

Application for mobile support of a clinical trial management system

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Motivation and Concept.

_Bachelors Thesis for studies of „Medical
Documentation and Computer Sciences“ at Ulm
University of Applied Sciences

_6 semesters, 1 internship

_main areas are mathematics and statistics
(including SAS), programming, database
management, medicine

Motivation and Concept.

- _usage of new technologies
- _combine special functions and groupware
- _simplify workflow in clinical trials
- _interconnect different parts of trial
- _easy to understand

Why mobile?

- _access from almost everywhere
- _wireless coverage improved during the last years
- _fast information processing
- _various functionalities
- _lower costs and handy devices
- _personalization of app

Functionalities.

Study Info
Participant Info
Visit Info

limited
EDC

Help Function
Logout

Contact Management
Scheduling
Appointments

Functionalities.

Study Info
Participant Info
Visit Info

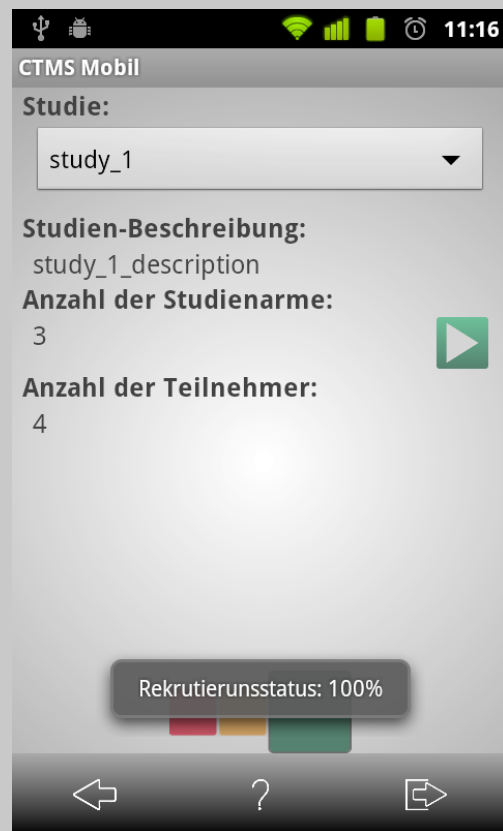
_name of study or
participant, visit number...

_participant count

_recruitments status
information

_visitnote

Functionalities.



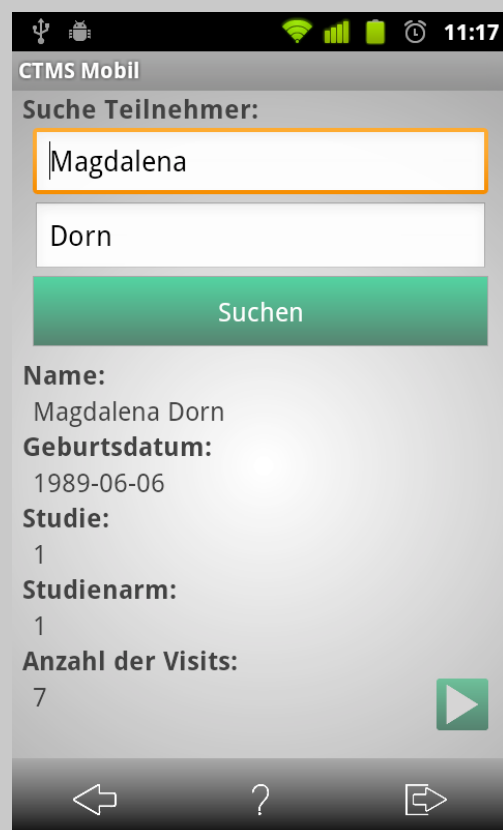
} 1
}

1. input for query

2. displayed DB results

} 3

3. information graphic



} 1
}

} 2

1. input for query

2. displayed DB results

Functionalities.

Study Info

Participant Info

Visit Info

limited
EDC

_visit status

_note on visit

Help Function
Logout

Contactmanagement

Scheduling

Appointments

Functionalities.

The screenshot shows the 'CTMS Mobil' application interface. At the top, there is a status bar with icons for USB, Android, Wi-Fi, signal strength, battery, and a clock showing 12:15. Below the status bar is a header bar labeled 'CTMS Mobil'. The main content area contains a form with the following elements: a checkbox labeled 'Visit wahrgenommen' with a green checkmark icon; a green button labeled 'Datum wählen' next to a date input field with the placeholder 'YYYY-MM-DD'; a text input field labeled 'Bemerkung'; and a large green button labeled 'Eintragen'. At the bottom, there is a navigation bar with three icons: a back arrow, a question mark, and a forward arrow.

- | | | |
|---|---|----------------------|
| } | 1 | 1. define visit date |
| } | 2 | 2. note function |
| } | 3 | 3. insert into DB |

Functionalities.

