
Locating the IETF: GIS related work in the IETF

Scott Bradner
Harvard University
sob@harvard.edu

2003-02-13

Copyright (C) 2003 Scott Bradner. All rights reserved.

Topics

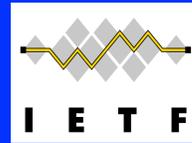
- ◆ what is the IETF?
- ◆ participating in the IETF
- ◆ IETF location-related work
- ◆ security and privacy at the IETF
- ◆ IETF/OGC relationship
- ◆ future directions for cooperation

2

Copyright (C) 2003 Scott Bradner. All rights reserved.

What is the IETF?

- ◆ since 1986, Internet standards R us
- ◆ does not exist, **no** members, **no** voting
- ◆ “***rough consensus & running code***”
- ◆ 1,200 to 2K at 3/year meetings, **NK** on mail lists
- ◆ 137 working groups (where the stuff happens)
- ◆ 8 areas (for organizational convenience) with ADs
APS, GEN, INT, O&M, RTG, SEC, SUB, TSV
- ◆ management: **IESG** (ADs, chosen by community)
- ◆ architectural guidance & liaisons: **IAB**
- ◆ produces **standards** (defined as such by use)



3

Copyright (C) 2003 Scott Bradner. All rights reserved.

What is the IETF?, contd.

- ◆ IETF documents - all open
- ◆ Internet-Drafts
 - anyone** can submit - expire in 6 months
 - some I-Ds are working group documents
- ◆ RFCs (stands for “RFC”)
 - archival publications (never changed once published)
 - different types: (**not all RFCs are standards!**)
 - informational, experimental, BCP, standards track, historic
- ◆ 3-step standards track
 - Proposed Standard, Draft Standard, Internet Standard
- ◆ interoperability not conformance

4

Copyright (C) 2003 Scott Bradner. All rights reserved.

Participating in the IETF

- ◆ most IETF work is done on mailing lists
 - see working group web page for subscription information
 - open subscription policy
- ◆ working groups do also meet during IETF meetings - 3 times per year
 - but final decisions are made on mailing list
 - open meeting but fee (helps pay for Secretariat)
- ◆ so - get on lists, come to meetings, submit I-Ds

5

Copyright (C) 2003 Scott Bradner. All rights reserved.

IETF Location-Related Work: geopriv

- ◆ Geographic Location/Privacy Working Group
 - a.k.a. geopriv
- ◆ think about use of location info in IETF protocols
- ◆ assess the the authorization, integrity and privacy requirements
- ◆ select standard location representation format
- ◆ 1st documents
 - geopriv requirements
 - geopriv scenarios
 - DHCP option

6

Copyright (C) 2003 Scott Bradner. All rights reserved.

geopriv, contd.

- ◆ working group long time in creation
 - dealing with privacy assumptions
- ◆ will define a “location object”
 - XML construct
 - location, who, time, privacy policies, authentication, ...
 - most fields are optional
- ◆ other IETF working groups needing to transport location information are expected to use geopriv

7

Copyright (C) 2003 Scott Bradner. All rights reserved.

geopriv: Principles

- ◆ must guarantee the integrity and confidentiality of location info
 - includes authentication of Location Object and the senders & receivers of Location Objects
- ◆ must enable user-controlled privacy policies
- ◆ Location Object should carry core privacy policies
- ◆ location must be able to be separated from user ID
- ◆ user should be able to hide real identities
 - from outside world and from others in exchange
 - i.e. - be able to use a pseudonym

8

Copyright (C) 2003 Scott Bradner. All rights reserved.

geopriv: Entities

- ◆ Target
 - entity whose location wanted by Location Seeker
- ◆ Device
 - device tracked to get location information
- ◆ Rule Maker
 - individual or entity authorized to create privacy policies
- ◆ Location Seeker
 - individual or entity that wants target's location information

9

Copyright (C) 2003 Scott Bradner All rights reserved.

