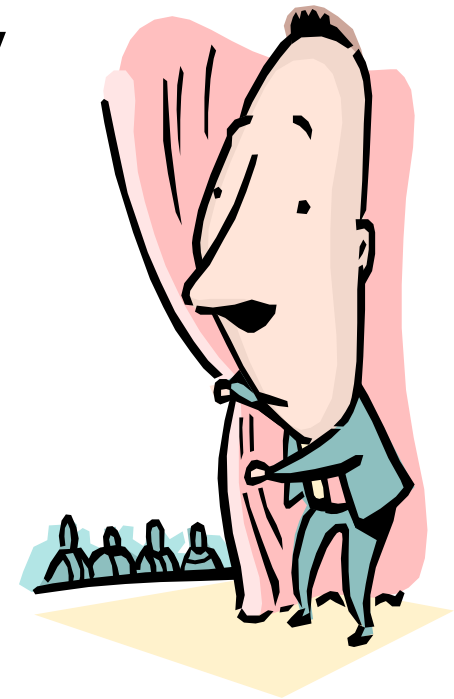


Location Based Services: From Promise to Reality

Ravi Jain
and Google LBS Team



Outline

- Realizing LBS
- How It Works
- Apps and APIs

Google Maps for Mobile with My Location

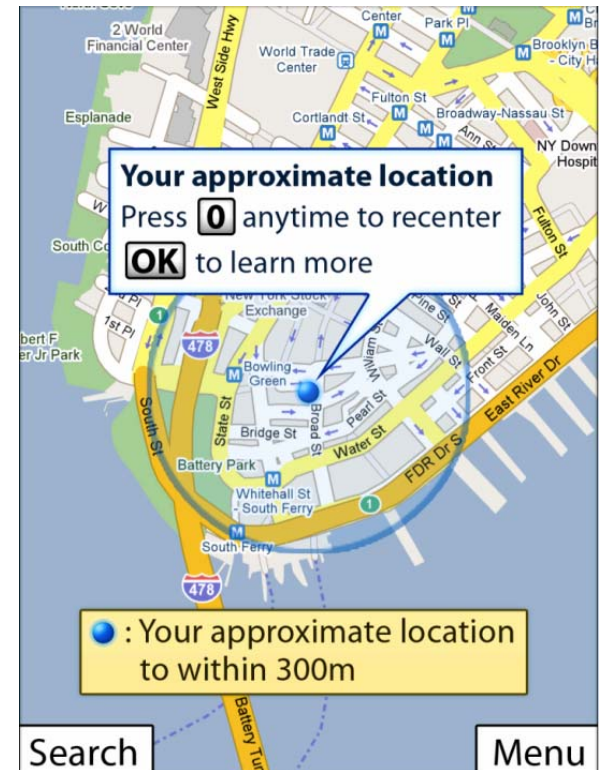
“My Location opens the road Atlas on the right page.”

“Sure, GPS would have been more accurate, but two blocks off isn't a big deal.”

