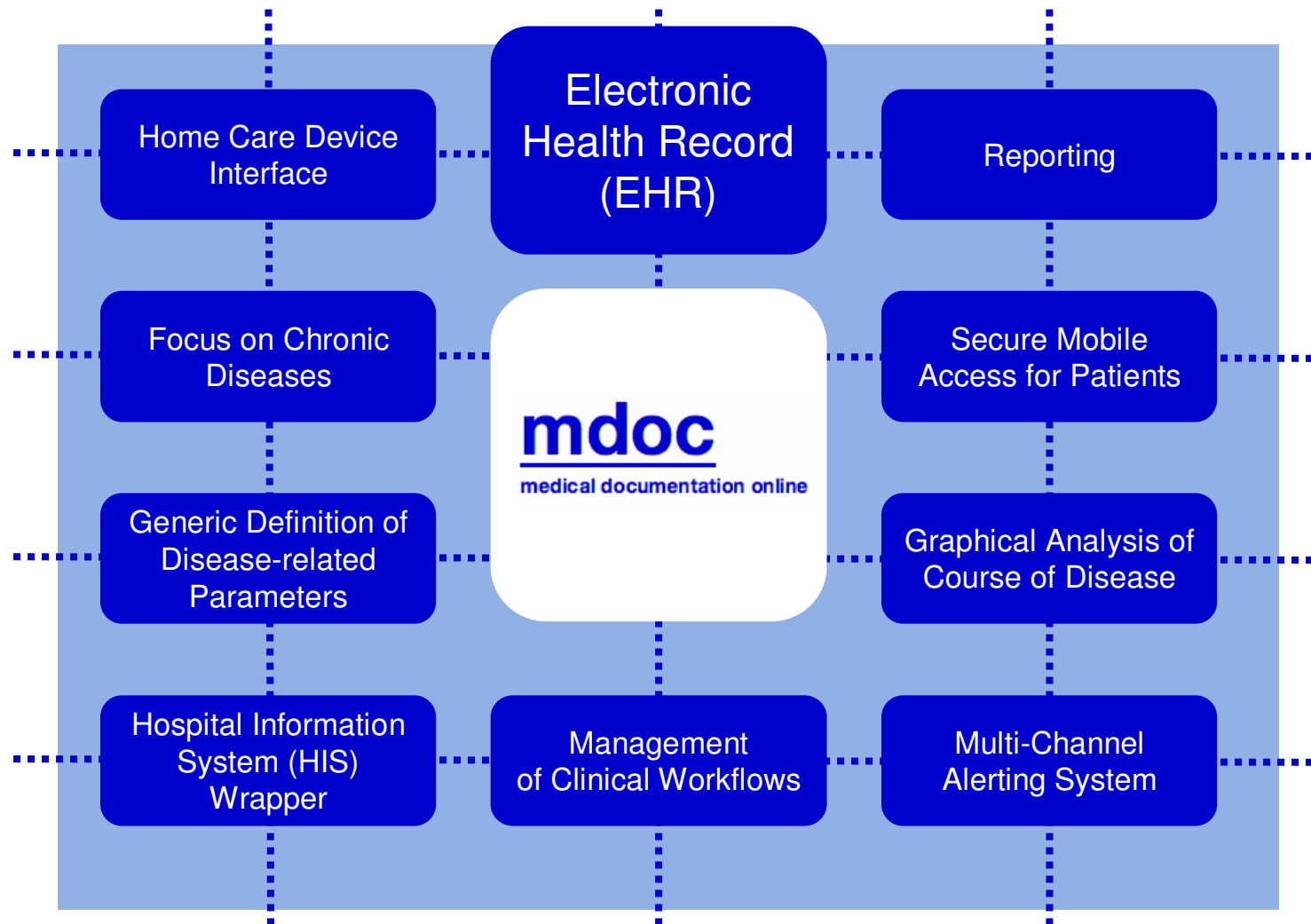


Tembit: Focussed on sensitive Data.



Tembit offers tried and tested applications for areas with high data protection needs.

mDOC: Overview



mDOC aggregates medical data from different sources (hospital/home care devices) to support an optimized monitoring and with it the best therapy for chronic diseases.

mDOC: Electronic Health Record

The screenshot displays the mDOC web application interface. The browser title is "mDOC - Medical Documentation Online - Mozilla Firefox". The address bar shows the URL "https://www.tembit.de/mDOC/index.zul#1275386753159". The page header includes "mDOC" and navigation links like "Mein Profil" and "Abmelden".

