

ASHVIN

WORKFLOW MONITORING SYSTEM

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BACKGROUND

- Tracking multiple patient medical records / treatment procedures
- Disorganized information easily leads to errors!
- Many different prescriptions.
- Given at different times of the day
- Medications Taken
 - Sublingual (under the tongue)
 - Intravenous (IV)
 - Topical (applied to skin)

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THE PROBLEM

- Remove the tedious task of scanning codes
- Improve nurse's workflow
- Reduce nurse errors

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CURRENT WORKFLOW

- Patient bracelets scanned in manually
- Mobile devices also used to manually enter patient ID
- Nurse scans barcode on medication
- Cameras monitor patient care area



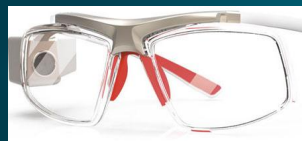
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ISSUES WITH CURRENT WORKFLOW

- Scanning bar codes takes time away from actually caring for the patient
- Camera monitors need to be staffed
- Current workflow represents a Passive System
 - Use of mobile devices is limited to passive input
 - Cameras offer no direct input into the Electronic Health Record computer system (EHR)

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IMPROVEMENTS



- Remove need to scan barcodes.
- EHR triggers flags / suggestions to nurse
- Compare input strategies RFID, camera, scanner, etc.

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OUR FOCUS

- Alleviate working requirements of nurses
- Integrate image recognition technology into the nursing workflow
- Develop a system for automatic dosage checking and alert system
 - Scanning to recognize patients and medications

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WHY

- Real-world implications for improving quality of health care
 - Reducing administrative overhead for nurses
 - Better, more automatic organization of records
 - Fewer errors
- Large market
 - 5,724 hospitals in US
 - 15,782 hospitals in the world

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DEVELOPMENT

- Some difficulties include:
 - Glasses will not be available for some time
 - Integrating our system with the existing healthcare system
- Testing and development will be the difficult for this project
 - Testing, because necessary hardware is currently unavailable
 - Development, because advanced high level algorithms are necessary unless existing libraries are used
- Limited battery on Glasses
 - GlassUp claims 1 day

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PROTOTYPE

- Mobile application handling received images, determining output
- Mobile application emulating smart glasses
- Sample database of patients and medications
- Server application to handle DB lookups and communication with the mobile device
- Final GUI design plan

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