PHARC: Photo Archiving Application

Saul Reynolds-Haertle, James Cline, Abhishek Shroff, Michael Polson

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What is PHARC?

Plastic Surgeons need to organize lots of pictures. However, they don't have good software:

- Need to organize around patients, diagnoses, treatments
- Have particular interface requirements
- Need particular storage requirements

Client asked us to build special application

Basic Client Requirements

- Search archive by patient, treatment, diagnosis, physician, etcetera
- Easy interoperability with email, photo editing, and powerpoint
- Transparent filesystem layout. No opaque databases!

Basic Implementation

- Building a local application
- Using Python and Qt for cross-platform functionality
- Open-source using git and github
- Modular design to help with scheduling

Basic Schedule

- Sprint 1: Define project
  - Collect user stories
  - Write up project requirements
  - Begin backend implementation
- Sprint 2: Initial implementation
  - GUI Implementation and integration
  - Backend fine-tuning
- Sprint 3: Refinement
  - GUI Refinement
  - Begin multi-user support
  - Iterate design with client

Storage Requirements

- Multiple-user simultaneous access
- Works over network drives
- User can access archive without using application

Storage Architecture

- Our solution: use the filesystem.
  - Organize photos into directories by patient and session
  - Store notes and other information in text files
- This is slow, though. Solution: database cache
  - Cache information in local database
  - Maintain separate database per user
  - Also makes network operation bearable

Interface Implementation

- Framework: Qt
  - Popular, well-supported
  - Powerful
  - Cross-platform
- Python doesn't do threading, so processes instead

Interface Design

- Import window
- Main window for searching/selecting patients
- Patient Detail window for viewing/editing patient information
- Image Edit window for lightweight editing operations

Conclusion

- Where we want to be: a photo archiving application
- Where we are now:
  - Client requirements
  - User stories
  - Working on backend
  - GUI design done and beginning mockups
- Where we plan to go:
  - Finish GUI and backend
  - Integrate GUI and backend
  - Begin design verification and QA
- Any questions?