The main content area is titled "Patienten: Status" and features a navigation menu with options: "Tagesübersicht", "Patienten", "Studien", "Ansprechpartner", "Übersicht", and "Administration".

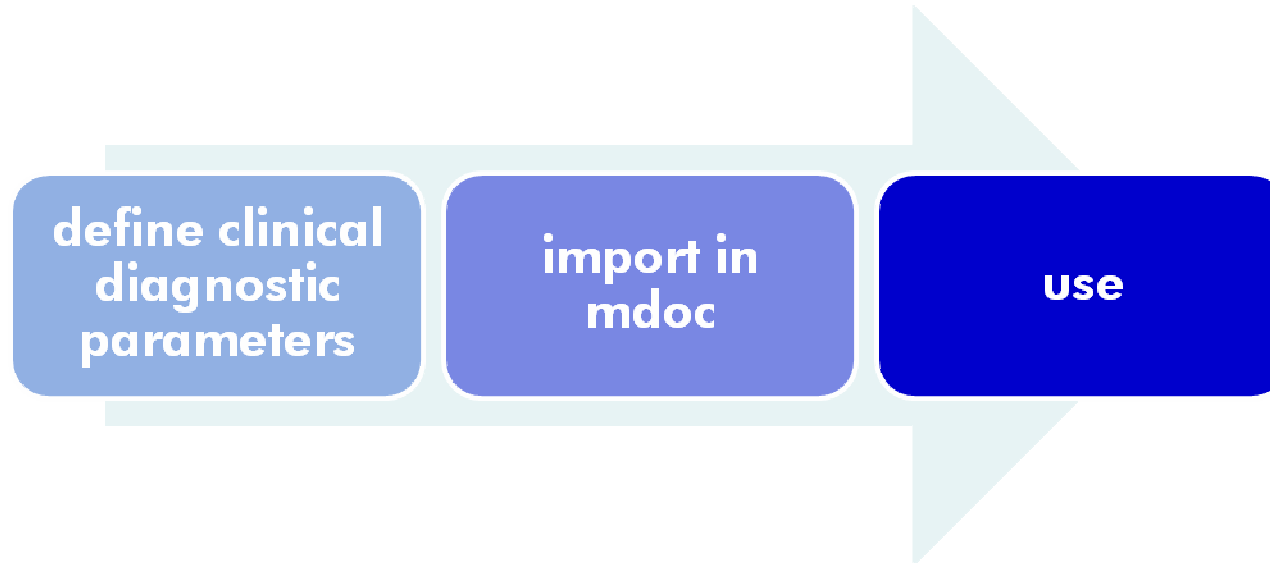
On the left, there is a sidebar with sections: "Infoblock" (containing a patient photo and name: Markus Schröder, * 24.09.1958), "Übersichten" (with links for Status, Behandlungsverlauf, Graphischer Verlauf, Berichte & Briefe, Terminübersicht), "Stammdaten" (with links for Patienten-Stammdaten, Erweiterte Stammdaten), and "Nach Kategorie" (with links for Warnungen, Untersuchungsdaten, Diagnosen, Therapien, Ereignisse, UAWs, Mitbehandler, Behandlungspfade, Dateien, Studien, Kontaktpersonen).

The main content area is divided into several sections:

- Status**: Contains a "Warnungen" table with one entry: "Walking Distance" with a value of 50,0, a limit of 0,0, and a date of 07.08.2006. A blue arrow points to this row with the label "Alerts".
- Kritische Diagnosen (keine Einträge)**: A section indicating no critical diagnoses.
- Untersuchungsdaten**: A table with columns: Parameter, Parameterwert, Erhoben am, Verlauf. It lists "EDSS" (8,5) and "MSFC" (5,0) from 11.09.2008. Blue arrows point to this section with the label "Selected medical data".
- Ereignisse**: A table with columns: Typ, Kurzbeschreibung, Bemerkung, Ereignis (Start), Ereignis (Ende). It lists events such as "Schub" (22.05.2009), "Autounfall" (11.03.2009), "Infarkt" (26.01.2009), and "Schwerer Schub" (03.10.2005). A blue arrow points to this section with the label "Therapy related events".
- Unerwünschte Arzneimittelwirkungen**: A table with columns: Maßnahme, Medikament, Datum. It lists "Dosis reduziert" (Zytrim, 22.11.2005) and "Medikament abgesetzt" (Imurek, 11.07.2003). A blue arrow points to this section with the label "Adverse reactions".
- Diagnosen**: A section for diagnoses.
- Medikamentöse Therapie**: A table with columns: Medikament, Bemerkung, Therapiebeginn. It lists "Zytrim" starting on 12.02.2009. A blue arrow points to this section with the label "Current therapy".

