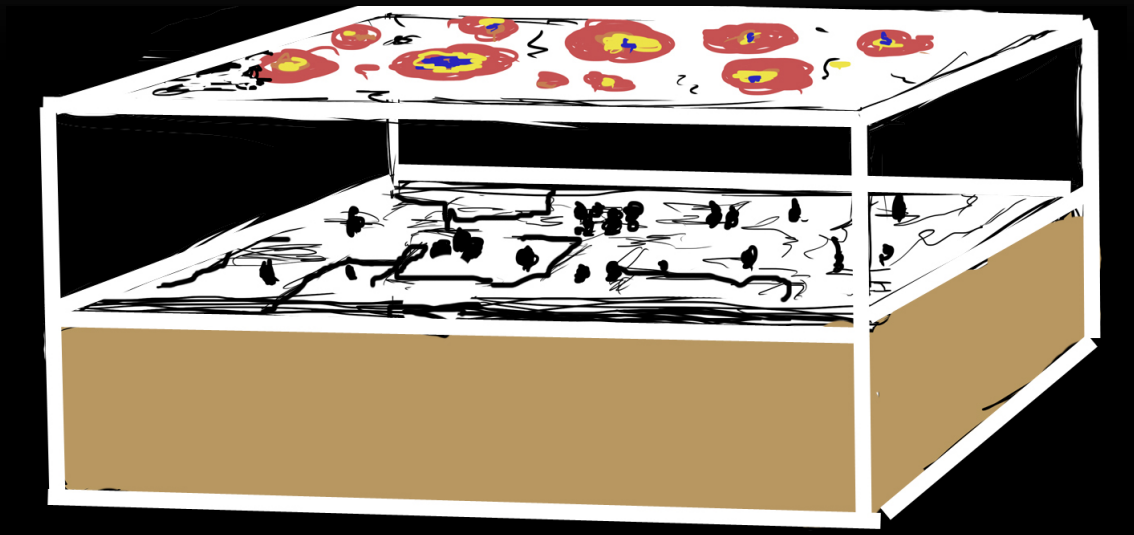
3D MAPPING IN THE MUSEUM

By Greg Classen

PURPOSE:

- To map the non-thermal and thermal movement of visitors of the museum.

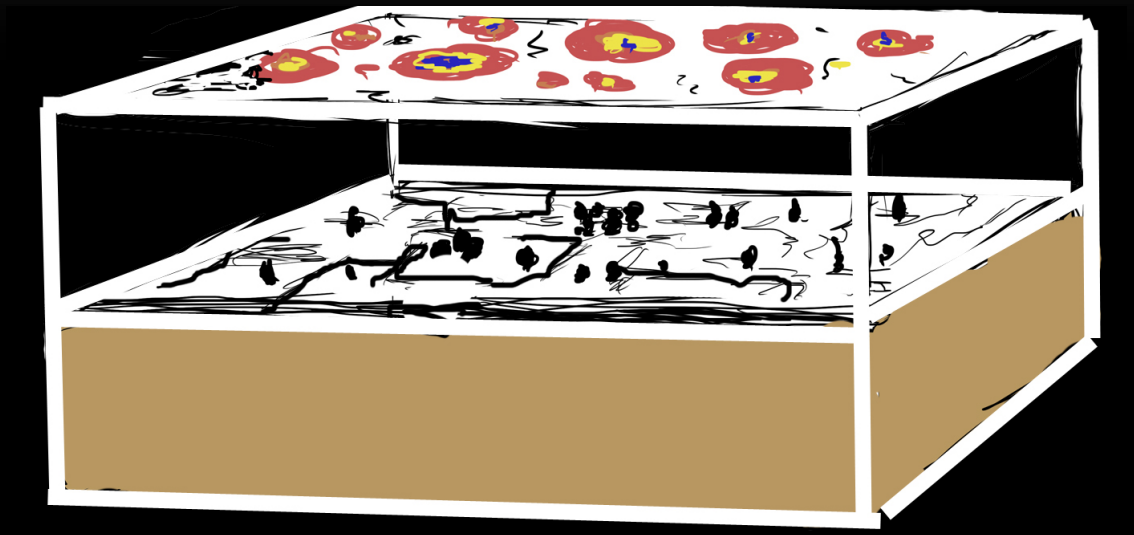
Interactive Sculpture:



