



Geos

Predicted Ephemeris: Waste of Time or an Untapped Resource?

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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, Geologi

"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

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Persistent Location

Home Automation

Government realtime tracking

Order management (pharmacy, food)

Games

Mobile Workforce Management (Fleets)

Cab/ride finder

Mobile tour guides

Geo-Pattern Mapping/Alerting

Battery Life

At-Risk Person Tracking

Hotel Check-in Customer service Medical records transfer

Mobile IT Security/Conditiona I Access Social Discovery

Loyalty Rewards

Geologi

Mobile Marketing Coupons Advertising Local Offers

Accuracy

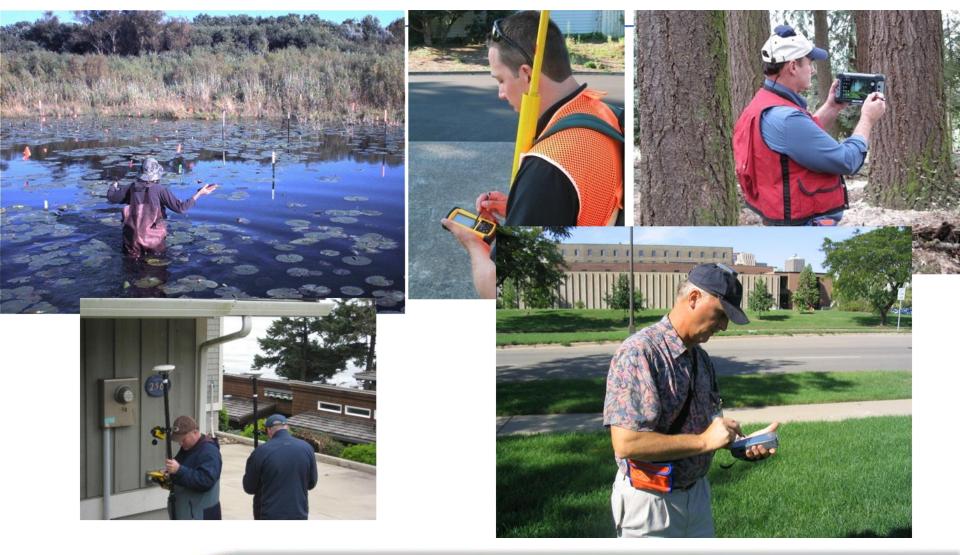
Geotrigger

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



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SENTATION

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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.

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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.

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

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Solutions

- Declassification of PRED.

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

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-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?"

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-Steve Jobs

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