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Administrative Specific Elements for Civic Location Format  
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## Abstract

This document defines additional civic address parameters for use in Location Objects [1], [2], and [4]. The format is based on the civic

address definition of PIDF-LO. These addition parameters allow expression of administrative specific location data elements.

## Conventions used in this document

The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "MAY", and "OPTIONAL" in this document are to be interpreted as described in [RFC-2119](#) [1].

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## [1.](#) Introduction

In large enterprise/campus networks, information about a host's network/campus location is often useful for internal application configuration and maintenance of both applications and network infrastructure. Typically, this is information that is not useful outside of the campus or enterprise. Currently, this information is collected via additional data collection mechanisms such as SNMP or link layer protocols.

The information included within this locally significant data set includes elements like access point identifier, switch port identifier, administrative domain identifier, etc. Although these attributes are not normally associated with publicly known civic locations advertised outside the enterprise, they are none the less

very important to the configuration, administration and maintenance of campus networks/applications. These elements are considered 'location' within the domain of enterprise application and infrastructure administration.

Although PIDF-LO civic location currently supports additional elements such as CATypes 28 (room), 32 (additional code), or 33 (seat), the use of already defined fields for internal purposes is problematic as there may be conflicts in the future. Therefore, there is the need to identify a range of elements that network/application administrators can use for their own local purposes.

Since these additional CATypes are designated for internal administrative usage and have no value outside the administrative domain, the additional CATypes defined here SHOULD be deleted from any location object (LO) prior to the LO being distributed outside the respective administrative domain.

#### Additions to PIDF-LO

PIDF-LO, as updated by [2], includes a full set of parameters used to describe civic locations. The new parameters defined here are additions to the updated set. Such additions provide a means to describe a host's location with additional local administrative significance.

## 2. Administrative Specific Location

Administrative Specific Location elements are defined by first identifying the Administrative domain via a new CAType. The CAType 200 is recommended for this purpose. It is then suggested that the CAType 201 to 225 be reserved for the Administrative domain specified information.

New Civic Field	CAType	Description	Example
Admin	200	Administrative Identifier	Cisco

AS-1	201	Administrative specific location element 1	Port-6
AS-2	202	Administrative specific location element 2	Region-12
AS-3	203	Administrative specific location	Sector-9

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		element 3	
AS-4	204	Administrative specific location element 4	Response team-6
AS-5	205	Administrative specific location element 5	987654
AS-6	206	Administrative specific location element 6	
AS-7	207	Administrative specific location element 7	
AS-8	208	Administrative specific location element 8	
AS-9	209	Administrative specific location element 9	
AS-10	210	Administrative specific location element 10	
AS-11	211	Administrative specific location element 11	
AS-12	212	Administrative specific location element 12	
AS-13	213	Administrative specific location element 13	
AS-14	214	Administrative specific location element 14	

AS-15	215	Administrative specific location element 15
AS-16	216	Administrative specific location element 16
AS-17	217	Administrative specific location element 17
AS-18	218	Administrative specific location

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		element 18
AS-19	219	Administrative specific location element 19
AS-20	220	Administrative specific location element 20
AS-21	221	Administrative specific location element 21
AS-22	222	Administrative specific location element 22
AS-23	223	Administrative specific location element 23
AS-24	224	Administrative specific location element 24
AS-25	225	Administrative specific location element 25

Table 1: New CAtypes

## 2.1. Examples of the Admin specific location parameters

A location that includes administrative specific information for switch number 6, port 3.

```
<ADMIN>cisco</ADMIN>
```

```
<AS-1>sw6port3</AS-1>
```

A location that includes administrative specific information for zone 6.

```
<ADMIN>cisco</ADMIN>
```

```
<AS-2>zone6</AS-2>
```

