Supporting Health ICT projects using handheld technology

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Introduction

- Why mobile computing is important for health applications particularly in developing countries
- Examples of applications from WHO
- Public Private Partnerships for extending the range of activities
- Conclusion

Physical Environment

- Many health ICT applications in developing countries have to operate in harsh physical conditions
  - Dust and dirt
  - Humidity
  - Temperature
  - Shock
- Because of their nature, mobile computing devices are much more resistant to environmental factors.
- Many devices are available in ruggedized versions

Resource Constraints

- Many areas where we want to deploy health ICT applications have significant resource constraints regarding the availability and cost of
  - Telecommunications
  - Electricity
  - IT equipment Infrastructure
  - Skilled staff
- Mobile computing devices and software can get make effective use of what is available at lower cost.

Quality of Data

- Mobile computing enables immediate validation of data both syntactically and contextually

- Reduces transcription errors for survey like applications

- Using networking, information can be made available in near realtime

- Very fast turn around time from data collection to analysis and reporting. This can translate into significant cost savings

Example WHO projects

- WHO has several projects currently using mobile technology in the field
- Service Availability Mapping
- Epidemiological Surveys
- Health Internetwork

Service Availability Mapping

- A mobile computing project which surveys the location of health care facilities at a district level and collects information regarding the services offered there as well as the usage patterns of the facility.

- A questionnaire is run on a PDA at various sites within a district. The collected information is then synchronized in a database system. This information is then transferred to a set of WHO mapping applications which is then used to create maps and data sets which are made available throughout the organization and to the public

Service Availability Mapping
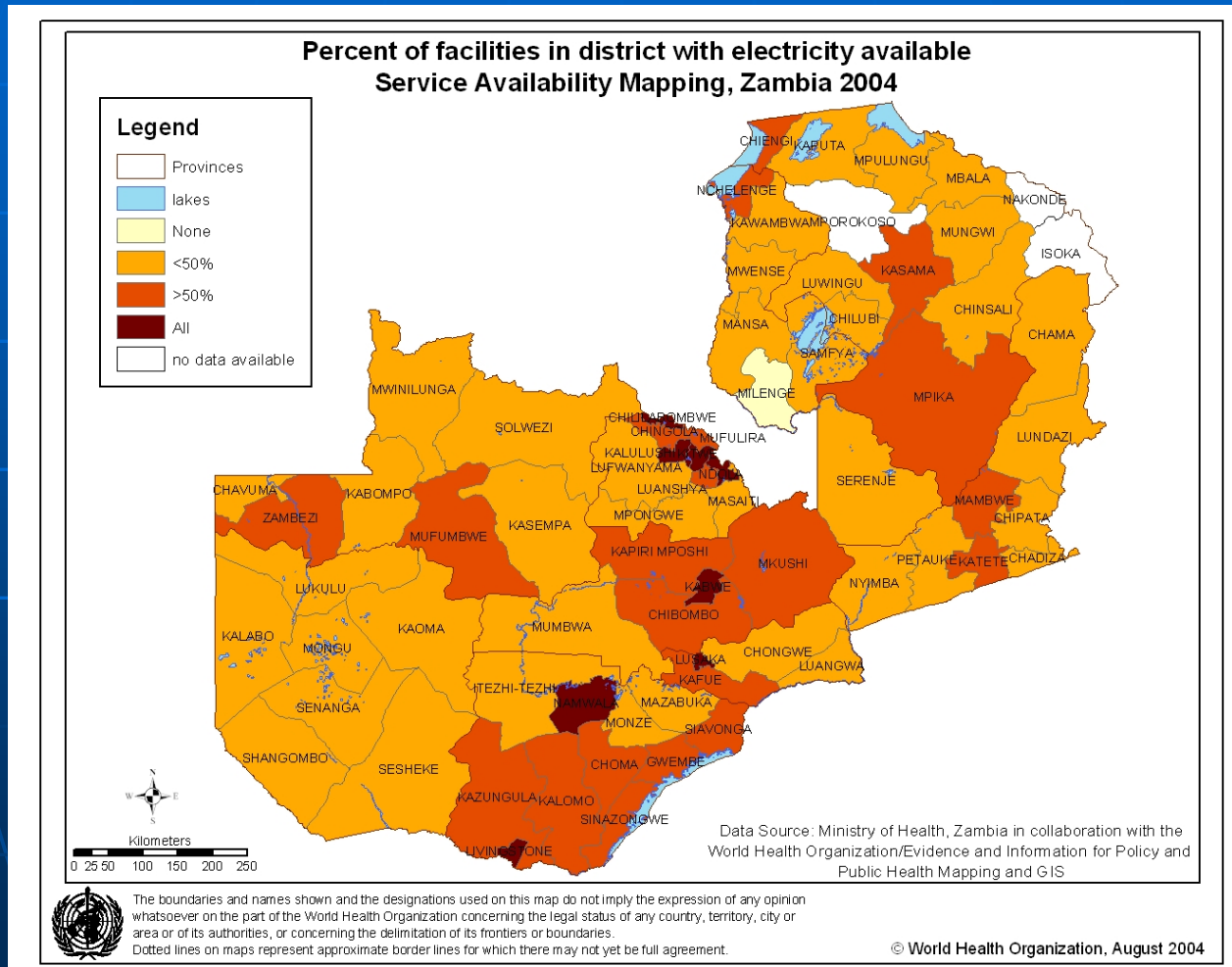
Epidemiological Survey

- Prototyped special purpose applications and generic form applications

- Used to perform epidemiological vaccination surveys using PDAs rather than paper forms

Health Internetwork

- A set of partnerships to use ICT for health in developing countries
- Provides technology assessments
- Makes electronic content available in various formats
- Provides capacity building
- Works beyond health sector to provide infrastructure through local partners

Health Internetwork

- Development work on Simputer
- Content delivery on handheld computers
- Distribution of laptops for health applications

Public Private Partnership Framework

- The World Health Organization is planning to use more and more mobile computing in its (e) health applications

- To do this successfully and efficiently we need to be in partnership with private entities

Public Private Partnership Framework

- WHO is refining its framework to guide the construction of partnerships for the development of IT for health applications

- It will cover multiple aspects, including technical, legal, and business issues

- Specific kinds of technology, namely mobile computing will be explicitly covered

Public Private Partnership Framework

- WHO ICT partnerships
  - Operational projects which deploy mobile technology into the field
  - Product development for adapting technology to specific health applications
  - Normative standards

Contact Information

- Service Availability Mapping
  - Email: health_mapping@who.int
  - Web: http://www.who.int/csr/mapping/en
- Epidemiological Survey
  - Email: burtona@who.int
- Health Internetwork
  - Web: http://www.healthinternetwork.org
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