Top Layer:

- Glass Layer that is opaque (see through)

Interactive Sculpture:



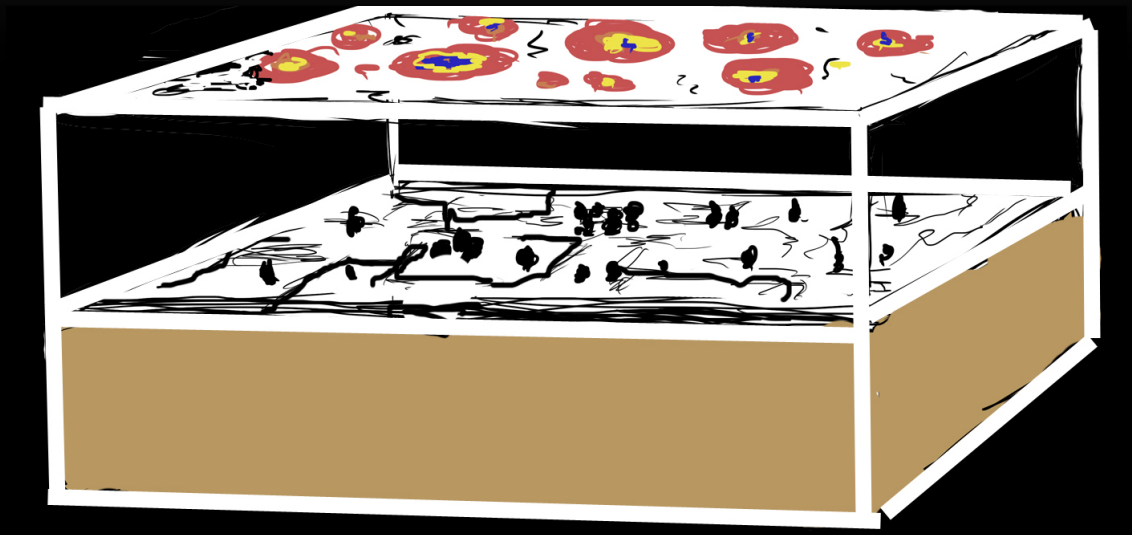
Top Layer:

- Glass Layer that is opaque (see through)

Bottom Layer:

- Hardwood panels

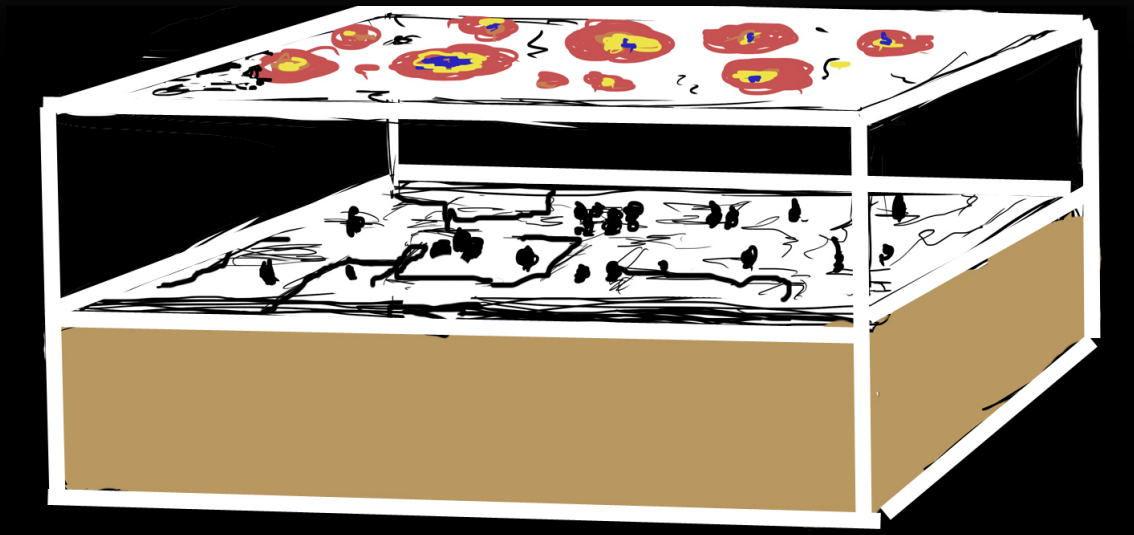
Interactive sculpture:



