

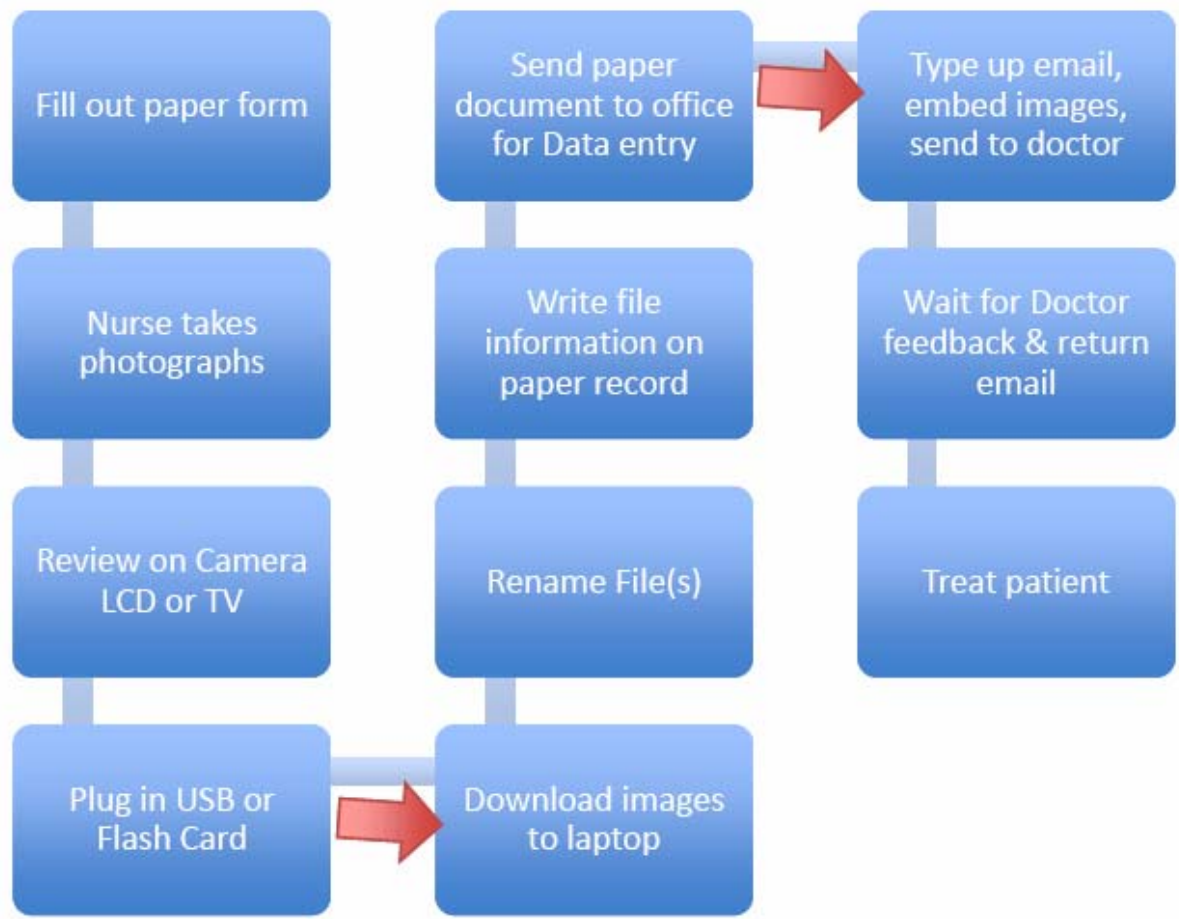
Mobile Diagnostics

for Cervical Cancer Screening in Zambia

Milestone 3: Initial Design

- Presentation: Clark Freifeld
- Team members: Santiago Alfaro, Sameer Hirji, Crystal Mao, Ted Chan
- Collaborators: RJ Ryan, two anonymous MIT students
- Faculty Advisor: Gari Clifford
- Local Liaison: Dan Myung

Current Process



Requirements

- Rapid, easy to use: high throughput
- Scalable beyond CIDRZ clinics
- High-quality photography
- Operate under low network bandwidth, reliability
- High-quality client-side image review
- Integrate with existing systems and procedures
- Ready to deploy in short term
- Sustainable in long term

Architecture

Courtesy of OpenMRS. Used with permission.

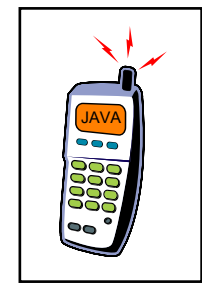
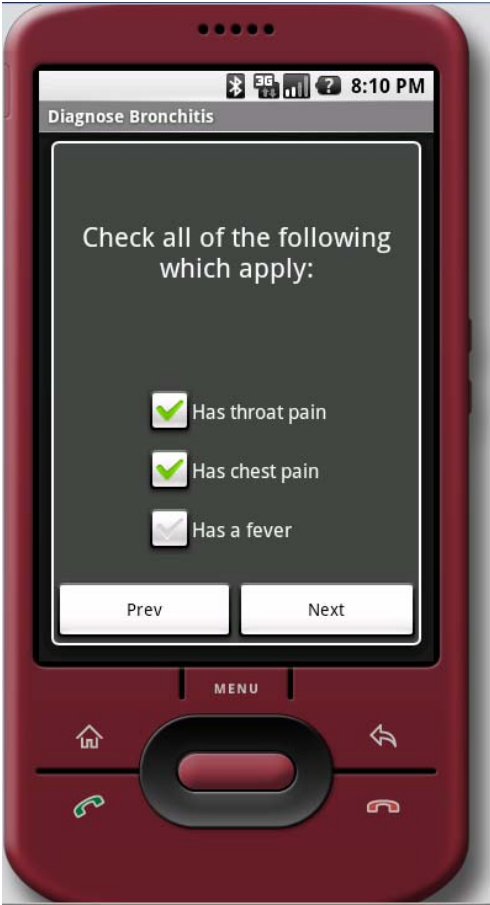


Figure by MIT OpenCourseWare.



