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**Updating Additional Data related to an Emergency Call using Subscribe/  
Notify  
draft-rosen-ecrit-addldata-subnot-01.txt**

**Abstract**

Additional Call Data is sent in a SIP Call-Info header or in a provided-by element of a PIDF-LO. Sometimes, the information needs to be updated while an emergency call is in progress. It is best for the Public Safety Answering Point (PSAP) to control the timing and frequency of updates. This document describes a SIP Subscribe/Notify Package to supply updates of Additional Call Data.

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## [1. Introduction](#)

This document provides a mechanism to update Additional Call Data sent with an emergency call as described in [\[I-D.ietf-ecrit-additional-data\]](#) using the SIP SUBSCRIBE/NOTIFY method. It also defines a new block that provides the URL to which a SUBSCRIBE can be sent by the PSAP to the provider of Additional Call Data.

Additional Data can be provided by a service provider, but can also be provided by a device. When provided by a device, implementing a sub/not mechanism implies the device has a server capable of



accepting subscriptions and providing notifications. Many devices could not do that. Instead, the device may PUBLISH the data to an external server, and then use that server to provide subscription and notification service.

## **2. Terminology**

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](#) [[RFC2119](#)].

## **3. SUBSCRIBE/NOTIFY Package for Additional Call Data**

This document defines an Event Package as define in [RFC 6655](#) [[RFC6655](#)]

### **3.1. Event Package Name**

The name of this event package is "additional-call-data".

### **3.2. Event Package Parameters**

This event package does not define any package parameters

### **3.3. SUBSCRIBE Bodies**

This event package defines no message bodies to be used in the SUBSCRIBE message.

### **3.4. Subscription Duration**

A subscription would not last longer than an emergency call, but the length of a call varies widely. A few minutes is a reasonable first subscription time. PSAPs should not expect a data source to accept subscriptions longer than 10 minutes.

### **3.5. NOTIFY Bodies**

The content of a NOTIFY body will be a set of blocks as defined in [[I-D.ietf-ecrit-additional-data](#)]. No delta or difference mechanism is provided for, but a block that did not change from the prior transmission MAY be omitted. To get the subscription address, the PSAP would have to have gotten the entire block set, by value or by reference, and subsequent NOTIFY messages (including the initial one) need only contain blocks which have changed. Blocks that have not changed MAY be sent in any NOTIFY, at the option of the data provider.



### **3.6. Notifier Processing of SUBSCRIBE Requests**

Upon receipt of a SUBSCRIBE request, the notifier applies authorization according to local policy. Typically, PSAPS will have credentials that may be useful to data providers in making such authorization decisions.

### **3.7. Notifier Generation of NOTIFY Requests**

NOTIFY messages are generated whenever the data in one or more blocks change. Small changes in values that are not significant to handling emergency calls SHOULD NOT generate new NOTIFY requests.

### **3.8. Subscriber Processing of NOTIFY Requests**

Upon receipt of a NOTIFY message, the subscriber applies any information in the message to update its view of the underlying data.

### **3.9. Handling of Forked Requests**

Forking of Additional Call Data requests is not expected to occur. In the aberrant circumstance that a SUBSCRIBE request is forked, the subscriber SHOULD terminate all but one subscription.

### **3.10. Rate of Notification**

While some data (e.g. sensor data) may change rapidly, PSAPs and responders cannot usually make use of a high rate of NOTIFY requests. Notifiers MUST implement event rate control [RFC 6446](#) [[RFC6446](#)]. In the absence of an event rate filter, Notifiers MUST NOT send notifications more frequently than once every twenty seconds.

### **3.11. Considerations for use with PUBLISH**

Additional data block(s) may be used with a PUBLISH operation to a server that can subsequently handle event notification per this document.

#### **3.11.1. PUBLISH Bodies**

The PUBLISH body MUST contain one or more additional data blocks as defined in [[I-D.ietf-ecrit-additional-data](#)]. Blocks whose value did not change need not appear in a given PUBLISH transaction.

#### **3.11.2. PUBLISH Response Bodies**

No bodies are expected in any response.



### **3.11.3. Multiple Sources for Event State**

Multiple sources for additional data for a given URI handled by the server is permitted, but no method for aggregating information when more than one source supplies data for the same block is specified. If different sources PUBLISH different blocks, the state is the union of the blocks from all sources.

### **3.11.4. Event State Segmentation**

No special segmentation processing is specified.