Top Layer:

- Thermal readings of participants in the museum

Interactive Sculpture:



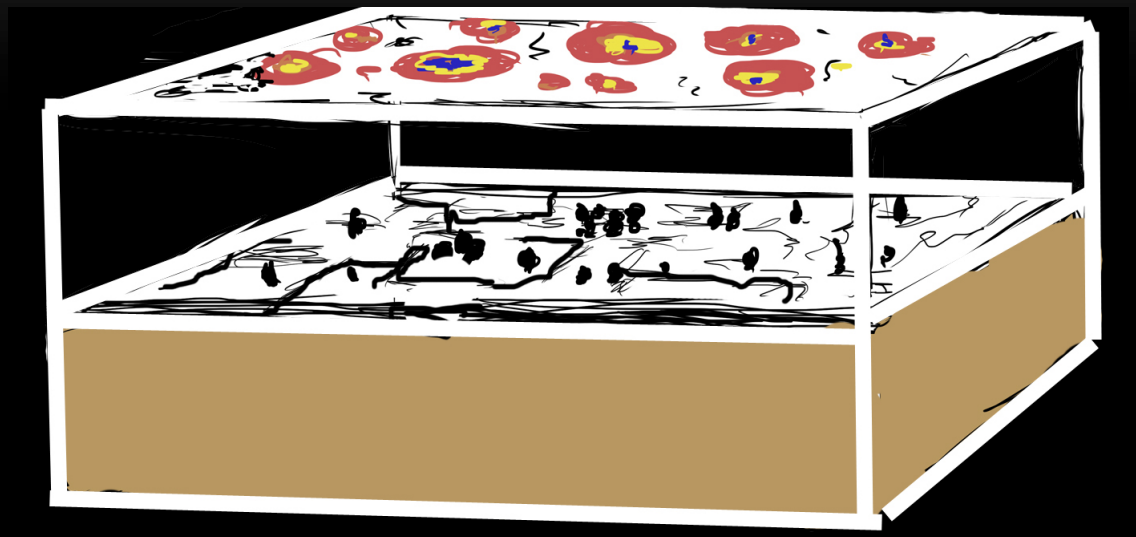
Top Layer:

