

Trends in Inexpensive High-Precision GNSS

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GNSS technology in the next 5 years is going to advance significantly more than the past 10 years.

10 Years Ago

- WAAS was not operational.
- Receivers capable of real-time sub-meter accuracy were:
 - Expensive
 - Power hungry
 - Bulky



5 Years Ago

- WAAS operational and exploited.
- Receivers capable of real-time sub-meter accuracy were:
 - Less expensive
 - Less power hungry
 - Smaller
- GPS was still the norm

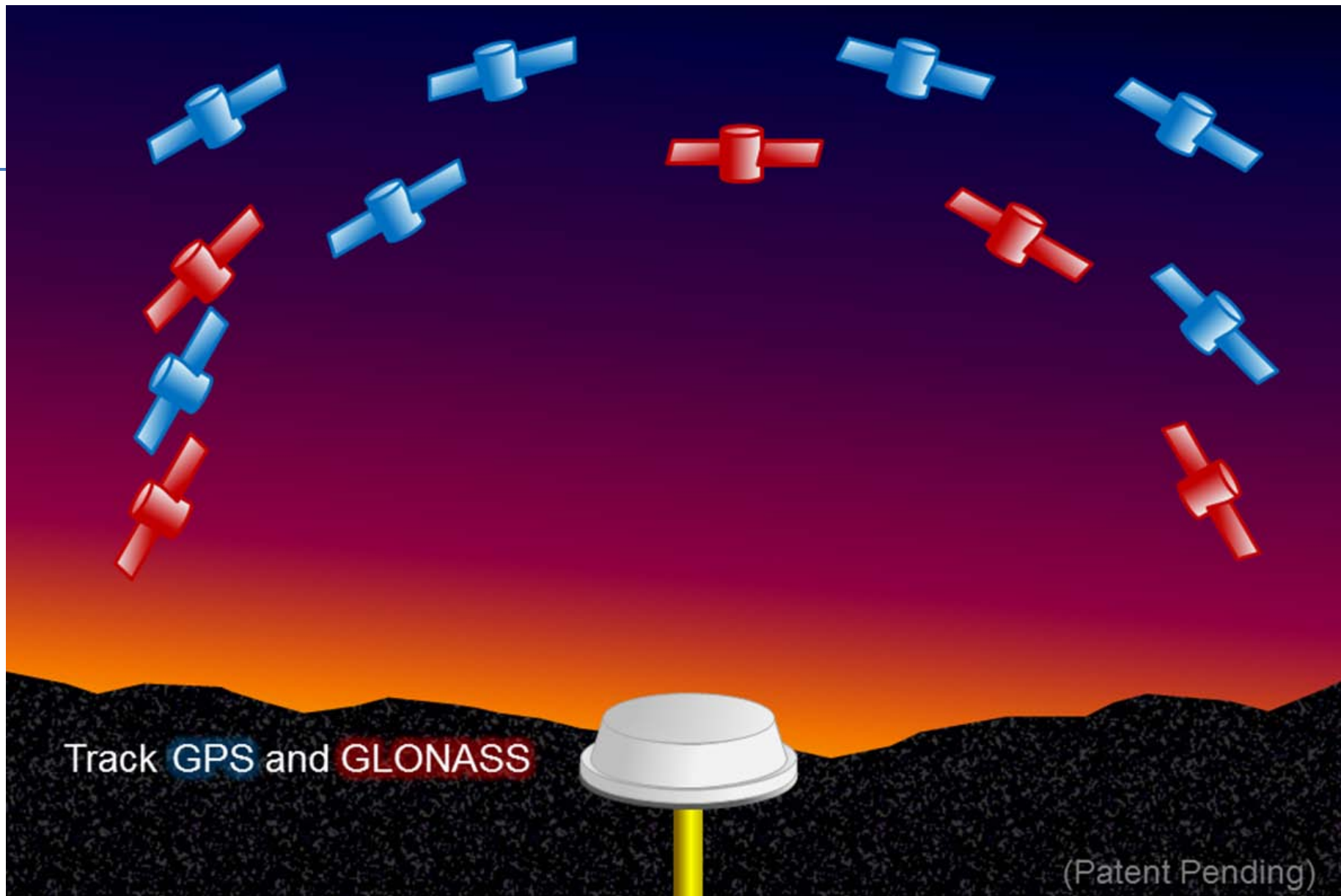


Today

- WAAS/EGNOS/MSAS operational. GAGAN in testing.
- Receivers capable of real-time sub-meter accuracy are:
 - Not much cheaper
 - Not much less power hungry
- GNSS becoming the norm and being exploited