### **3.11.5. Rate of Publication**

There are no rate limitations for additional data publication.

## **4. SUBSCRIBE Additional Data Block**

This document defines a new Additional Data block type to contain the URI to send a SUBSCRIBE to.

### **4.1. Update SUBSCRIBE URI**

Data Element: Update SUBSCRIBE URI

Use: Optional

XML Element: <UpdateSubscribeURII>

Description: If the data provider anticipates some block data may change during the processing of an emergency call, it MAY provide this URI to send a SUBSCRIBE to. This MUST be a SIP URI. .

Reason for Need: Provide a PSAP controlled update mechanism for blocks that may change during an emergency call.

How Used by Call Taker: To obtain updates for Additional Call Data.





## **5. Security Considerations**

Security considerations for the SUBSCRIBE/NOTIFY update mechanism are identical to those in [[I-D.ietf-ecrit-additional-data](#)]. The same credentials described in that document would be used to identify the PSAP and the data provider. The SUBSCRIBE URI should be protected against casual observation, and thus SIPS or HTTPS, as appropriate SHOULD be used on the original transmission of blocks which contains the SUBSCRIBE URI block.

Rapid updates could overwhelm PSAPs. The event rate controls defined in [Section 3.10](#) are essential to allow PSAPs to control the update rate.

## **6. Privacy Considerations**

The privacy considerations detailed in [[I-D.ietf-ecrit-additional-data](#)] apply to updates of the blocks as well as the original transmission.

## **7. IANA Considerations**

### **7.1. Event Package Registration**

This document defines a new Event Package as described in [[RFC6655](#)] and registers it in the Event packages and Event template-packages registry. The Package Name is "additional-call-data", The Type is "package". The contact is "Brian Rosen, br@brianrosen.net" and the Reference is this document.

### **7.2. MIME Content-type Registration for 'application/emergencyCall.SvcInfo+xml'**

This specification requests the registration of a new MIME type according to the procedures of [RFC 4288](#) [[RFC4288](#)] and guidelines in [RFC 3023](#) [[RFC3023](#)].

MIME media type name: application

MIME subtype name: emergencyCall.UpdateSubscribeURI+xml

Mandatory parameters: none

Optional parameters: charset

Indicates the character encoding of enclosed XML.

Encoding considerations:



Uses XML, which can employ 8-bit characters, depending on the character encoding used. See [Section 3.2 of RFC 3023](#) [[RFC3023](#)].

Security considerations:

This content type is designed to carry an event package subscription URI, which is a sub-category of additional data about an emergency call.

Please refer to [Section 5](#) for more information about the sensitivity of the SUBSCRIBE URI.

Interoperability considerations: None

Published specification: [TBD: This document]

Applications which use this media type: Emergency Services

Additional information:

Magic Number: None

File Extension: .xml

Macintosh file type code: 'TEXT'

Person and email address for further information: Brian Rosen,  
br@brianrosen.net

Intended usage: LIMITED USE

Author: This specification is a work item of the IETF ECRIT working group, with mailing list address <ecrit@ietf.org>.

Change controller: The IESG <ietf@ietf.org>

### **[7.3.](#) Block Registration**

This document registers a new Additional Data block as defined in [[I-D.ietf-ecrit-additional-data](#)] and registers it in the Additional Call Data Blocks Registry. The Token is "UpdateSubscribeURI", the Reference is this document.

## **[8.](#) Normative References**

[I-D.ietf-ecrit-additional-data]



Rosen, B., Tschofenig, H., Marshall, R., Randy, R., and J. Winterbottom, "Additional Data related to an Emergency Call", [draft-ietf-ecrit-additional-data-15](#) (work in progress), November 2013.

- [RFC2119] Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", [BCP 14](#), [RFC 2119](#), March 1997.
- [RFC3023] Murata, M., St. Laurent, S., and D. Kohn, "XML Media Types", [RFC 3023](#), January 2001.
- [RFC4288] Freed, N. and J. Klensin, "Media Type Specifications and Registration Procedures", [RFC 4288](#), December 2005.
- [RFC6446] Niemi, A., Kiss, K., and S. Loreto, "Session Initiation Protocol (SIP) Event Notification Extension for Notification Rate Control", [RFC 6446](#), January 2012.
- [RFC6655] McGrew, D. and D. Bailey, "AES-CCM Cipher Suites for Transport Layer Security (TLS)", [RFC 6655](#), July 2012.

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