

Liebner Notification System



Fig. 1 System Mockup

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What?

- An embedded notification system for an office door
- Enhances communication with people outside the office
- Provides a touch-based interface and one-way visual feed

How?

- Network camera, touchscreen interface and processor able to communicate with a software application running on host computer

Why?

- Initial idea provided by Mr. Eric Liebner
- Solves conflict resulting from both an incoming phone call and help request at the door
- Potential to create a commercially successful project

Technical Details

External Processing

Image Processing done on user's computer



Away-Mode: Text-Message Service

Wired/Wireless Communication

Hardware



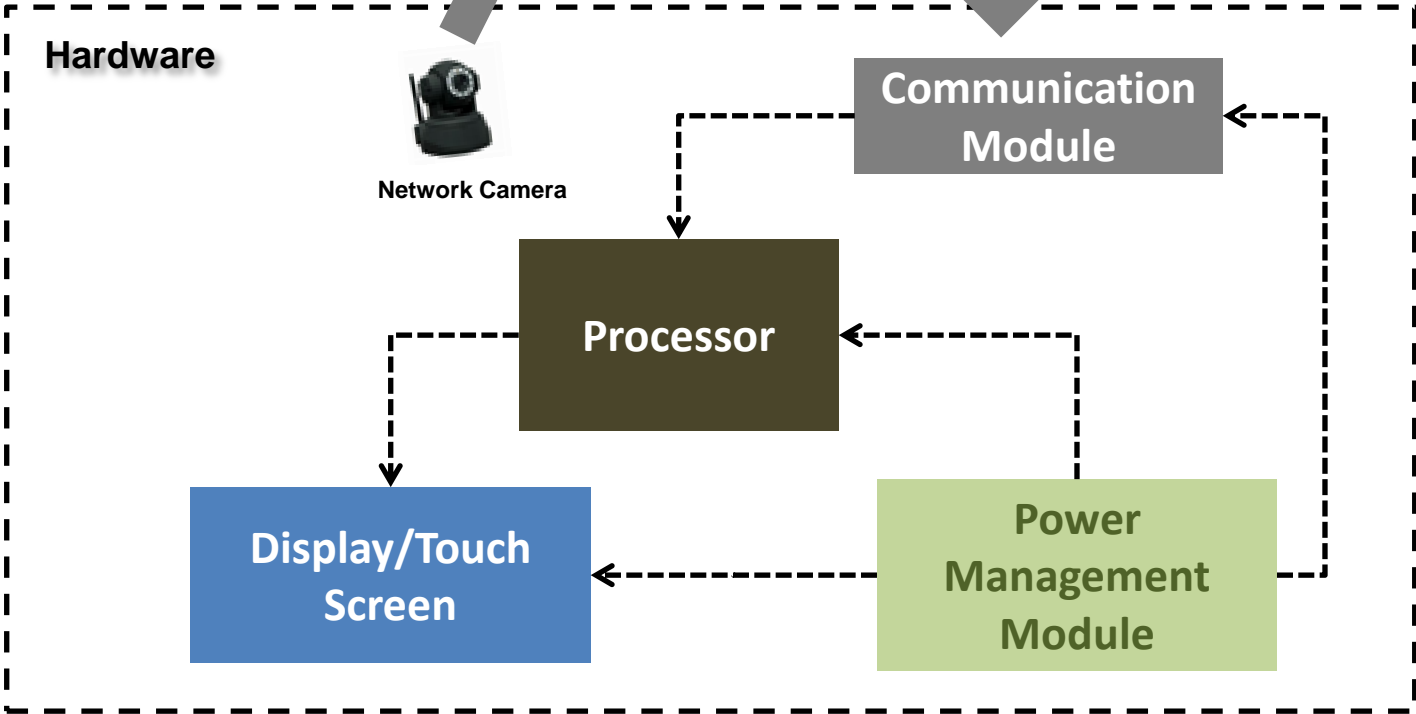
Network Camera

Communication Module

Processor

Display/Touch Screen

Power Management Module



Decision Making

Wireless vs. Wired Design ?

