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Returning a Location Information in a Location to Service Translation
query
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Abstract

This document defines an extension to LoST ([RFC5222](#)) to permit a location information to be returned in a findservice response. When the validation is requested in the findservice request, the location information supplied in the request may have enough valid address components (CAtypes) to be considered valid, but the LoST server may wish to return address components CAtypes not found in the query.

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1. 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 [[RFC2119](#)].

2. Overview

This document describes an extension to LoST [[RFC5222](#)], to allow location information to be returned in a <findServiceResponse>. When requesting validation, the location information in the <findService> request may contain enough CATypes to be considered valid. The LoST server may have all of the address components for the location. As an example, the query may contain a PC, postal code, but may not contain A1, A2 or A3 CATypes. The street name and PC may be sufficient to locate the address specified in the request and thus be considered. It may be helpful to downstream entities to have the A1-A3 components, and the LoST server could supply them. However, [[RFC5222](#)] does not have a way for location information to be returned in the <findServiceResponse>. This document adds the possibility to include a <location> element to the <findServiceResponse> message.

3. responseLocation

This document defines a new element <responseLocation> which MAY be included in a <findServiceResponse> when validation is requested. It MUST NOT be used in any other request or response. The Location Information in the response MUST contain all of the location information in the request and MAY contain any additional CATypes that refer to the same location specified in the request.

4. Relax NG Schema

This section provides the Relax NG schema for an extension to include the <location> in the <findServiceResponse> in the compact form. The verbose form is included in [Appendix A](#).

```
namespace a = "http://relaxng.org/ns/compatibility/annotations/1.0"
default namespace ns1 = "urn:ietf:params:xml:ns:lostRLI"
```

```
##
## Extensions to the Location-to-Service Translation (LoST)
## Protocol
```

```
##
## LoST Extensions to optionally return a <location> in
## <findServiceResponse>
##
```

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```
start =
  responseLocation
```

```
##
## findServiceResponse
##
div {
  findServiceResponse =
    extensionPoint+,
    attribute profile { xsd:NMTOKEN }?
}
```

```
##
## Location in Responses
##
div {
  responseLocation =
    element location {
      attribute id { xsd:token },
      locationInformation
    }+
}
```

```
##
## Patterns for inclusion of elements from schemas in
## other namespaces.
##
```

```

div {

    ##
    ##    Any element not in the LoST Extensions
    ##    namespace.
    ##
    notLostRP = element * - (ns1:* | ns1:*) { anyElement }

    ##
    ##    A wildcard pattern for including any element
    ##    from any other namespace.
    ##
    anyElement =
        (element * { anyElement }
         | attribute * { text }
         | text)*

    ##
    ##    A point where future extensions

```

```

    ##    (elements from other namespaces)
    ##    can be added.
    ##
    extensionPoint = notLostRP*
}

```

Figure 1: Relax NG Schema

[5.](#) Security Considerations

Although the input to the LoST request may be valid, however the LoST server determines what valid is, the requester may not actually understand where that is. This extension returns more location information that the requester may not have had which may reveal more about the location. While this may be very desirable for, e.g. an emergency call, it may not be as desirable for other services. The LoST server implementation should consider the risk of releasing more detail verses the value in doing so. Generally, we do not believe this is a significant problem as the requester must have enough location information to be considered valid, which in most cases is enough to uniquely locate the address. Providing more CATypes generally doesn't actually reveal anything more.

[6.](#) IANA Considerations

[6.1.](#) XML Schema Registration

This section registers an XML schema as per the procedures in [\[RFC3688\]](#).

URI: urn:ietf:params:xml:schema:lostRLI

Registrant Contact: IETF, ECRIT working group (ecrit@ietf.org),
Brian Rosen (br@brianrosen.net).

The XML for this schema can be found as the entirety of [Section 7](#) of this document.

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[6.2.](#) LoST Extension to Return LI Relax NG Schema Registration

URI: urn:ietf:params:xml:schema:lostRLI

Registrant Contact: Brian Rosen (br@brianrosen.net)

Relax NG Schema: The Relax NG schema to be registered is contained in [Section 4](#). Its first line is

default namespace ns1 = "urn:ietf:params:xml:ns:lostRLI"

and its last line is

}

[6.3.](#) LoST Extension to return LI Namespace Registration

URI: urn:ietf:params:xml:ns:lost1:ext

Registrant Contact: Brian Rosen (br@brianrosen.net)

XML:

BEGIN

```
<?xml version="1.0"?>
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML Basic 1.0//EN"
  "http://www.w3.org/TR/xhtml-basic/xhtml-basic10.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
<head>
  <meta http-equiv="content-type"
    content="text/html; charset=iso-8859-1"/>
  <title>LoST Extension to Return LI Namespace</title>
</head>
<body>
  <h1>Namespace for LoST Extension to return LI</h1>
  <h2>urn:ietf:params:xml:ns:lostRLI</h2>
  <p>See <a href="http://www.rfc-editor.org/rfc/rfcXXXX.txt">
    RFCXXXX</a>.</p>
</body>
</html>
END
<!-- [[NOTE TO RFC-EDITOR: Please replace all instances of RFCXXXX
  with the number of the published
  document and remove this note.]] -->
END
```

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[7.](#) Acknowledgements

This work arose from discussions held within the NENA Long Term Development work group.

[8.](#) Normative References

[RFC2119] Bradner, S., "Key words for use in RFCs to Indicate

Requirement Levels", [BCP 14](#), [RFC 2119](#), March 1997.

[RFC5222] Hardie, T., Newton, A., Schulzrinne, H., and H. Tschofenig, "LoST: A Location-to-Service Translation Protocol", [RFC 5222](#), August 2008.

[RFC3688] Mealling, M., "The IETF XML Registry", [BCP 81](#), [RFC 3688](#), January 2004.

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