### [3. Example Schema](#)

```
<xs:schema
targetNamespace="urn:ietf:params:xml:ns:pidf:geopriv10:civicAddr"
xmlns:xs="http://www.w3.org/2001/XMLSchema"
  xmlns:ca="urn:ietf:params:xml:ns:pidf:geopriv10:civicAddr"
xmlns:xml="http://www.w3.org/XML/1998/namespace"
  elementFormDefault="qualified" attributeFormDefault="unqualified">
  <xs:import namespace="http://www.w3.org/XML/1998/namespace"
schemaLocation="http://www.w3.org/2001/xml.xsd" />
  <xs:element name="civicAddress" type="ca:civicAddress" />
  <xs:complexType name="caType">
    <xs:simpleContent>
      <xs:extension base="xs:token">
        <xs:attribute ref="xml:lang" use="optional" />
      </xs:extension>
    </xs:simpleContent>
  </xs:complexType>
  <xs:complexType name="civicAddress">
    <xs:sequence>
      <!-- additions to civicAddress -->
      <xs:element name="admin" type="ca:caType" minOccurs="0" />
      <xs:element name="as-1" type="ca:caType" minOccurs="0" />
      <xs:element name="as-2" type="ca:caType" minOccurs="0" />
    </xs:sequence>
  </xs:complexType>
</xs:schema>
```

```

<xs:element name="as-3" type="ca:caType" minOccurs="0" />
<xs:element name="as-4" type="ca:caType" minOccurs="0" />
    <xs:element name="as-5" type="ca:caType" minOccurs="0" />
<xs:element name="as-6" type="ca:caType" minOccurs="0" />
<xs:element name="as-7" type="ca:caType" minOccurs="0" />
<xs:element name="as-8" type="ca:caType" minOccurs="0" />
    <xs:element name="as-9" type="ca:caType" minOccurs="0" />
<xs:element name="as-10" type="ca:caType" minOccurs="0" />
<xs:element name="as-11" type="ca:caType" minOccurs="0" />
<xs:element name="as-12" type="ca:caType" minOccurs="0" />
    <xs:element name="as-13" type="ca:caType" minOccurs="0"
/>
<xs:element name="as-14" type="ca:caType" minOccurs="0" />
<xs:element name="as-15" type="ca:caType" minOccurs="0" />
<xs:element name="as-16" type="ca:caType" minOccurs="0" />

```

```

    <xs:element name="as-17" type="ca:caType" minOccurs="0"
/>
<xs:element name="as-18" type="ca:caType" minOccurs="0" />
<xs:element name="as-19" type="ca:caType" minOccurs="0" />
<xs:element name="as-20" type="ca:caType" minOccurs="0" />
    <xs:element name="as-21" type="ca:caType" minOccurs="0"
/>
<xs:element name="as-22" type="ca:caType" minOccurs="0" />
<xs:element name="as-23" type="ca:caType" minOccurs="0" />
<xs:element name="as-24" type="ca:caType" minOccurs="0" />
    <xs:element name="as-25" type="ca:caType" minOccurs="0"
/>
</xs:sequence>
</xs:complexType>
</xs:schema>

```

#### [4.](#) Security Considerations

The XML parameters defined in the document are additions to the current PIDF-LO specification. Therefore the parameters defined here are subject to the same security considerations of [\[1\]](#).

#### [5.](#) IANA Considerations

##### 5.1. XML Schema Registration

IANA will update the registered XML schema with additions as shown in

[section 3](#). of this document.

URI: urn:ietf:params:xml:schema:pidf:geopriv10:civicAddr

## 5.2. CAType Registry Update

IANA will update the civic address type registry established by [RFC4776](#). The additions to the registry are shown in Table 1 of the document.

## 6. Acknowledgments

This document was prepared using 2-Word-v2.0.template.dot.

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## 7. References

### 7.1. Normative References

- [1] Petersen, J., "A Presence-based GEOPRIV Location Object Format", [RFC 4119](#), December 2005.
- [2] Thomson, M. & Winterbottom, J., "Revised Civic Location Format for Presence Identifier Format Location Object (PIDF-LO)", [RFC 5139](#), February 2008.
- [3] Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", [BCP 14](#), [RFC 2119](#), March 1997.
- [4] Schulzrinne, H., "Dynamic Host Configuration Protocol (DHCPv4 and DHCPv6) Option for Civic Addresses Configuration Information", [RFC4776](#), November 2006

### 7.2. Informative References

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