Smart Doorbell

Team 10: **Teemo** (our favorite LoL hero)
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Status Update

- Smart Secretary Board -> Smart Doorbell
  (Similar project exists, Design not general enough)

- Most parts are in our hands.

- dead-bolt
- rfid reader
- arduino Mega
- rfid keychain
Project Motivation

- Upon reviewing feedback after the initial presentation, we noticed that a lot of people were concerned because of the lack of hardware usage in the idea—a concern we had ourselves.

- We also noticed a lot of people thought the door lock/unlock feature we thought of as an "extra" feature was good.

- So we are going to try for a similar idea but with a different approach.
Use Cases

- Visitor presses the doorbell. Tablet menu opens up. The home owner is notified along with a picture of the visitor, and can either leave a message to show up on the tablet display, chat w/ video, or decline.

- Home owner uses his/her RFID tag to get in without having to input the password in the deadbolt. Other family members of the home are notified that the owner has come home.

- Home owner can use the deadbolt normally if he/she does not have access to the RFID tag.
## Risks and Mitigation

<table>
<thead>
<tr>
<th>Risk</th>
<th>Mitigation</th>
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<tbody>
<tr>
<td>Owner does not want to talk to everyone who presses the doorbell.</td>
<td>Tablet will take picture of the person in front of door and send it to the owner's phone for approval.</td>
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<tr>
<td>Camera malfunction: owner may not see who is visiting.</td>
<td>Upon camera failure, tablet will load text input interface for visitor to send messages instead.</td>
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<td>Tablet wireless not working</td>
<td>n/a</td>
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<tr>
<td>Tablet theft</td>
<td>make the tablet built-in to the wall/door or some kind of locking mechanism attached to the door</td>
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Possible Alternatives

Plan A: doorbell, RFID, video-chat features, electronic deadbolt

But if not..
- Plan B: No deadbolt feature
- Plan C: Remove the RFID feature.
Division of Workload

- Dividing up work into three main parts:
  - Sensors: Inho Yong
  - Arduino Programming and Interfacing: Sang Won Choi, Sung Jae Lee
  - Front-end/Managing displays - Seung Min Choi