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Computer Assisted Personal Interview

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CAPI at the World Bank

- Development started in December 2011
- Computational Tools Team (DECCT) of the research department of the WB
- LSMS group (DECPI) of DECRG
- Project is jointly financed by a grant from the Bill and Melinda Gates Foundation and by the World Bank
- Development team of 7 full time programmers

Structure of CAPI System

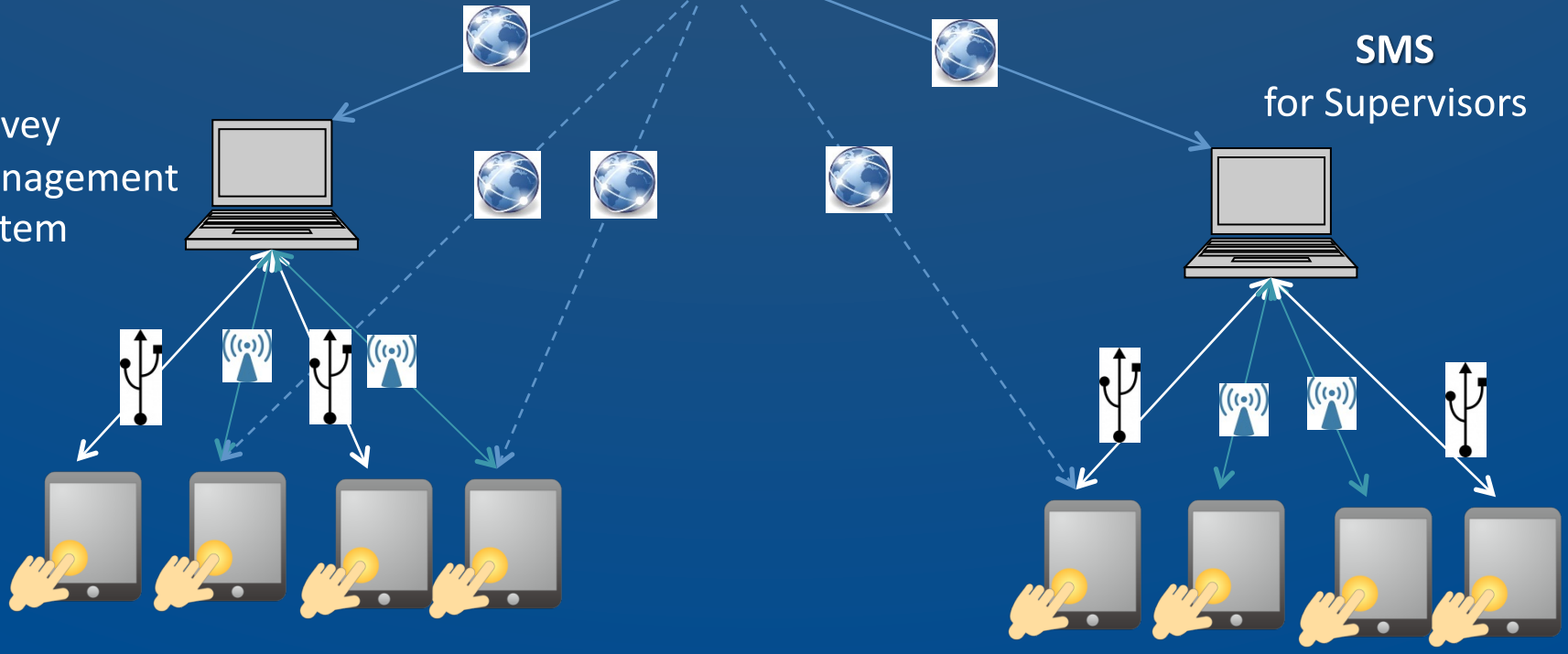
- Tablet-based Data Entry Application
  - Users: Interviewers
  - Main Functionality: Data collection in the field
  - Features: GPS, Time Stamps, Maps, Prepopulated Questionnaires
- Survey Management System
  - Users: Survey Supervisor
  - Main functionality: Populate tablets with questionnaires; collect data from tablets; send data to HQ.
  - Features: WiFi, USB, GPRS
- Questionnaire Designer System
  - Users: Technical staff
  - Functionality: Design of the new questioners
  - Features: Graphic interface for questionnaire design

CAPI

HQ
Data Management System

Survey Management System

SMS
for Supervisors



Interviewer: Software for Tablet PC

Connects to SMS via WiFi, USB.
Connects to HQ via Internet if available.

Why develop CAPI in the Bank?

- Main clients: Stat Agencies in developing countries. Low budget and low skills. Free software is preferable.
- Large, complex questionnaire with a **dynamic** structure. Most of the CAPI software on the market work with **static** questionnaire structure.
- CAPI Software should be designed based on experience of collecting complex survey. The World Bank has this expertise.

Advantages of CAPI

- Better management of mobile teams
  - Headquarters & Team Leaders: Assigning work,
  - tracking progress, immediate & comprehensive feedback
- Faster cycles of data collection, data availability
  - Data entry, checking & exportation in one application
- Improvements in quality of the data
  - Accommodation of dynamic, non-linear questionnaires
  - GPS coordinates and Time stamps
  - Automated routing reduces the incidence of missing data
  - Data checking, reporting and revision facilities during the interview
  - Range & consistency checks, flags for missing fields
  - Improvement in quantification of nonstandard units
  - Instructions on questions, note taking facilities
- Collection of different type of data
  - Maps
  - Audio and Video recording
  - USB-based measurement devices

Better quality data

Costs of switching to CAPI

- Reliability – hard to compete with paper
- Higher requirements to personnel
- High up-front cost, per survey costs would drop if hardware is reused for many surveys
- CAPI generates (minimal savings) in printing costs and costs of data entry. Savings increase with complexity and frequencies of surveys.

Difficult decisions:

- No standard software platform: Windows, Android, iOS, other (Kindle, EReader, etc).
- Hardware (Tablet PC) differs even for the same software platform.
  - Screen: E-Ink, LCD
  - Battery life
- Data Entry device uncertainty: touch, stylus, keyboard, combinations.

Development Timeline

- August, 2012 – field test #1
  - Fully functioning client
  - Limited functionality on the Survey Management System
  - Questionnaire Designer for internal use
- December, 2012 – field test #2
  - Fully functional SMS
- March, 2013 – field test #3
  - Open up some functionality of Questionnaire designer to the end users
- September, 2012 – release of the fully functional system
  - Tablet Client
  - Survey Management System
  - Fully functional Questionnaire designer