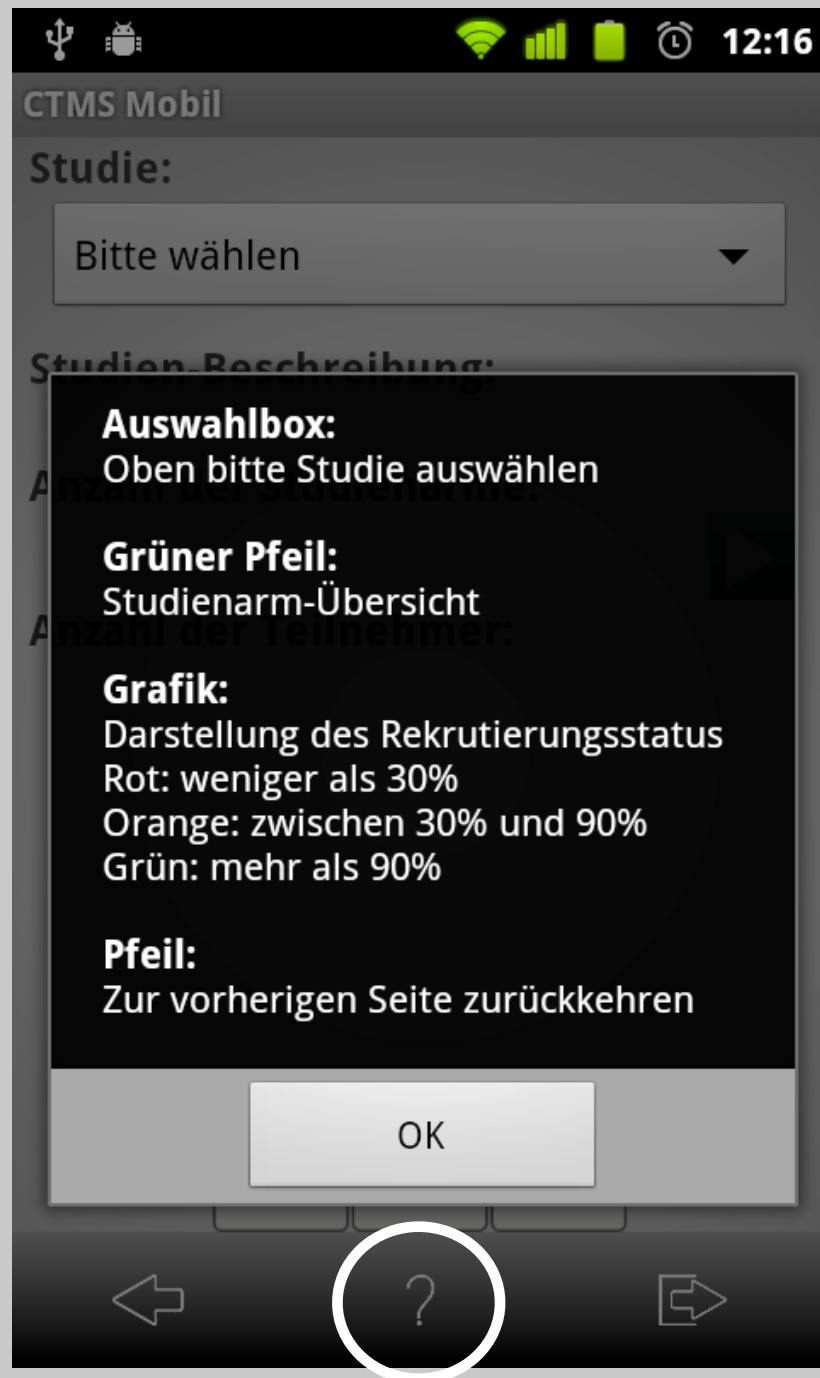
Help Function
Logout

_help concerning how to
use view

_possibility to log out
quickly

Contactmanagement
Scheduling
Appointments

Functionalities.



2

2. explanation for every single part of the screen

1

1. open help function

Functionalities.

_access to contact
information of different
people

_create appointments

_view personal calendar

Contactmanagement
Scheduling
Appointments

Functionalities.



1

1. choose way of contact
(home, mobile, business)



2

2. insert new appointments
or edit existing ones

Database.

_external MySQL-Database

_connection using simple PHP script as mediator

_dynamic delivery of different parameters for SQL-
Query

_data processing using query results in application

Database.

