Handheld computers for rural healthcare: Experiences from research concept to global operations

Decision Systems Group, Brigham & Women’s Harvard Medical School
MIT-Media Lab Asia
Dimagi, Inc
Concept Labs
overview

design + implementation
  project objective
  hardware design
  user interface
  implementation

developmental entrepreneurship
  results
  transition to entrepreneurship
Develop a handheld electronic medical record (EMS) system for health workers in remote areas, to enable
- quick access to medical records
- a collection of data for analysis of trends + records

Addresses two important problems:
- Prenatal Care
- Child health
objective

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Source: Anantraman, V. et al., "Handheld computers for rural healthcare: Experiences from research concept to global operations." Proceedings of Development by Design, 1-10.
overview

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system design

- Compaq iPAQ 3765
- device is self-contained; runs both server and client
- open source linux for easy migration
- data stored on compact flash cards

user interface

- designed in 2 weeks with active participation of target users
- minimize free text entry

- divided into 5 modules

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implementation

- deployed in 4 Ballabgharh subcenters over 5 months.
  subcenters included early and late adopters of technology

- **phase 1 training**: use hardware

- **phase 2 training**: use software
overview

**design + implementation**
- project objective
- system design
- user interface
- implementation

**developmental entrepreneurship**
- results
- transition to entrepreneurship
results

- expansion to 10 clinics
- complete replacement of paper records
- high acceptance of technology
- **Dimagi** was created in 2002 to help the technology scale up

Photo: Anantraman, V. et al., "Handheld computers for rural healthcare: Experiences from research concept to global operations." *Proceedings of Development by Design*, 1-10.
transition: research to entrepreneurship

- **redesign to ensure wide applications**: cheaper handhelds; software generalized to include potential integration of GPS, wireless modules, cameras, etc.

- **funding**: difficult to obtain venture capital, targeted social venture, angel investors, grants, government funds

- **market focus**: develop robust business model; allow technology to be used in non-developing countries

- **partnerships**: for advice, focus, + customer base
discussion

can you think of other projects that have made a successful or unsuccessful transition to entrepreneurship?

does your nextlab project have the potential for expansion? what has your group discussed? what are the strengths and challenges