Blind Navigation

- What are some strategies for how blind people get around in a building?
- How would a friend who was blind get to the TechNights room?
You are here
Activity: Dead Reckoning
To tell people where to go, we need to know where they are.

How do you know where you are when you use a map?

How do we locate people now in cars?
Global Positioning System (GPS)
time: 2011 Jun 27 00:00:00 TDT
central object: Earth
distance from Earth: 1.00177 AU
observer position: free
Where is Pikachu?
2.5 miles
Activity: Trilateration
Activity Rules

1. Measure from 3 radio towers to the person.
2. Team members inside use measurements to figure out where the person is on their map.
3. They send back number of steps to take and in which direction.
(All measurements are in feet)
THE LANDS OF RADIO CITY

- Pine Forest
- School
- City Hall
- Stadium
- Library
- Store
- Ice Cream
- Market
- Docks
- Food Trucks
- Theater
- Museum
- Redwood Park
**Measurement Sheet**

<table>
<thead>
<tr>
<th>Direction Number</th>
<th>Steps</th>
<th>Direction</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2 steps</td>
<td>30 degrees to right</td>
</tr>
</tbody>
</table>

Always say which direction to turn!
How did it go?
POWER OUTAGE
Problems...

- What should we do if we can’t reach all of the radio towers?
- What happens if the distance is not measured correctly?
How could we use trilateration to do this indoors?
Well, can we use other signals?
You are here
Thank you!

Any questions?