- Thermal readings of participants in the museum

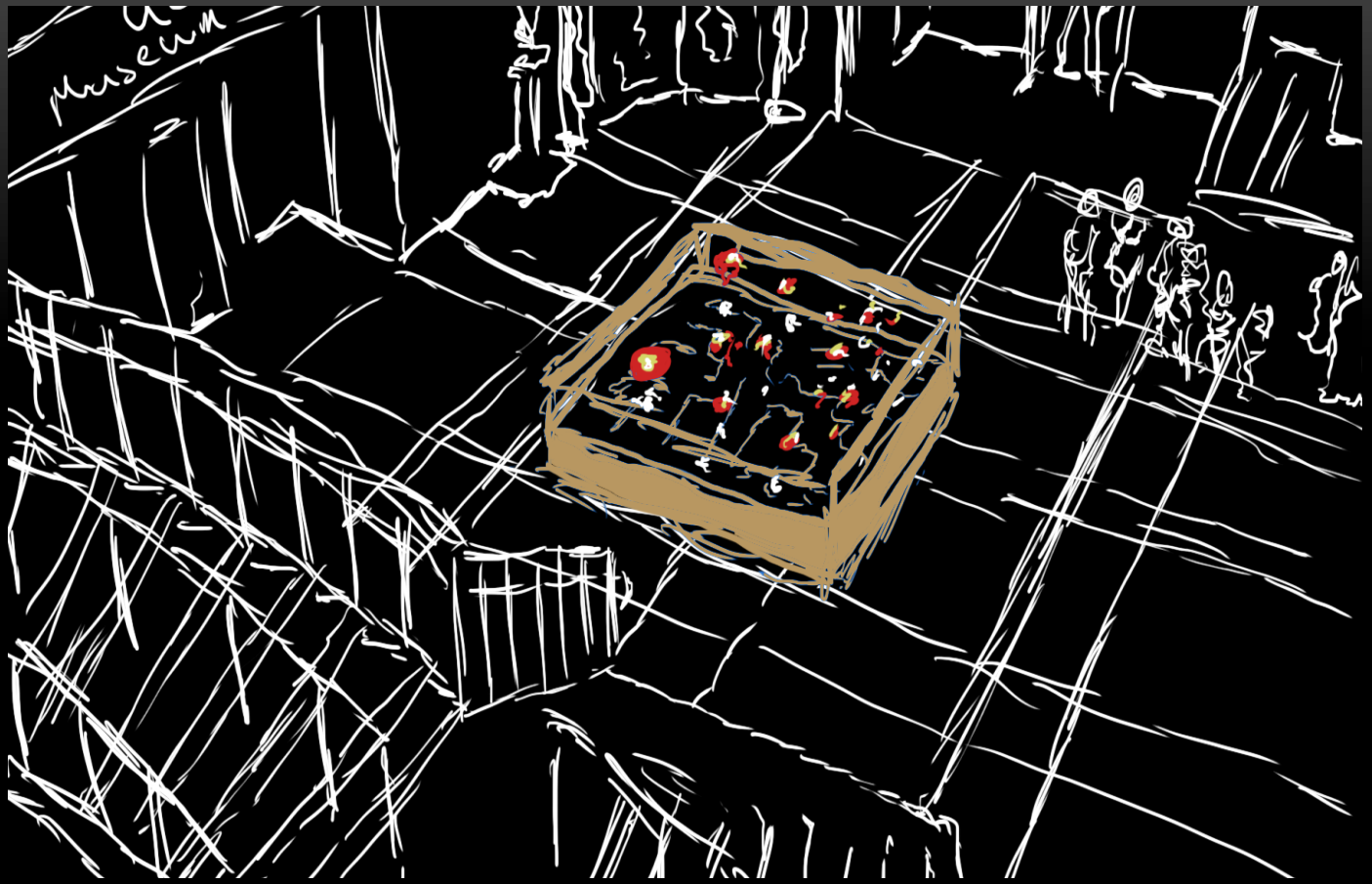
Bottom Layer:

- Map of museum with tokens that move as the participants move

INTERACTIVE SCULPTURE:



- This project would be ideally placed in an open large room like a lobby or atrium and be able to be viewed from above from different floors looking down and as well as close up.



- Example of placement in a lobby of a museum.

How it works:

- Using GPS and thermal imagery, movement will be tracked once a visitor enters the museum and will be displayed visually on the interactive sculpture.

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- As a Visitor enters the museum they are given a GPS wristband also called a data puller.

- As the participant moves throughout the museum their movements will be recorded.

How it works:

- The location of the participant is then sent to a computer in the sculpture

How it works:

- The movement is then placed on a grid in the computer.

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- The grid corresponds with the lay-out of the museum that is on the sculpture.

