

IS-IS Geo Location

draft-shen-isis-geo-coordinates-01

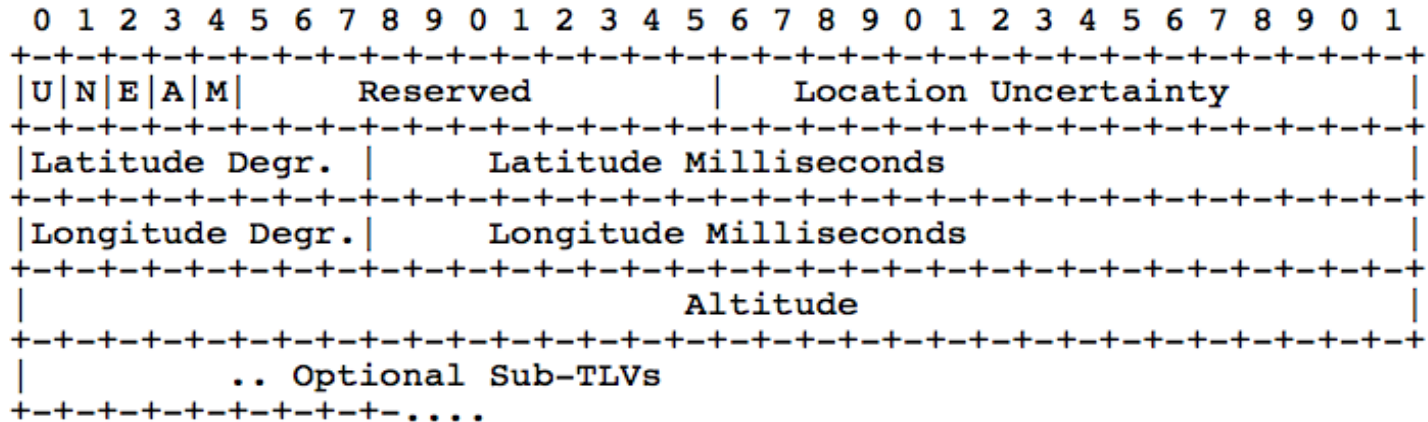
Naiming Shen, Enke Chen, Acee Lindem

IETF 96, Berlin

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

In IS-IS LSP & IIH

- In LSP PDU
 - Optionally in IS-IS LSP for router location
 - Withdrawal is done by simply re-flooding the LSP without Geo Location TLV.
- In IIH PDU
 - Notify the neighbor of our location
 - Can be used to calculate P2P, P2MP, and hybrid (RFC 6845, I-D.lamparter-isis-p2mp) cost.
 - Implementation and operation specific

Security

- May 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