



23rd Population Census Conference

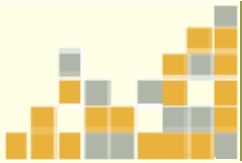
Innovations in Fieldwork Operations

**Use of PDA in Singapore's
General Household Survey 2005**

Singapore Department of Statistics

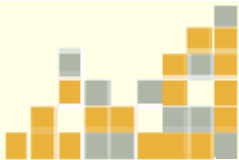
Apr 2007

STATISTICS
SINGAPORE



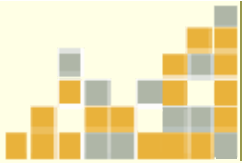
About the GHS05

- Conducted in years ending '5', between Population Censuses
- Register-based for basic data
 - Basic information (e.g. age, sex) of complete population available from administrative records
- Tri-modal data collection for 10% sample
 - Additional information (e.g. education, marital status) collected using: Internet, Telephone interview and Face-to-Face interview



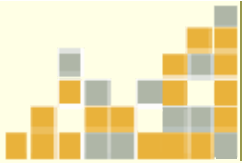
Staggered Workflow for Enumeration

- Optimize use of time and scarce resources
- Notification letters sent out over 8-10 weeks in 15 batches
- 2 weeks given to submit via Internet, another 2-3 weeks via Computer-Assisted Telephone Interviewing (CATI), after which field interviewers visit for face-to-face interview (FW)
- 2 reminders sent before FW for each batch



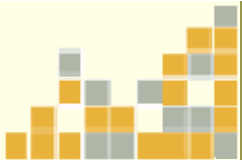
Face to Face Interview

- Key innovation for GHS05 fieldwork:
 - Use of Personal Digital Assistants (PDAs)
- Used for the 1st time in the field to improve survey operational efficiency
- Data security ensured through various IT security measures



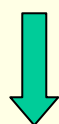
Features of PDA

- Retrieve data previously collected via other modes of collection (i.e. Internet and CATI)
- Automated branching of questions
- On-line completeness checks
- Security and data protection features incorporated in application

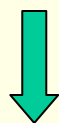


PDA Fieldwork Enumeration System

Fieldwork Server



PDA Supervisor Module



PDA Enumeration Module



Three Levels of Data Back-Up

1) Everyday

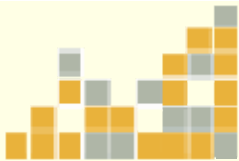
Fieldworkers perform a data back-up into a back-up memory card

2) Twice-Weekly

Fieldworkers back-up data into Supervisor's PDA

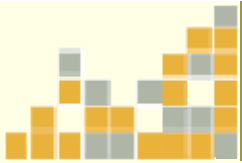
3) Weekly

Enumerated records transferred onto Server for data processing



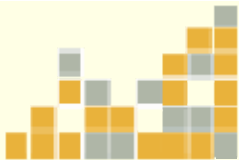
Benefits of using PDA

- Improved flow of face-to-face interview
 - Automatic branching of questions ensure that respondents answer only the relevant questions
 - On-line completeness checks reduces accidental omission during field interviews, respondents are therefore less likely to be called or visited again



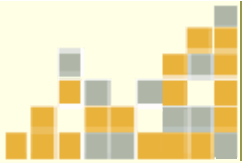
Benefits of using PDA

- Improved logistics in field operations
 - Eliminate need for printing of voluminous hardcopy survey questionnaires and secured transportation of completed forms
 - PDA more portable than piles of paper forms for field interviewers



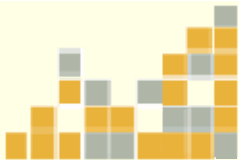
Benefits of using PDA

- Reduced back-end data processing
 - Data directly entered into the PDA and electronically coded, minimise need for scanning, back-end data entry/correction and coding
 - On-line checks on data performed during interview ensure that quality of information collected was reasonably good, reduce time and effort to process data in the office



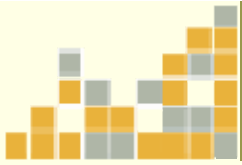
General Household Survey 2005

Demonstration on **PDA Enumeration**



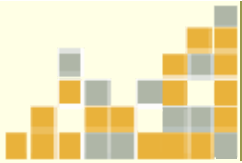
General Comments on Use of PDA

- Encrypted data ensures confidentiality
- Slightly longer time for enumeration due to descriptive text fields
- User-friendly screen design essential, numerous pre-tests required



Some Learning Points

- Ease and speed of enumeration is crucial
- Design and flow of PDA application
- Fieldworkers must be well-trained
- PDA Usability Test plays an important role



Thank You