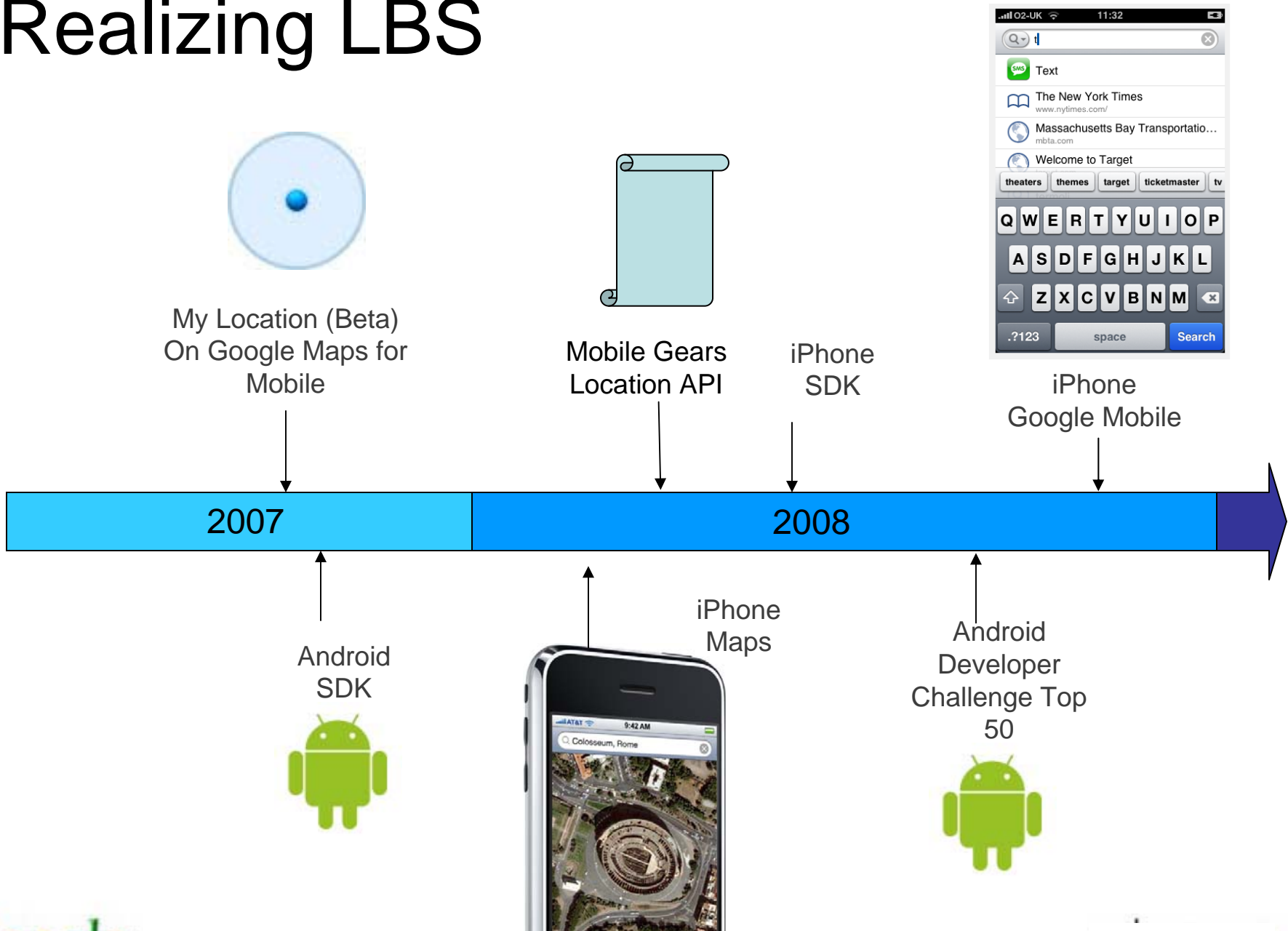
- Launched in beta in **November 2007**
 - **Multiple platforms, multiple countries, no GPS**

- Quotes:

“Wondering how much Redbull are they drinking over at the Google Maps offices? Today we have 'My Location', yesterday we had 'Our Maps' and the new 'Terrain' layer. Go Google Maps Go!”



Realizing LBS



Google Mobile

- Search and much more ... (demo)

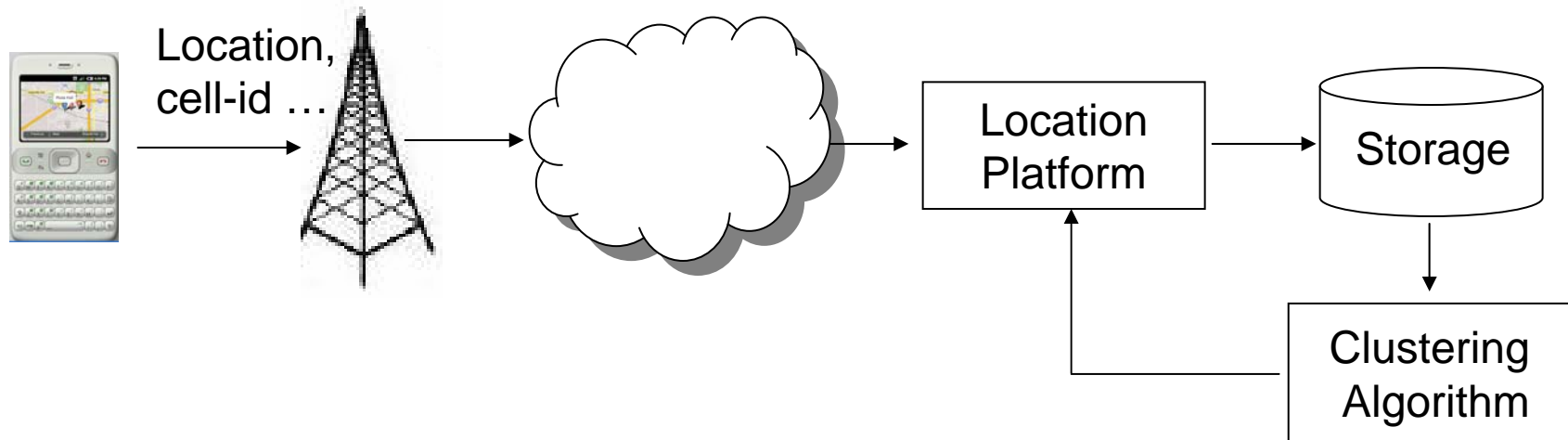
Important Features of My Location

- Cellid is complementary to GPS
 - Many applications can benefit from cellid-based accuracy
 - No waiting for time to first fix
 - No line-of-sight problem
 - Better battery life
- FREE!
- Worldwide coverage (**200+** countries)
- Works across many network types (GSM, CDMA, 3G)
- Works across different carriers