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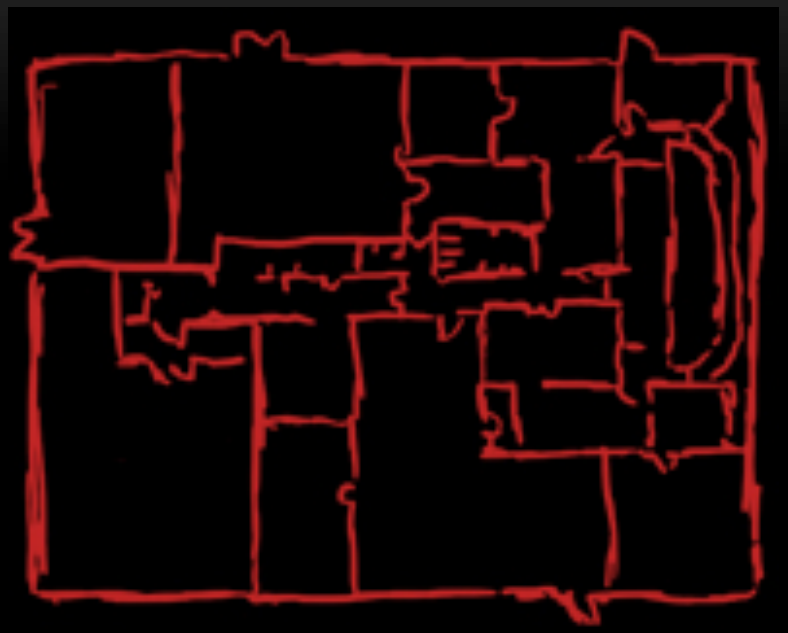

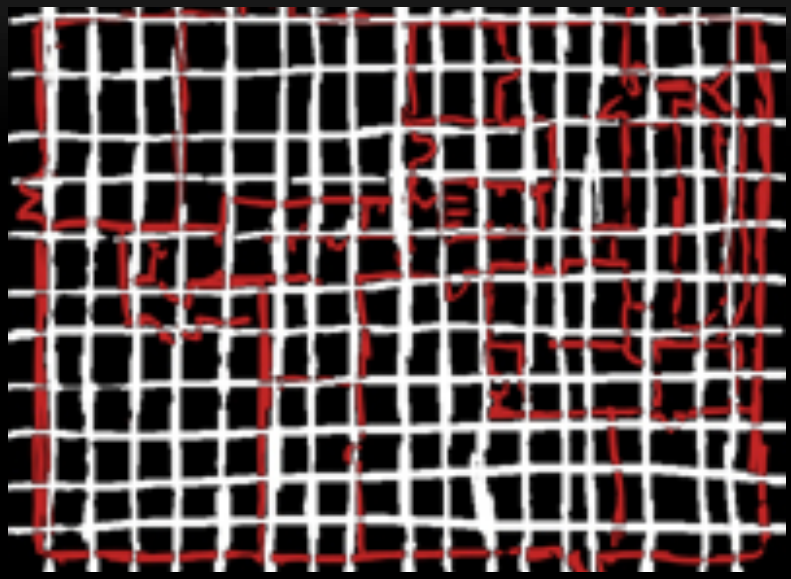

- As seen above, the map of the museum is broken up into a grid. Each square represents a different coordinate on the map, like a chessboard.

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- The movement on the sculpture is like this chessboard. Each person is represented by a token, or piece on the board.
- As the participant moves along the grid of the museum, the token on the sculpture moves to the coordinate that corresponds using an electromagnetic system in the sculpture.

How it works:

- In the movie Harry Potter, the Marauder's Map encompasses the same concept of motion tracking that the sculpture will accomplish.

Scene from the movie:

http://www.youtube.com/watch?v=6X0Br-8tsXc&feature=related

How it works:

- Thermal Movement:
  - Thermal movement will also be tracked, corresponding to the body heat that is in the rooms of the museum.

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- This information will be sent to the computer that determines where on the grid the body heat falls.

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- The information appears yet you can still see through into the background.