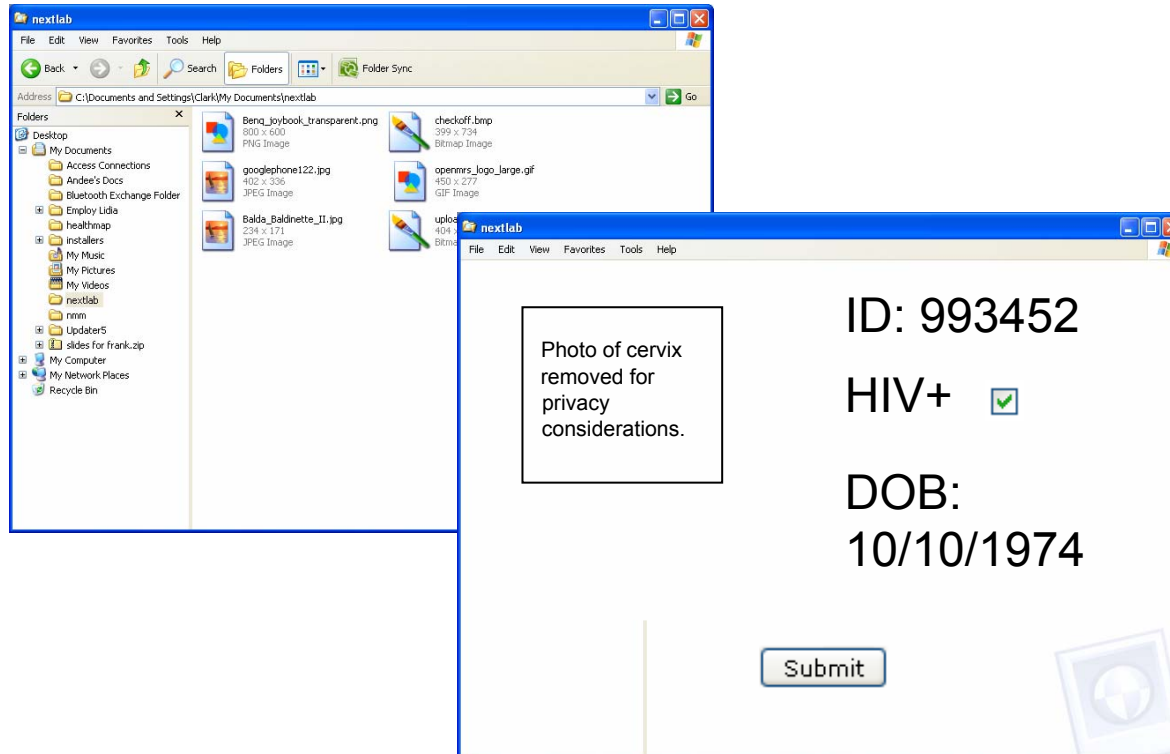
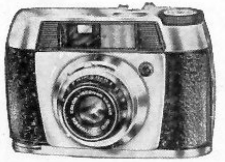
Android Solution



Requirements

- Rapid, easy to use: high throughput
- Scalable beyond CIDRZ clinics
- High-quality photography
- Operate under low network bandwidth, reliability
- High-quality client-side image review
- Integrate with existing systems and procedures
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Laptop Solution



The screenshot shows a Windows XP desktop environment. On the left, a File Explorer window is open to the 'nextlab' folder in 'C:\Documents and Settings\Clark\My Documents'. The folder contains several image files: 'Benq_joybook_transparent.png', 'googlephone122.jpg', 'Balda_Baldinette_II.jpg', 'checkoff.bmp', 'opennes_logo_large.gif', and 'upload'. On the right, a web browser window titled 'nextlab' displays a form with the following fields:

- ID: 993452
- HIV+
- DOB: 10/10/1974
- Submit button

A text box on the left side of the form contains the message: "Photo of cervix removed for privacy considerations."

Requirements

- Rapid, easy to use: high throughput
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- High-quality photography
- Operate under low network bandwidth, reliability
- High-quality client-side image review
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J2ME Solution



Requirements

- Rapid, easy to use: high throughput
- Scalable beyond CIDRZ clinics
- High-quality photography
- Operate under low network bandwidth, reliability
- High-quality client-side image review
- Integrate with existing systems and procedures
- Ready to deploy in short term
- Sustainable in long term

OpenMRS Server

Jane Doe

 50 yrs (Oct 14, 1958)

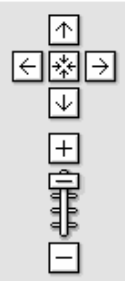


Photo of cervix removed for privacy considerations.

Requirements

- Rapid, easy to use: high throughput
- Scalable beyond CIDRZ clinics
- High-quality photography
- Operate under low network bandwidth, reliability
- High-quality *image review*
- Integrate with existing systems and procedures
- Ready to deploy in short term
- Sustainable in long term

Conclusion

- Current focus is on Android + OpenMRS
- Possibility for laptop solution + J2ME improvements

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MAS.965 / 6.976 / ES.S06 NextLab I: Designing Mobile Technologies for the Next Billion Users
Fall 2008

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