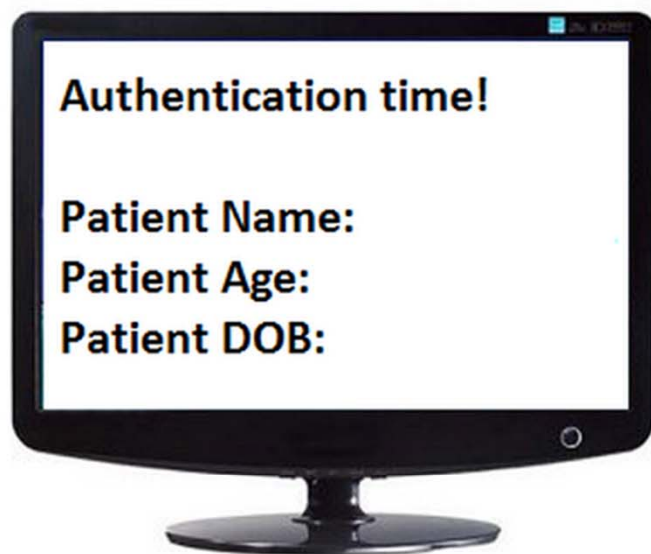# INTRUDER
## PROGRESS PRESENTATION II

JONNETTA BRATCHER, NAJA GREEN, JONATHAN LOPERA, JUSTIN POWELL, & CANDACE ROSS

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# CHANGES FROM LAST TIME



Authentication time!

Patient Name:
Patient Age:
Patient DOB:

Intel Atom
Processor
Cedarview
(N2600)

User
Authenticated?

FPGA
ALTERA.
Cyclone IV
EP4CGX150DF31

No more encryption at Intel Atom Chip
Intel Atom Chip will **verify** patient information against database.

# DESIGN REQUIREMENTS

- Intel Chip must authenticate user on computer
  - Must be software compatible with Linux OS
- FPGA must wait for authentication from Intel chip before executing command
  - Similar to "wait for" statement in code
- FPGA must receive command from infrared receiver as a means for second confirmation

# MILESTONES

| | Date | Milestone | Outcome |
|---|---|---|---|
| 1 | Feb. 6 | Purchase infusion pump | In the Process |
| 2 | Feb. 13 | Develop scenario/user case | Incomplete |
| 3 | Feb. 25 | PCI communication | In the Process |
| 4 | Feb. 28 | Implement high-level code | |
| 5 | Mar. 1 | Implement implement entire system | |
| 6 | Mar. 11 | Communicate IR receiver & transmitter Adjust low-level code to recognize IR signal | Communication Complete |
| 7 | Mar. 31 | Attack system and make changes | |

# HIGHLIGHTS

- PCI Demonstration code downloaded to DE2i-150 board
- IR receiver functioning
- Addition of minutes taken at team meetings
  - Increased organization
  - Set weekly goals

# LOW POINTS

- Infusion pump
  - Must be certified to purchase this equipment
  - Looking to borrow from HUH/College of Medicine
- Navigation through Yocto
- Quartus software bumps
  - RC4 implementation on DE2i

# RISK MITIGATION

| Risk | Probability | Impact | Risk Control & Management |
|------|-------------|--------|---------------------------|
| Infusion pump does not communicate or is not compatible with hardware | 0.4 | 5 | • Order infusion pump on time<br>• Test with board to confirm compatibility |
| PCI fails to communicate Intel and FPGA chips | 0.6 | 4 | • Attempt new method of approach |

| Probability | | | | | |
|---|---|---|---|---|---|
| 1.0 | L | M | M | H | H |
| 0.8 | L | M | M | H | H |
| 0.6 | L | M | M | M | M |
| 0.4 | L | L | M | M | M |
| 0.2 | L | L | L | L | L |
| | 1 | 2 | 3 | 4 | 5 |
| | | | Impact | | |

# FOCUS FOR NEXT PERIOD

- Acquire infusion pump
- Complete PCI communication
- Complete database interface
- Get PCI, IR, and encryption code running simultaneously

# QUESTIONS & COMMENTS