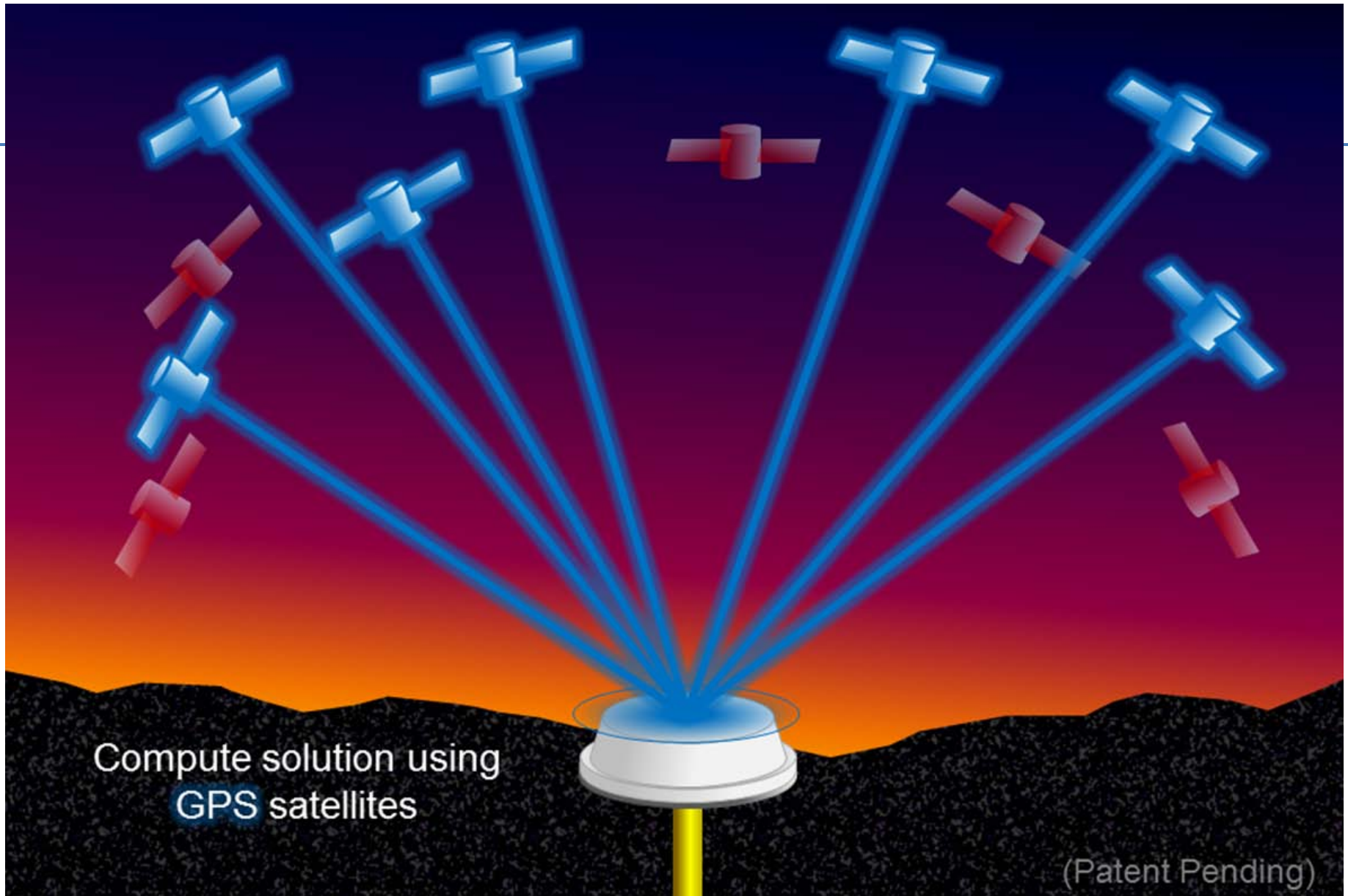
Today

- High-precision GNSS without a GNSS reference station. Applies to:
 - SBAS (WAAS/EGNOS/MSAS/GAGAN)
 - DGPS beacon
 - RTK