geopriv: Privacy Policies (Rules)

- ◆ Privacy Policy or Privacy Rule
 - “A rule or set of rules that regulate an entity's activities with respect to location information, including the collection, use, disclosure, and retention of location information. In particular, the policy describes how location information may be used by an entity and which transformed location information may be released to which entities under which conditions. Policies must be obeyed; they are not advisory.”*
- ◆ but, in reality, local laws may override rules
- ◆ should have bypass in case of emergency

10

Copyright (C) 2003 Scott Bradner All rights reserved.

geopriv: Scenarios

- ◆ enhanced call routing
 - E911, Pizza Hut
- ◆ location-based charging or billing
 - different bills for on-campus call origination
- ◆ location-based emergency alert
 - tell people in an area of a problem
- ◆ navigation services
 - driving instructions, emergency path, taxi dispatch
- ◆ location-based services to mobile users
 - location of Starbucks, gas stations

11

Copyright (C) 2003 Scott Bradner. All rights reserved.

geopriv: Scenarios, contd.

- ◆ tracking services
 - package or vehicle tracking
- ◆ geographic-based content services
 - local news or weather
- ◆ traffic services
 - traffic monitoring, traffic jam info

12

Copyright (C) 2003 Scott Bradner. All rights reserved.

LAN Location Determination

- ◆ device can not know its location on a LAN w/o external input (e.g. GPS)
- ◆ proposal: have DHCP option which is filled in by the Ethernet switch
 - puts switch number and port number into DHCP request
 - looked up by DHCP server to get actual location
 - location info returned in DHCP response packet
 - applications then can use location info
- ◆ early in process on this proposal
 - will change before adoption

13

Copyright (C) 2003 Scott Bradner All rights reserved.

Harvard GIS Use and Worry

- ◆ <http://gis.harvard.edu> - user group
- ◆ Harvard Library has major GIS project
 - develop GIS-based access to library resources
 - 1st work is gazetteer related
 - Harvard has lots of gazetteers
 - including historical China
 - plus herbarium plant collection data
 - show me where the plant was collected
 - much much more too come
- ◆ worry: access control to information
 - no useful access control information in GIS data

14

Copyright (C) 2003 Scott Bradner All rights reserved.

Security and Privacy at the IETF

- ◆ much of the IETF is compulsive about security and privacy - sort of libertarian
- ◆ but not all
- ◆ the IESG is compulsive about this
 - thoughtful Security Considerations required in RFCs
 - includes privacy issues
- ◆ IETF mostly has mandatory-to-implement security
 - not mandatory-to-use
 - but at least one security technology that everyone can use

15

Copyright (C) 2003 Scott Bradner. All rights reserved.

Privacy!

- ◆ basic geopriv concept:
 - the user gets to define the use and distribution of his or her location information**
- ◆ i.e. empower the user
- ◆ also
 - let the user use a pseudonym**
 - including pseudonyms which can not be linked to user

16

Copyright (C) 2003 Scott Bradner. All rights reserved.

IETF/OGC Relationship

- ◆ best way to cooperate is to work together
happening now
- ◆ IETF does not deal well with liaison-type relationships
not structured to create or respond to liaison statements
frustrates people - (e.g., ITU-T)
- ◆ cross participation is the most reliable path
- ◆ IETF structure makes it easy (if time consuming) for individuals to participate
but not - as individuals - no easy way to speak for organization

17

Copyright (C) 2003 Scott Bradner. All rights reserved.

IETF/SDO Relationships

- ◆ IETF has formal relationships with some SDOs
 - ITU-T - RFC 3356 (more work underway)
 - W3C - no RFC
 - 3GPP - RFC 3113
 - 3GPP2 - RFC 3131
 - JTC1 - no RFC
- ◆ IETF has informal relationships with other SDOs
ATM Forum, MPLS Forum (now one), ETSI, IEEE, etc

18

Copyright (C) 2003 Scott Bradner. All rights reserved.

