Phantoms of Palgrave Manor

Team SpiritWorld
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What are the limitations of a board game?

- Board games: all info on the board, no secrets
- Online games: secrets, but no face-to-face
- Some board games have secrets, but:
  - Can't move around the room, have to focus on own side
  - Limits organic social interaction
What if players could look at the same board, but see different things?

- Secrecy of an online game
- Organic interaction of a board game
- Surreal alternate reality experience
User Experience and Game Mechanics

- Tablet displays gameboard, and shared info
- Players look "through" phones to see AR version of the board corresponding to their secrets
- Public moves are made on the tablet touchscreen
- Secret moves can be made by issuing orders with phone
What's been done in AR already?

• Most mobile AR experiences:
  ○ non-social
  ○ location-specific
  ○ marketing gimmicks
  ○ same AR content regardless of person

• Our twists:
  ○ AR tags on an interactive touch screen
  ○ face-to-face social interaction, like a board game
  ○ individualized AR views.
Implementation

• **Vuforia Augmented Reality API:**
  ○ Display AR tags on the tablet gameboard
  ○ Phones recognize tags and render asynchronous AR elements

• **Peer to peer wireless:**
  ○ Synchronize game state across devices.

• **Performance questions:**
  ○ Limitations on how many tags can be tracked
  ○ Limitations on stability and throughput of peer to peer connections
  ○ Specify game model and communication systems appropriately