

Predicted Ephemeris: Waste of Time or an Untapped Resource?

Speaker: Eric Gakstatter

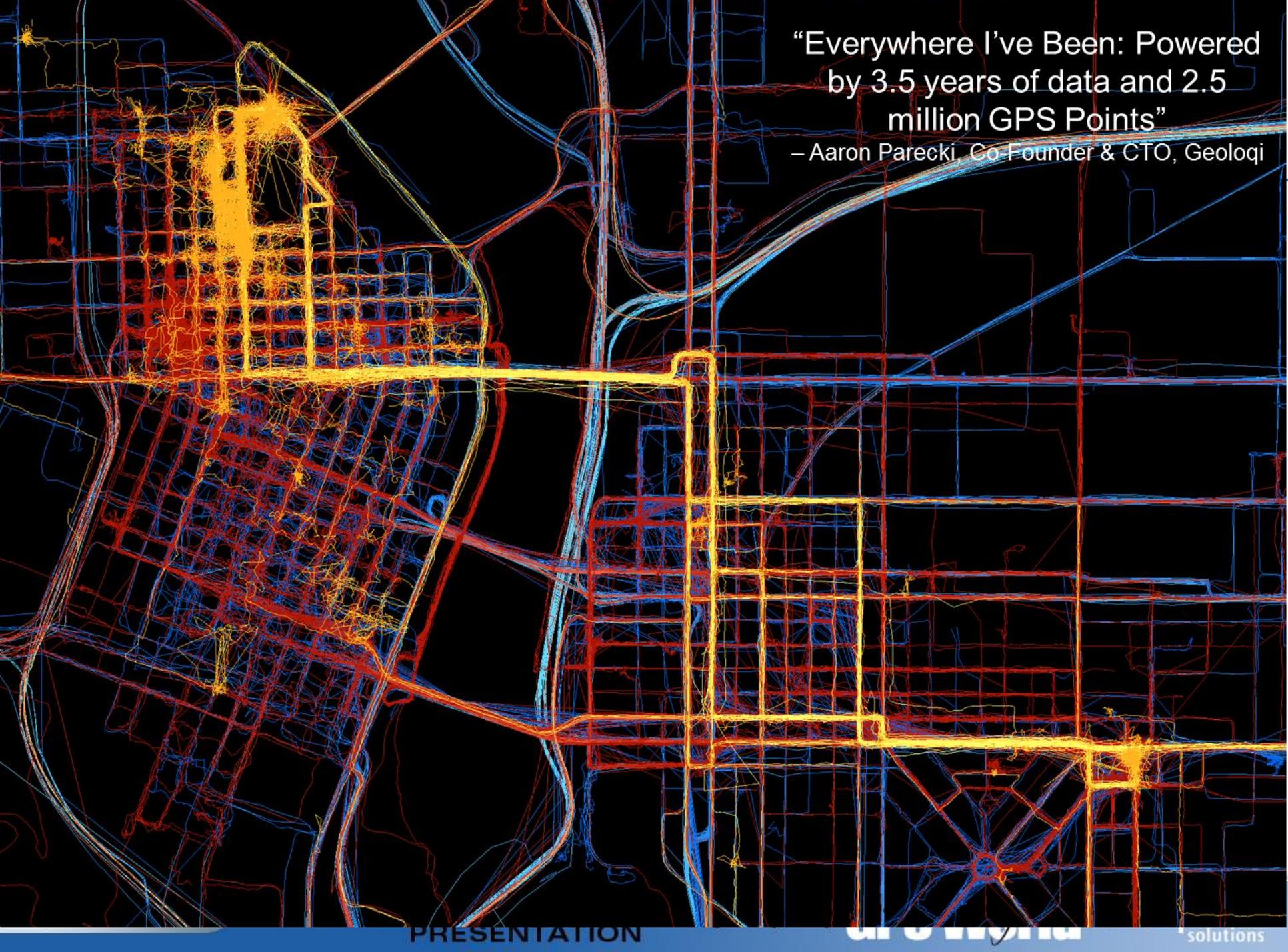
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“Everywhere I’ve Been: Powered
by 3.5 years of data and 2.5
million GPS Points”