At the bottom of the main content area, there is a button labeled "Patientenstatus ausdrucken".

mDOC: Generic Definition of EHR Parameters



- mdoc is open to specify new parameters for special disease's diagnostics
- diagnostic parameters are part of clinical pathways which define steps to gather these parameters
- mdoc is able to import these pathways at runtime without code change



mdoc is open to extend its use to new diseases. New clinical pathways may be imported from an Excel file.

mDOC: Clinical Workflow Management

The screenshot shows the mDOC web application interface. The browser title is "mDOC - Medical Documentation Online - Mozilla Firefox". The address bar shows "https://www.tembit.de/mDOC/index.zul". The page title is "Tagesübersicht: Warteliste". The navigation menu includes "Tagesübersicht", "Patienten", "Ansprechpartner", "Therapie-Übersicht", "Administration", "Mein Profil", and "Abmelden".

The main content area is divided into two sections:

- Auswahlliste:** A list of patients with their appointment times, names, and doctors. The first patient is "08:50 - Herbert Schulz" with doctor "Dr. Heinz Müller". The second patient is "12:50 - Markus Schröder" with doctor "Dr. Heinz Müller". The third patient is "13:50 - Mirko Schlosser" with doctor "Dr. Karl-Dieter von Hohenwege".
- Task List:** A table of tasks for the selected patient "MS - Modul C - Therapie". The tasks are:

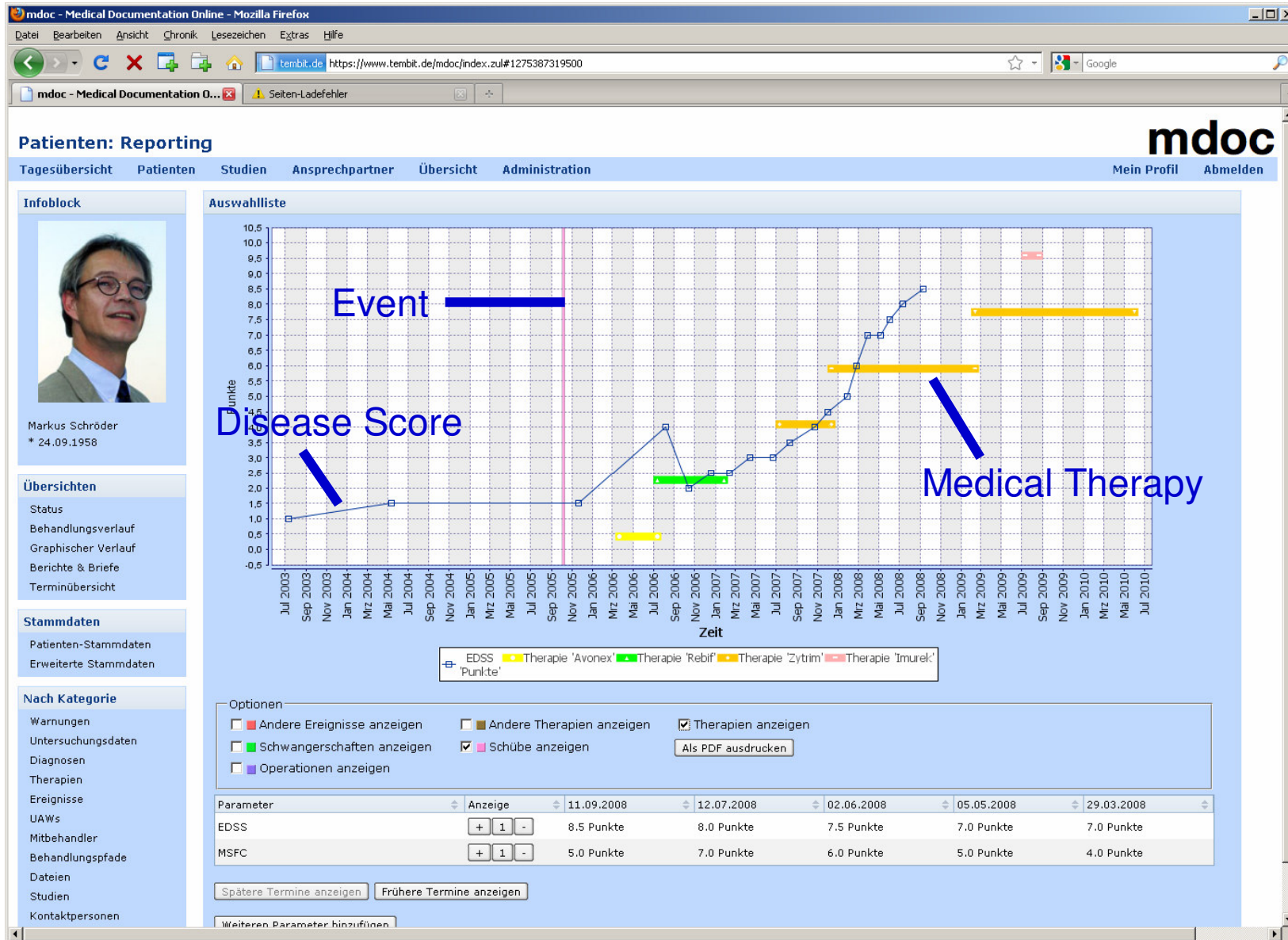
Task	Dauer (Min.)	Abschließen
Aktuell angewendete Therapieverfahren erfassen	10	Offen Task abschließen
Kausalorientierte MS-Therapie (Letzte Schubtherapie) erfassen	10	Offen Task abschließen
Kausalorientierte Therapie (Sonstige) erfassen	10	Offen Task abschließen
Therapie häufiger MS-bedingter Symptome erfassen	10	Offen Task abschließen
Aktuelle nicht-medikamentöse Therapie erfassen	10	Offen Task abschließen
Hilfsmittelversorgung erfassen	10	Offen Task abschließen
Alternative Therapie erfassen	10	Offen Task abschließen