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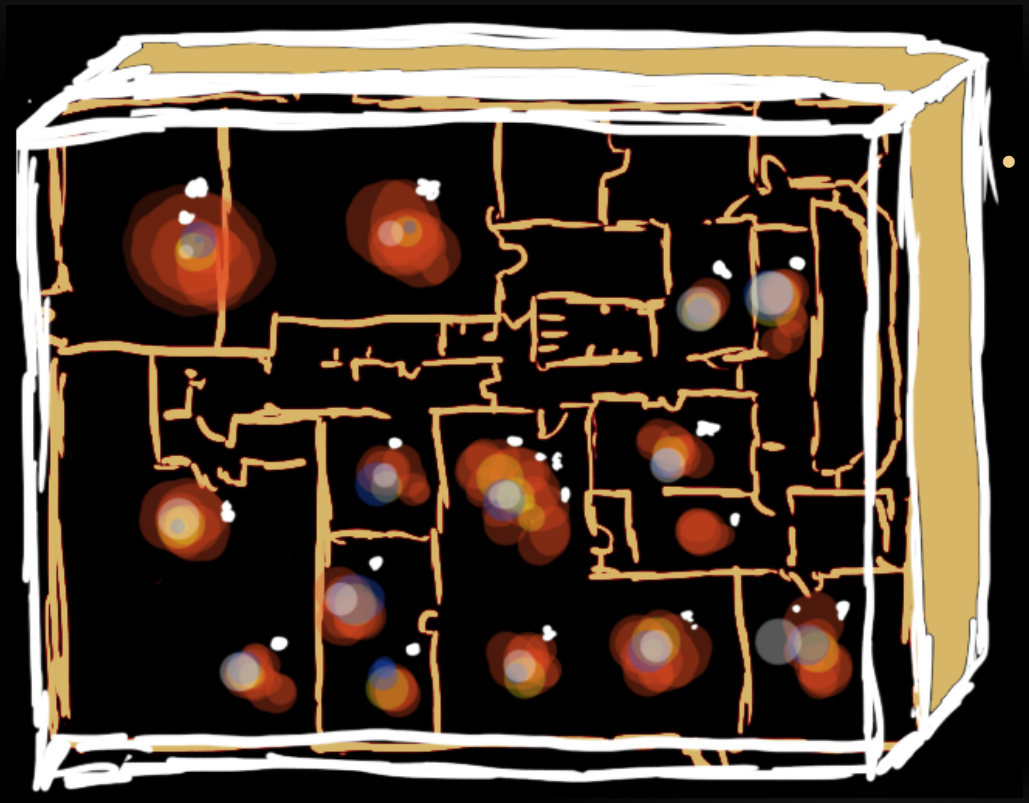

- Top view looking down

- Using touch glass, the thermal readings of body heat would be displayed.

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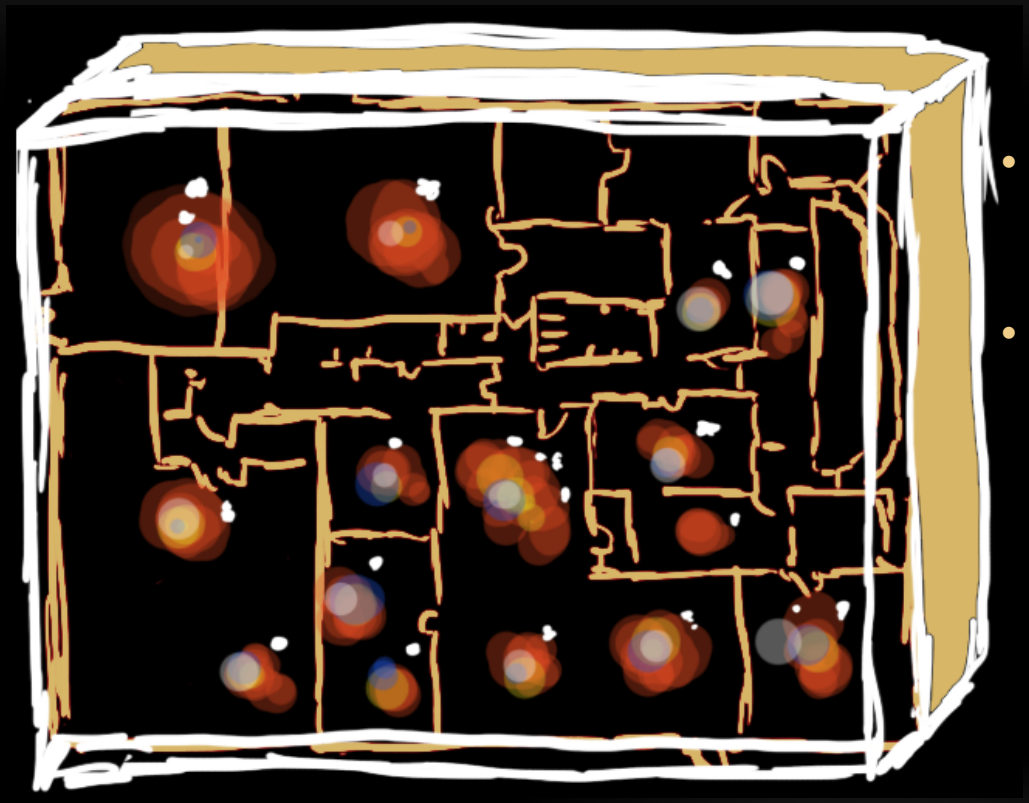