How It Works

- Collect geocontextual information along with a **cell-id**
- Cell Tower Identifier (**cell-id**)
- Location signals: GPS vs. center of the map viewport

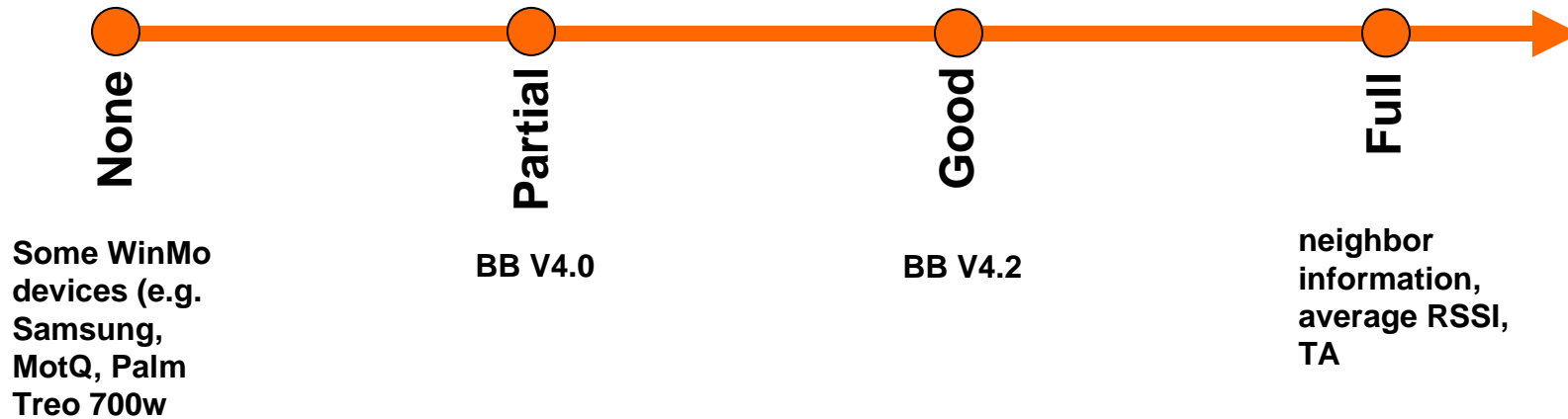


Challenges

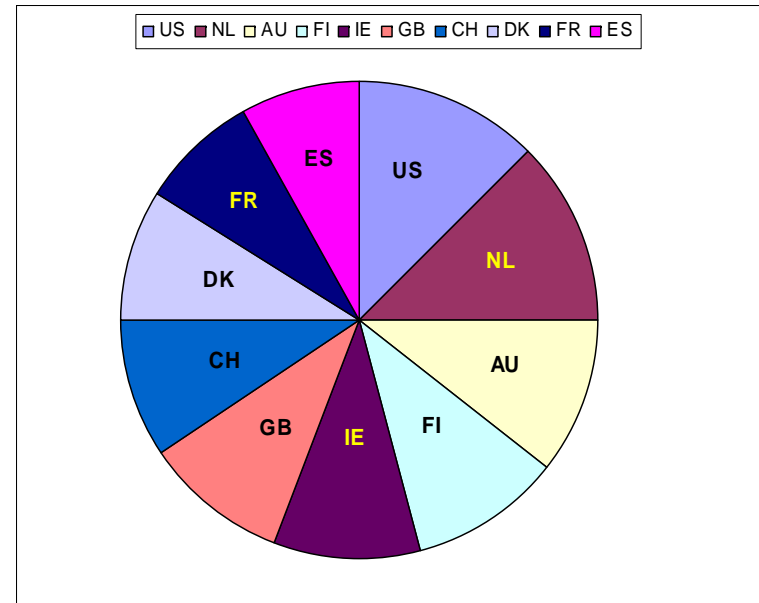
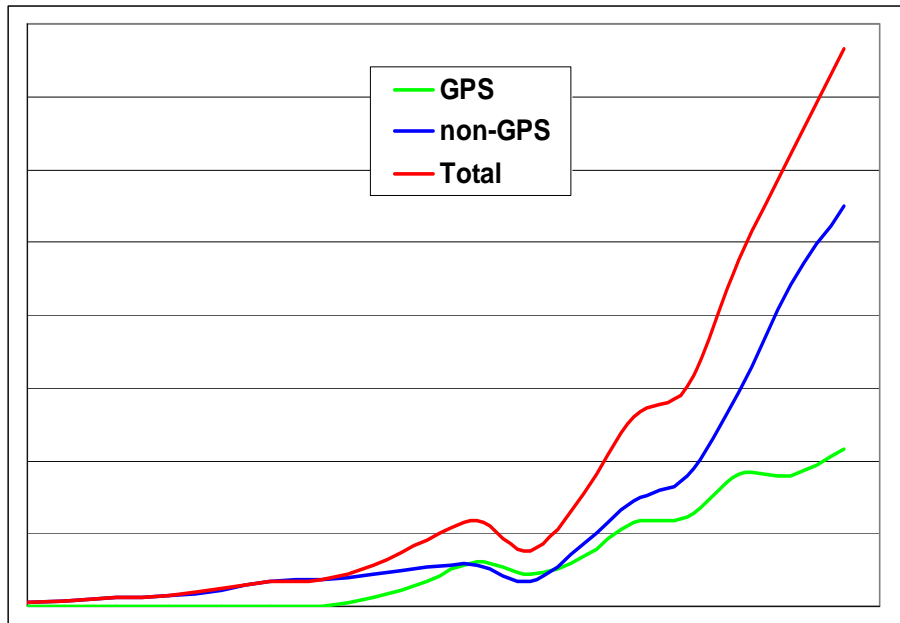
- Area of interest vs. actual location
- Noisy data:
 - Oklahoma points
 - GPS errors
- Towers in the water!