Blue arrows point from the text "Tasks (scheduled for this patient)" to the task list table, and from "Patients (expected)" to the patient list. The status bar at the bottom indicates "Fertig" and "www.tembit.de".

Tasks
(scheduled for
this patient)

Patients
(expected)

mDOC: Graphical Reporting



mDOC: Home Care Device Monitoring (Overview)



blood pressure meter

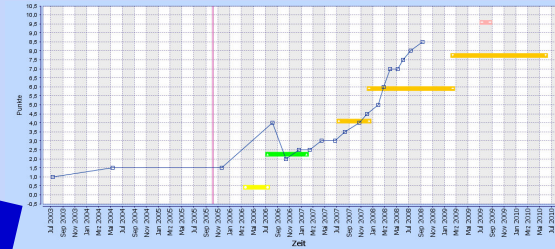


pulse oximeter



ECG

Home Area



graphical course of disease

Gerät	Zeitpunkt der letzten Datenübertragung:	Status
Atemfrequenzmessgerät		● ● ●
Blutdruckmessgerät	27.05.2010 14:55:42	● ● ●
EKG	27.05.2010 14:45:42	● ● ●
Pulsmessgerät	26.05.2010 16:25:42	● ● ●
Waage	20.01.2010 18:05:00	● ● ●



device indicator

Hospital

mDOC: Home Care Device Monitoring (Interface)

The screenshot displays the mDOC web interface in a Mozilla Firefox browser window. The page title is "Patienten: Telemedizinische Daten". The interface includes a navigation menu with options like "Tagesübersicht", "Patienten", "Studien", "Ansprechpartner", "Übersicht", and "Administration".

On the left, there is a sidebar with sections for "Infoblock" (showing a patient photo and name: Markus Schröder), "Übersichten" (Status, Behandlungsverlauf, etc.), "Stammdaten", and "Nach Kategorie" (Warnungen, Untersuchungsdaten, etc.).

The main content area shows "Ansicht (01.06.2010 12:33:42.294)". It features a "Device" section with buttons for "Auch beendete HCD-Verordnungen einblenden" and "Neue Geräteverordnung". Below this, there are two rows of device status:

- Atemfrequenzmessgerät**: Zeitpunkt der letzten Datenübertragung: [Green dots]
- Blutdruckmessgerät**: Zeitpunkt der letzten Datenübertragung: 27.05.2010 14:55:42 [Green dots]

Below the device status is a table for "Verordnungen für dieses Gerät" with columns for "Beginn", "Ende", and "Verantwortlicher Arzt".