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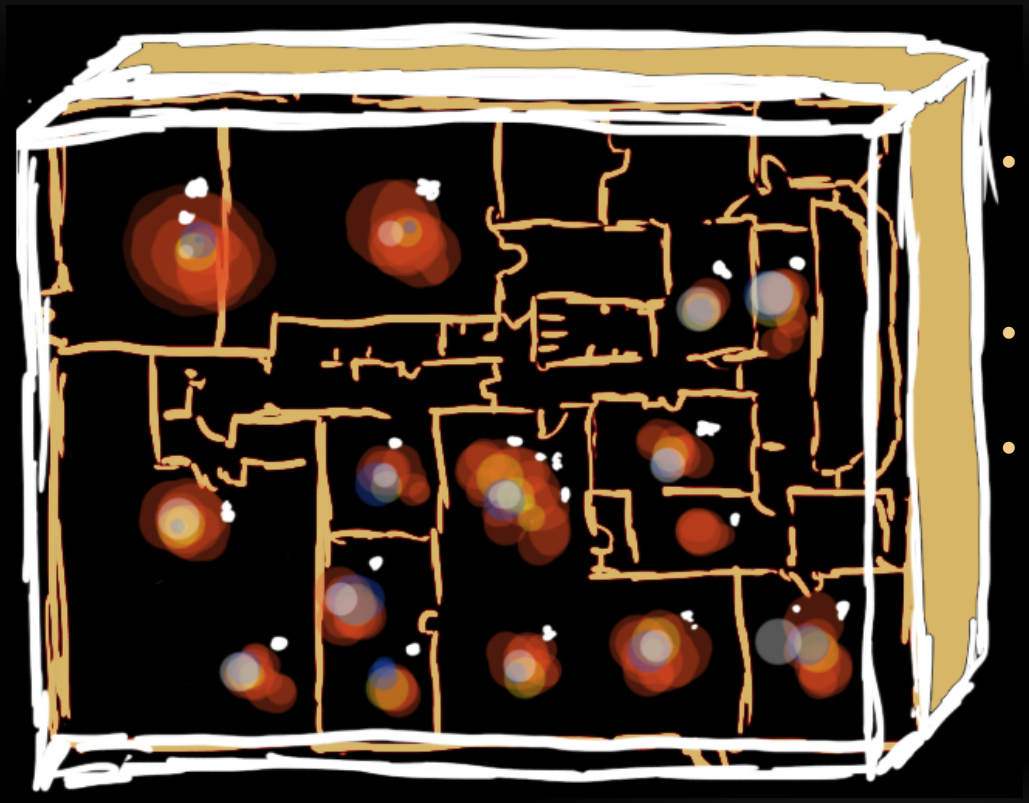

- Top view looking down

- Using touch glass, the thermal readings of body heat would be displayed.
- they would move as the tokens move.
- For example, if multiple tokens moved into a cluster, the heat readings would get larger in that area.

References:

- Harry Potter (Marauder's Map)

http://harrypotter.wikia.com/wiki/Marauder's_Map

- Excalibur (Chessboard)

http://www.chessmart.com/excalibur-phantom-chess-computer-whit-self-moving-pieces.aspx

- Hiwodtouch (Touch Glass)

http://www.biztrademarket.com/transfersell_Supply-Interactive-Touch-Glass-Kiosk-Hiwodtouch20081205_1114267.htm

- Keruve (GPS Locator)

http://thefutureofthings.com/pod/1240/children-gps-locator.html