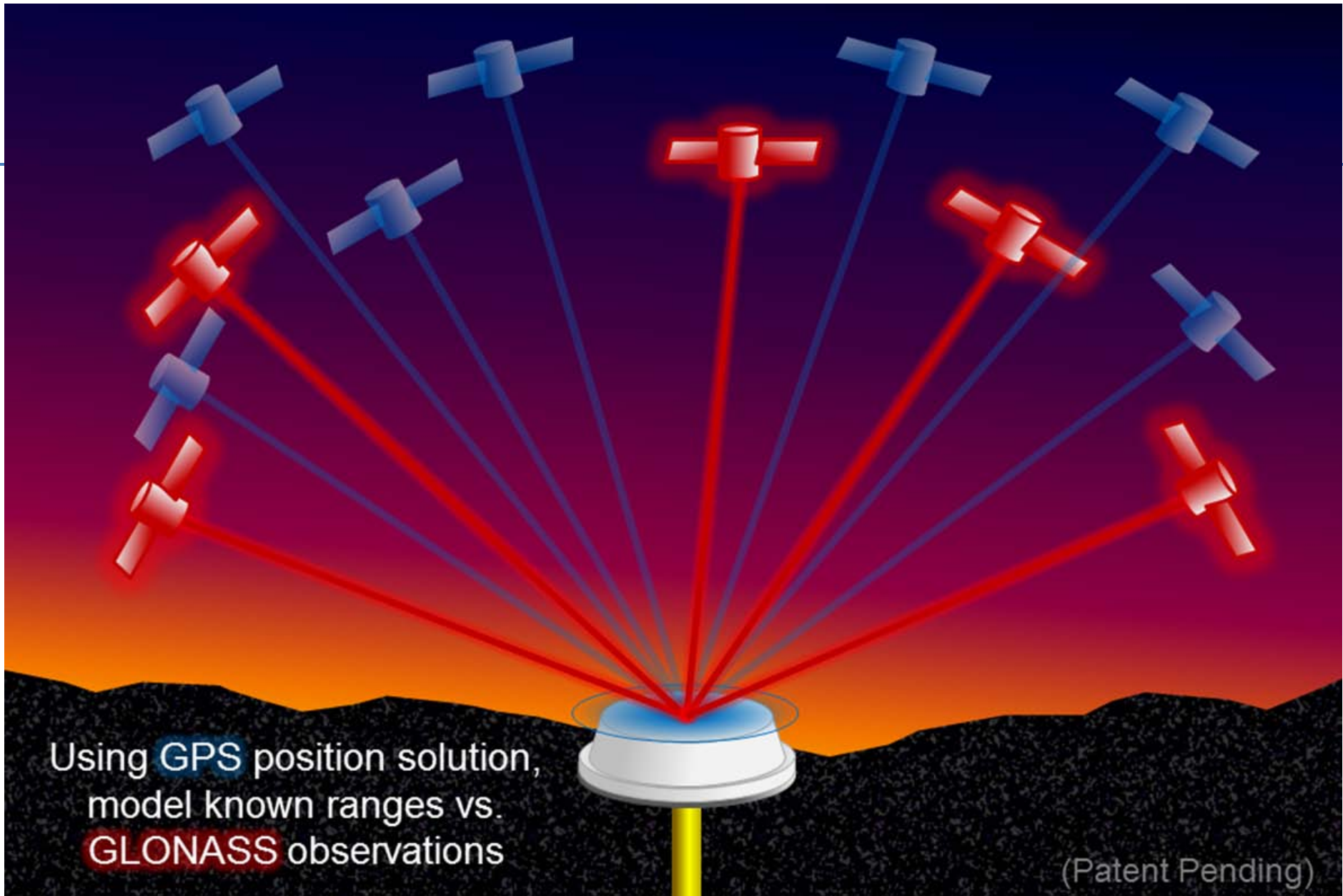
Track GPS and GLONASS

(Patent Pending)