- Affects power management
- Camera selection
- Processor selection
- Communication module selection

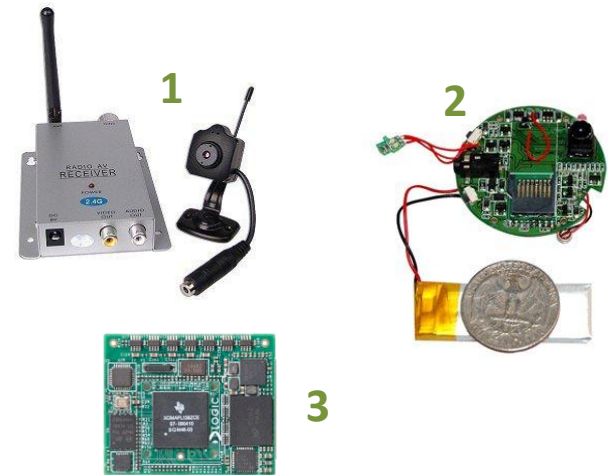
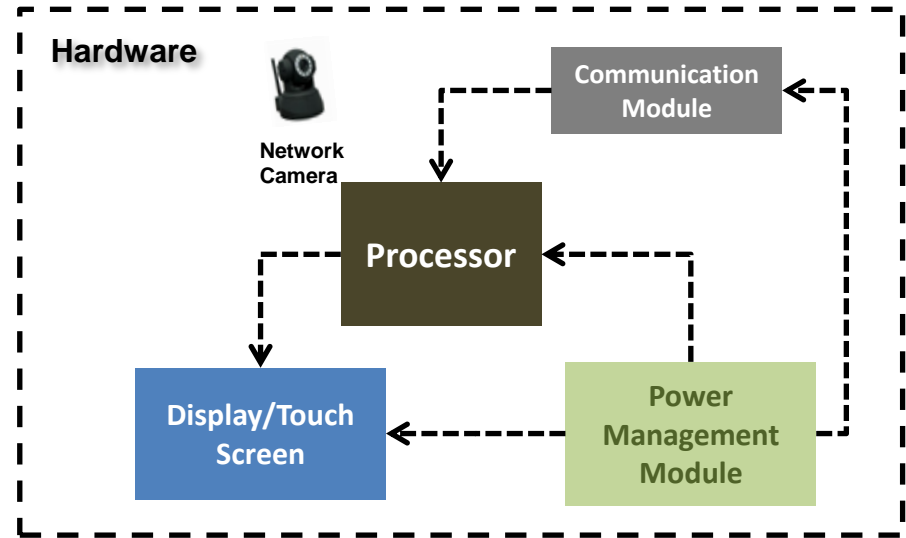
LCD Display vs. LCD Touchscreen ?

- Separate vs. integrated
- Influences processor selection

Camera and Processor Research

1. Mini Wireless Color Camera
2. Micro DVR / JPEG Video Camera Module
3. OMAP-L138 SOM-M1

- MSP430XXX/AtmegaXXXX alternative



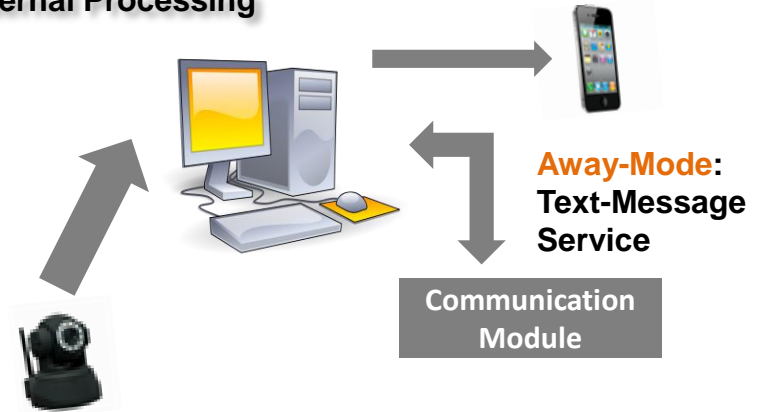
Other features

OpenCV-based face detection on PC

- Direct camera connection
- Triggers active power mode

C++/Java-based Software Application providing additional controls

External Processing



Text-message service done from PC