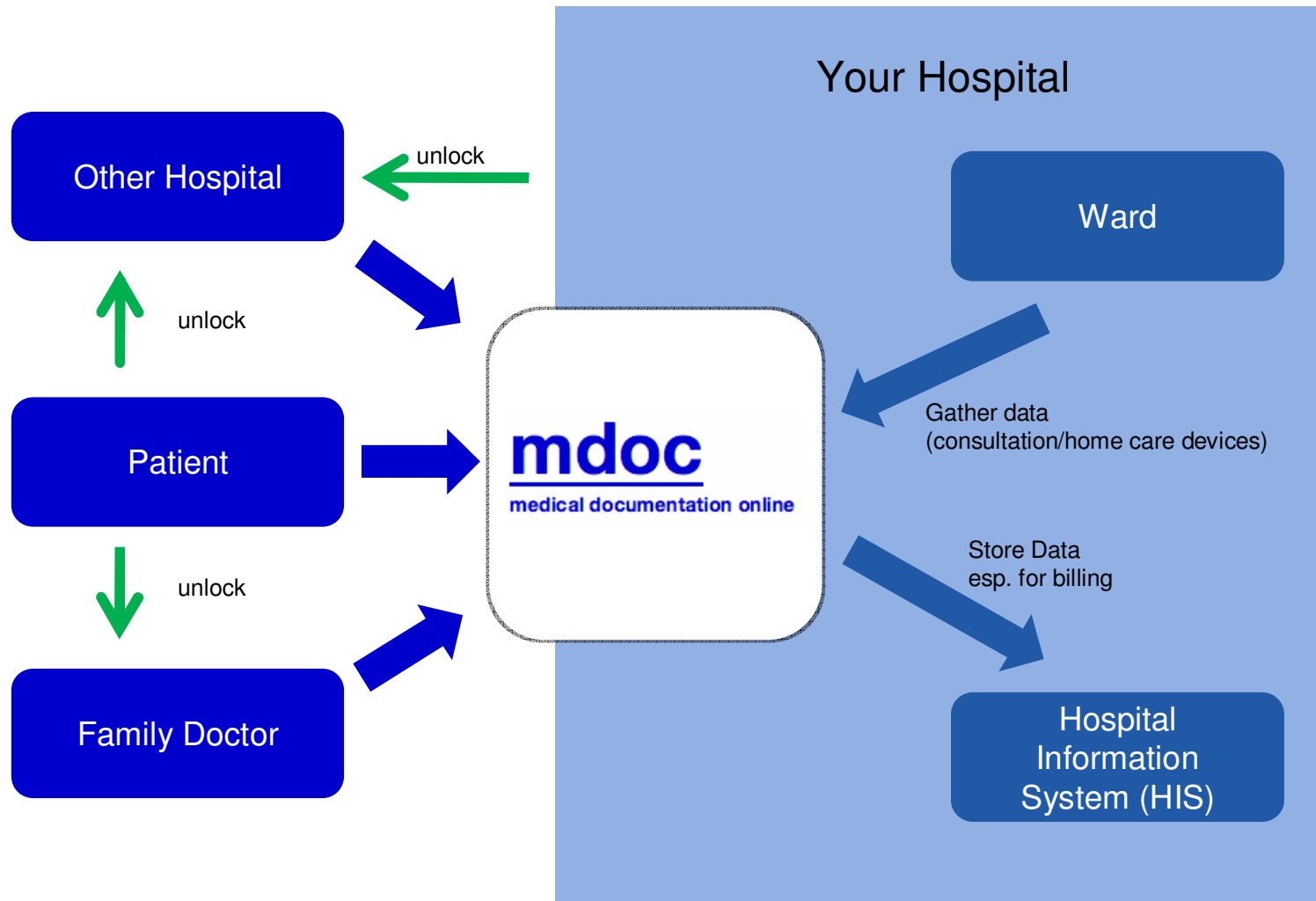
The "Warnungen" section contains a table with columns: "Zeitpunkt der Datenübertragung", "Art", "Gerät ist zertifiziert", and "Bestätigt?". The "Art" column includes "Maximalwert überschritten", which is labeled as "Alerts".

The "Empfangene Daten" section contains a table with columns: "Parameter", "Parameter-Wert", "Erfassungsdatum", and "Übertragungsstatus". The "Übertragungsstatus" column shows "Regulär" (green dots) and "Regulär, Maximalwert überschritten" (green dot and red dot), which is labeled as "Threshold exceeded".

Blue arrows and text labels are overlaid on the image:

- "Device" points to the device status section.
- "Device Indicator" points to the green dots in the device status section.
- "Alerts" points to the "Maximalwert überschritten" entries in the warnings table.
- "Device Data" points to the "Empfangene Daten" table.
- "Threshold exceeded" points to the "Regulär, Maximalwert überschritten" status in the received data table.

Data Exchange between different Counterparts.



Intention: make patient data available to and from other doctors to offer a full set of data for optimal therapy – in a secure way fulfilling all requirements of data protection.



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