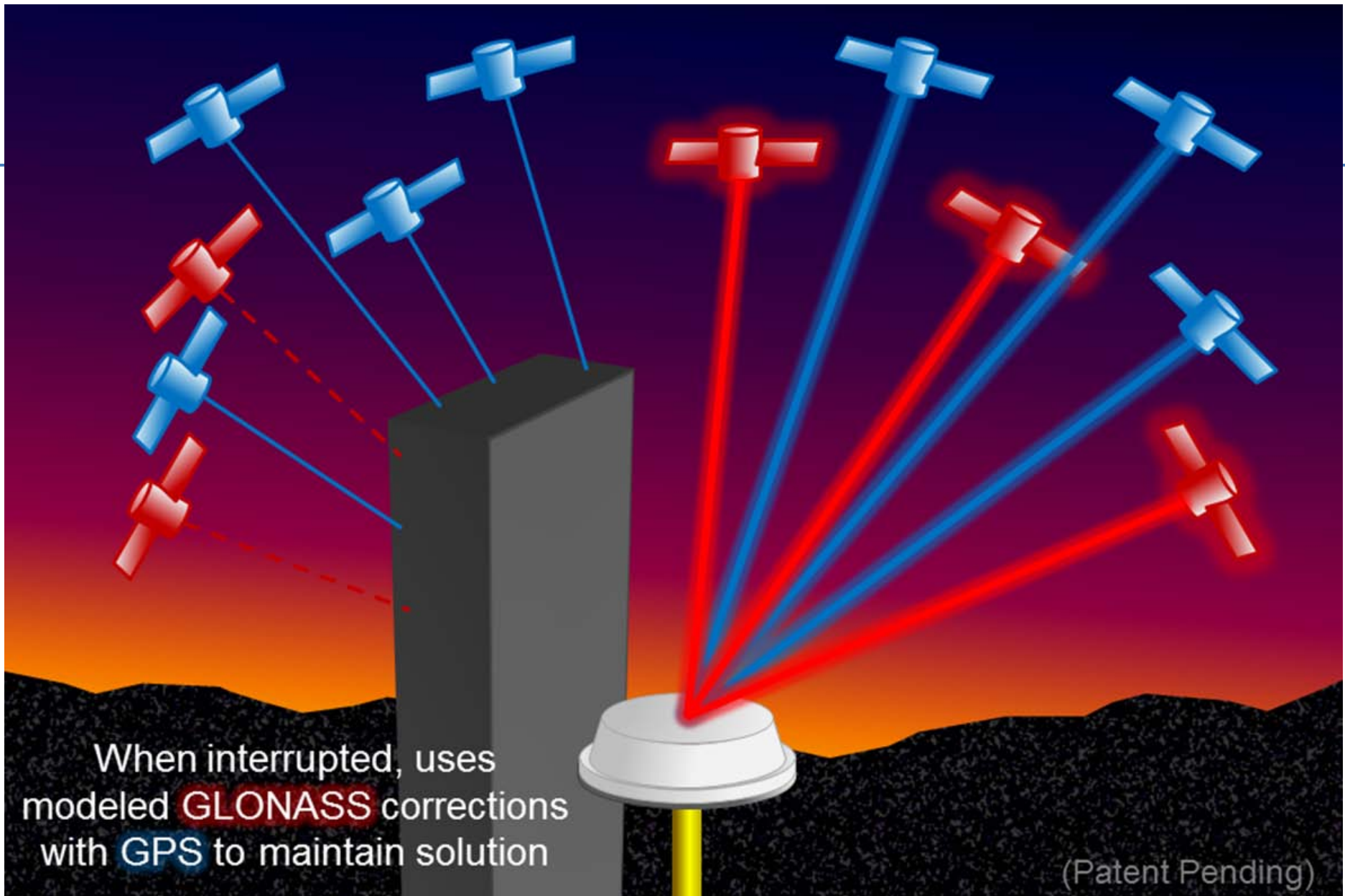
Compute solution using
GPS satellites

(Patent Pending)



Using GPS position solution,
model known ranges vs.
GLONASS observations

(Patent Pending)



Five Years from Now

- WAAS/EGNOS/MSAS/GAGAN operational.
- L5 is useful. GPS + Galileo.
- Real-time sub-meter accuracy without augmentation.
- GNSS the norm
- Dual+ frequency/multi-constellation GNSS chipsets the norm.

Questions?



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