Location Tranformation

http://tools.ietf.org/html/draft-marshall-geopriv-location-transform-00

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Status

- Goal, to describe a standard (protocol) mechanism useful in exchanging one form of location for another
- Combines parts of earlier drafts and garnered support in previous IETF face-to-face mtgs.
  - draft-george-geopriv-address-translation
  - draft-polk-ecrit-losts-transformations-urn

History

- Promotes use of LoST for a discovery process
  - Location & Service URN as inputs
  - e.g., Anytown, Country + urn:service:transform.location (tbd)
- One issue is that this makes discovery have to be location based
  - Are there other ideas?

A Few Examples

- Consider a protocol that could:
  - Take Civic Location as input, and returns a geodetic transformation (lat/lon)

  (yes, this is simple geocoding – but in a standard way, over the Internet)
  - Given a lat/lon based on NAD83, this mechanism could be used to return a “transformed” WGS84 lat/lon

  (handy, since hundreds of datums exist worldwide)

A Few More…

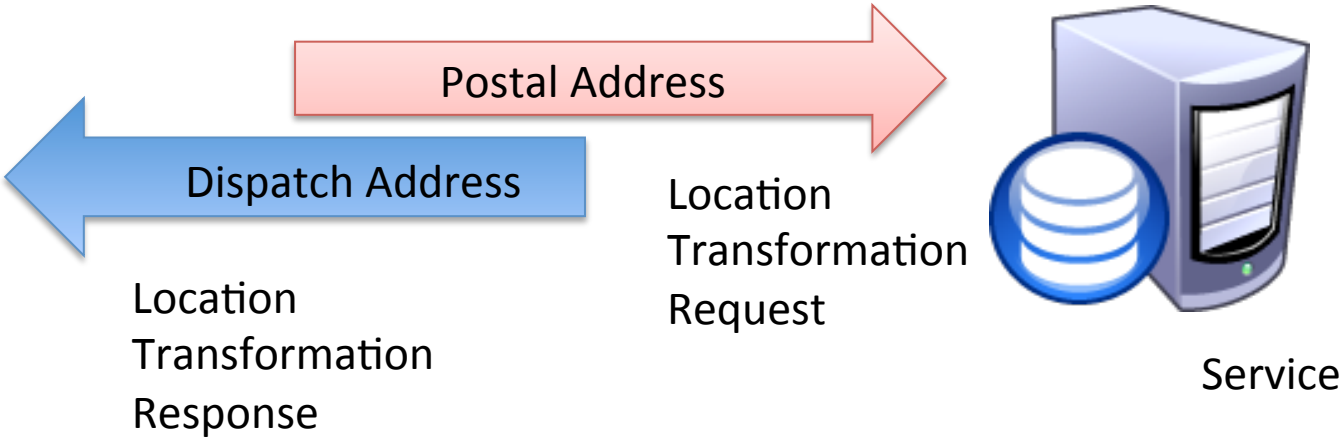
- Examples, continued:
  - Input: Geo Position AND base layer constraint (e.g., parcel polygon layer), returns the "associated" civic location

  (reverse geocoding with specific layer flexibility)
  - Given a municipal survey (real estate) description as input, it returns a complete WGS84 Geo Polygon
  - Input: Postal Civic form of address, Output: Dispatch ready address format

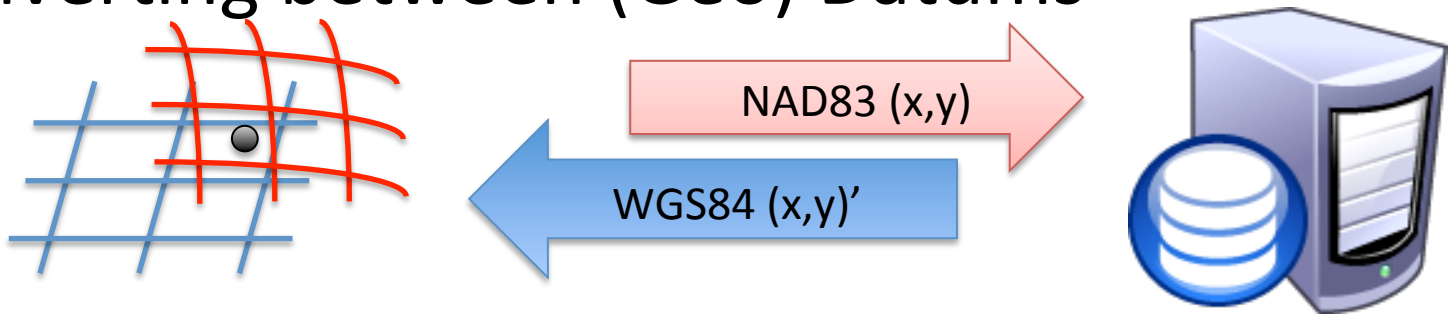
Many Transformations of Location

a) Converting between (Civic) Location types

123 Main Street
Seattle, WA
…
123 Main St.
Ballard, WA



b) Converting between (Geo) Datums



Civic, Geo and Geo data layer in PIDF-LO

MESSAGE sip:transform@domain.com SIP/2.0
Via: SIP/2.0/TCP transform1.domain.com;branch=z1pG2bK996sdkfse
Max-Forwards: 70
From: sip[illegible]domain.com;tag=49553
To: sip:trans[illegible]domain.com
Call-ID: a[illegible]dm86asid59@1.2.3.4
Geolocati[illegible]vr@domain.com>
;routing-allowed=yes
Supporte[illegible]
Accept: appli[illegible]/pidf+xml,
application/comm[illegible]-alerting-protocol+xml
CSeq: 1 M[illegible]
Content-Type: [illegible]ultipart/mixed; boundary=boundary1
Content-Length: ...

-- set of points

PIDF-LO ! discrete

--polygon

PIDF-LO ! Data layer

Additional Ideas

- Many applications are possible
- Additional examples?
- Location specific – e.g., not meant to be a unit conversion tool

Next Steps?

- Protocol framework is currently missing, to be supplied soon in subsequent revision
- Ideas on protocol structure, RelaxNG, etc.
- Some initial comments received, more welcome