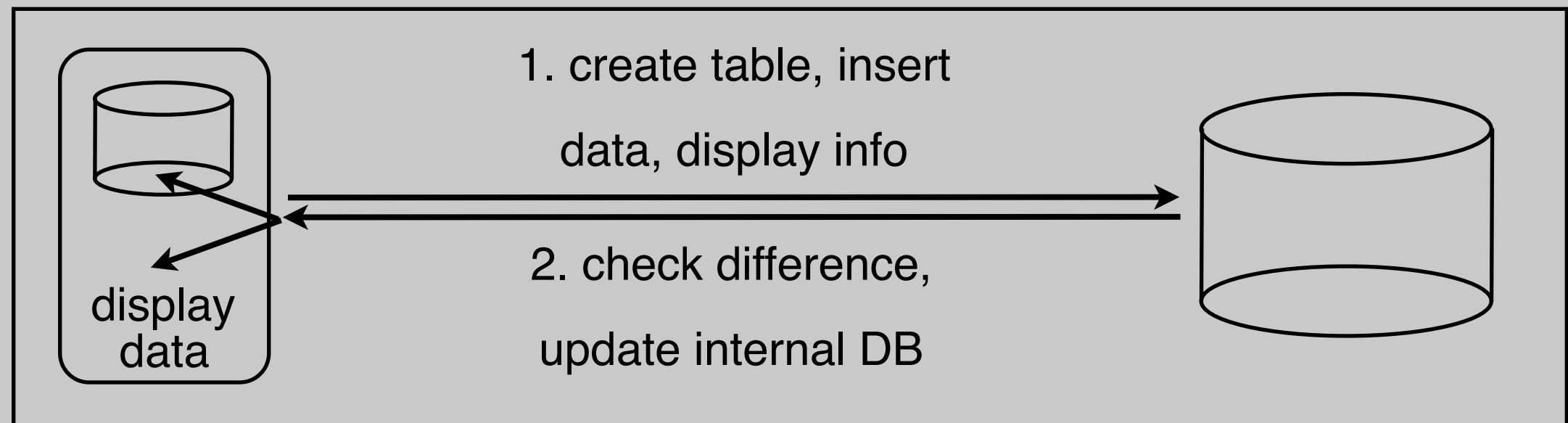
_internal SQLite database as „backup“ for slow internet connections

_displays information the same way it is when extracted from the external database

_additionally the user is informed about the date of last data exchange and asked to switch on WIFI

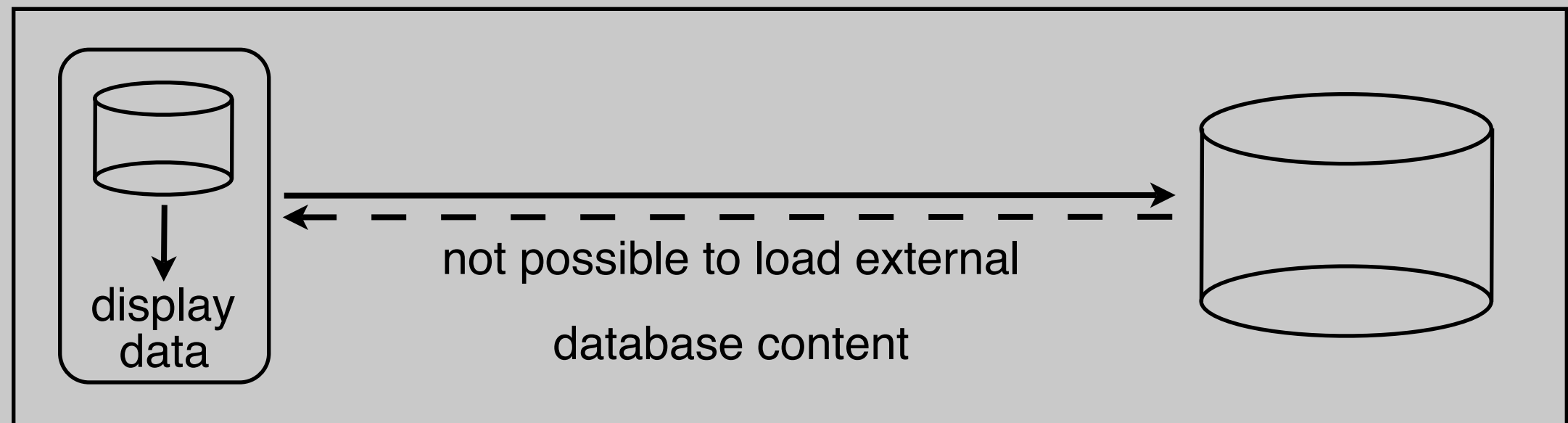
Database.

WIFI connection



Database.

slow internet connection



Internal components.

_contacts from internal contacts provider of
operating system

_interactive display of phone numbers and e-mail
addresses

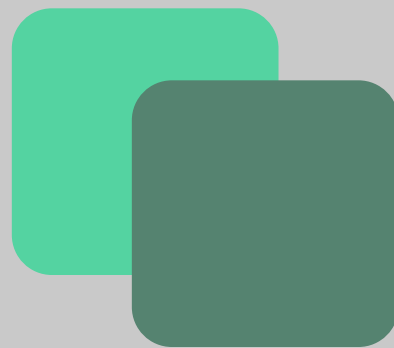
_calendar in- and output inside of the application

Usability.

- _handling waiting periods and process information
- _native apps directly involved in CTMS-app
- _internal helpfunction
- _GUI adjusted to properties of mobile device

Interface.

- _uniform text arrangement and color scheme
- _pictograms
- _meaningful and inculcating icon
- > easy to understand the app



Thank you for your attention!

For a short demo video visit <http://youtu.be/aEFApZsIGVg>