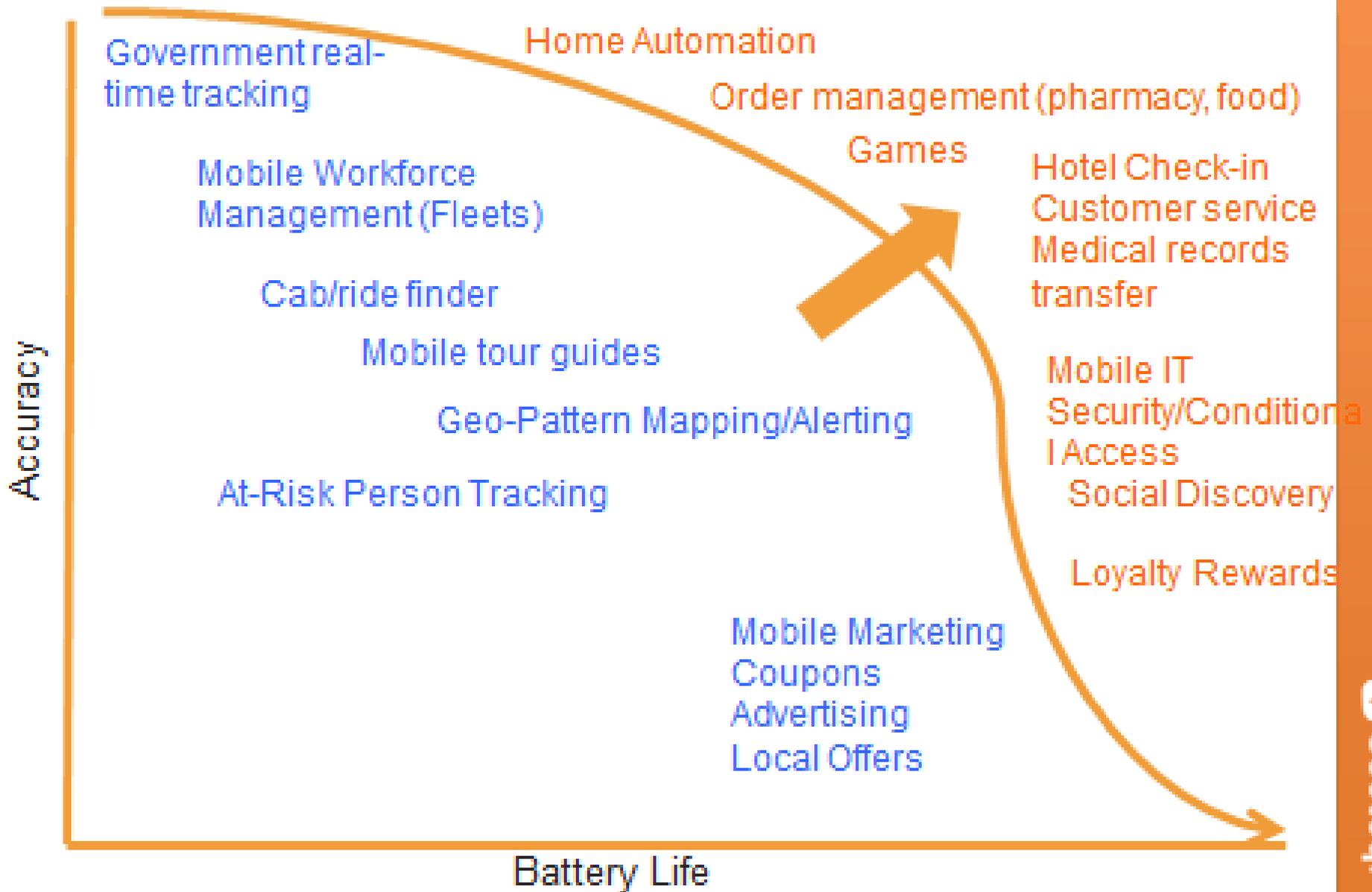
– Aaron Parecki, Co-Founder & CTO, Geolqi

“Geolocation has the potential to become an indispensable part of our lives. But in order for it to be a valuable service to end users, the technology needs to be invisible yet opted into, private, and secure.”

– Amber Case, Co-Founder & CEO, Geologi



Persistent Location



Geotrigger

Application Capabilities:

- Awareness of each individual's arrival and exit at a geofence perimeter
- Knowledge of each individual's dwell time within each geofence
- Send push notifications or URL callbacks upon entry, exit or dwell thresholds



Surveying and Mapping



Thesis

Should the U.S. Government make available the PRED (Predicted Ephemeris/State Vector Data File), which is currently generated every 15 minutes by the GPS Operations Center under FOUO, be designated as unclassified and made available for public use.

Description

Ephemeris data download from visible GPS satellite takes more than 30 seconds under ideal conditions.

In GPS-impaired environments (eg. urban canyon, indoors), this can be even more difficult.

PRED (Predicted Ephemeris /State Vector Data File) is generated every 15 minutes by the GPS Operations Center (GPSOC). Could be distributed terrestrially to reduce TTFF to a few seconds.

Problem

How to transfer PRED from a U.S. Government “classified” environment to a “unclassified” environment?

Solutions

- Declassification of PRED.
- Use existing sources (JPL, NGA). Product managers may have difficulty (lack of confidence?) implementing technology not sponsored by GPSOC.

-PRED can be available. Civil GPS app developers need to speak up. Civil users won't.

“How does somebody know what they want if they haven't even seen it?”

-Steve Jobs



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