Positioning
Spatial Computing – University of Minnesota
Learning Objectives

1. Know how your smartphone can figure out where you are (Hint: It’s not just GPS!)
   - Never use the term “GPS” incorrectly ever again!
2. Be familiar with an important frontier in positioning: content-based positioning
Positioning is about a simple question:

“Where?”

Where is this property line?
Where should this missile go?
Where is this animal?
Where is this smartphone user?
the “geo-atom”

(Goodchild et al. 2007)
Main subject of this module!

Presence of cholera
Temperature
Population
Air Quality
Tweet content
Wikipedia article text

$\langle x, Z, z(x) \rangle$

10°C
-10°C
User position is a particularly important type of x.
$\mathbf{x}$ is a vector, not a single value!

$\langle x, Z, z(x) \rangle$

(44.97428, -93.232502, 264m, 10:33am)
Signal-based Positioning

Content-based Positioning

102.111.321.5
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Attributions

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