OSPF Geo Location

draft-acee-ospf-geo-location-02

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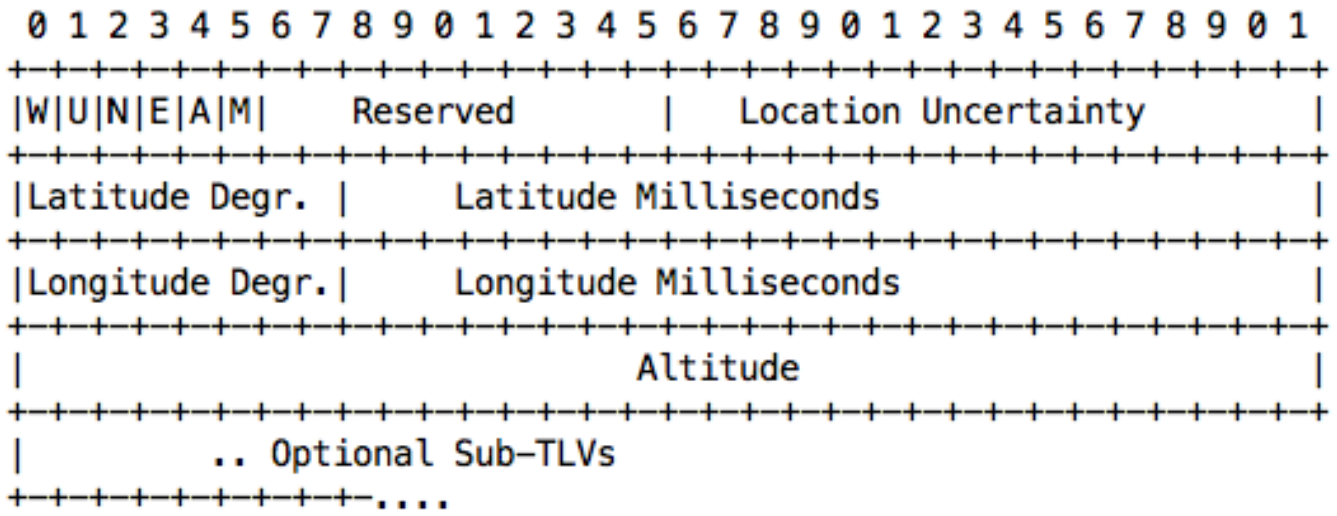
Geo Location in Routing

- P2P, P2MP, and Hybrid automatic link cost
- Find-My-Router Apps
- Proximity services in content sharing and SFC
- Network topology maps
- Dynamic DNS loadsharing
- Traffic matrix of location pairs
- Same ‘subnet’ over WAN and ECMP
- Future routing/service/mgmt apps
- Static provisioning, utilize additional information or GPS capable device

Geo Location TLV



- Flag: W, U, N, E, A, M
- Location Uncertainty in centimeter
- Latitude and Longitude in milliseconds
- Altitude is a signed integer, in centimeter or meter

In OSPF LLS

- Notify the neighbor of our location
- Can be used to calculate P2P, P2MP, and hybrid (RFC 6845) cost.
- Implementation and operation specific
- Can be optionally suppressed after the adjacency is established, re-advertise in LLS or withdraw by setting the ‘W’ bit in the Geo Coordinate flag

In OSPF RI

- Optionally in OSPF RI LSAs for router location
- Withdrawal is done by simply re-flooding RI LSA without Geo Location.
- Packet flooding scope can vary

Security

- Increase of attack vector
- Geo location information can be sensitive, proprietary or physical security/safety related
- Implementation MUST make advertisement optional
- Protocol level or link level encryption may be needed