Platform Support

Hey, My Location seems very cool but why is it not working on my cell phone?



Data Collection

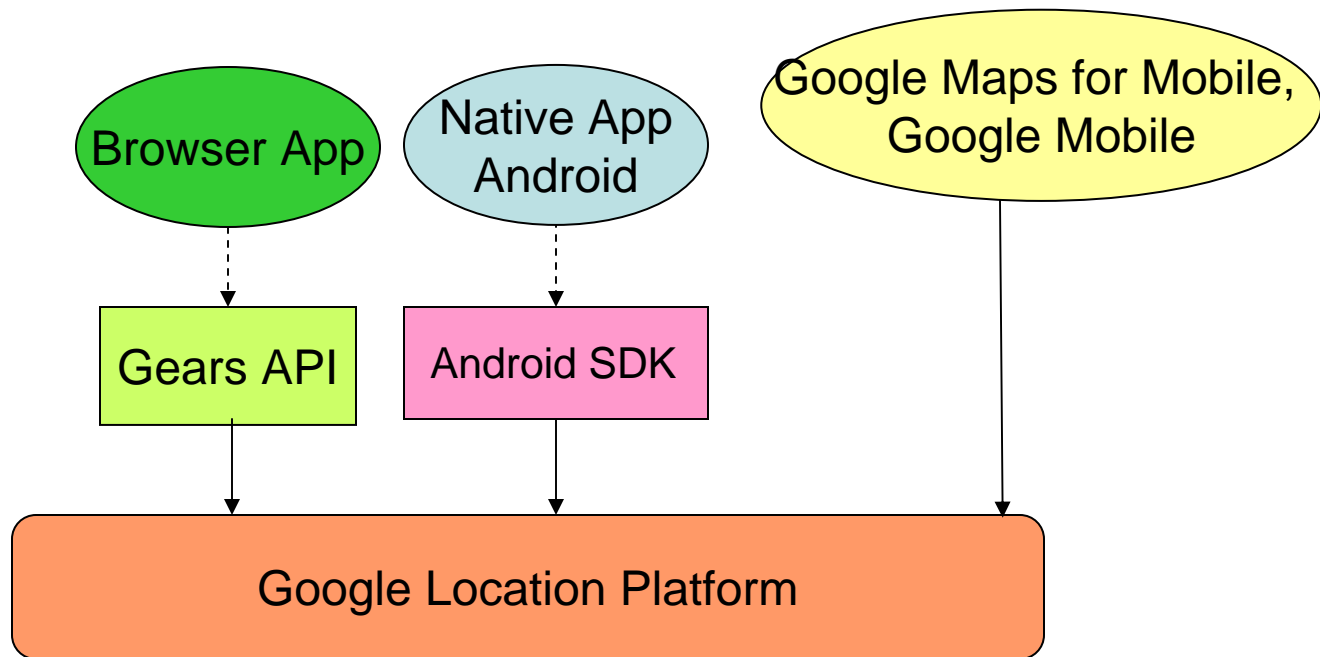


Privacy

- A balance between respecting user privacy and providing good useful functionality to the user
- How does My Location do this?
 - Anonymous: No PII, no session id
 - User has full control

The Coming Wave

Enabling location for 3rd parties via:
Android, Gears (browser)



How can you help?

Build **innovative** location-based applications

THANK YOU



Real-time traffic



Multiple-stop routing with Optimization to navigate around traffic



Mobile Points of Interest

<http://www.google.com/gmm>

<http://code.google.com/android/>

<http://code.google.com/apis/gears/>

