

## Annex 1 Examples

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The following annex is informative only and is not a part of this standard.

Several basic messaging scenarios are described in this annex. The intent of the annex is to provide representative examples of how such communications *might* be intercepted and the appropriate information conveyed to the LEA under this standard. This annex is not intended as an exhaustive set of examples. The scenarios contained in this annex are informative only. PSPs may provide access using configurations and accesses not shown. PSPs are not obligated to implement particular services or features in the way illustrated in these exemplary scenarios.

For the purposes of illustrating the following examples, the PSP referenced will be known as "USA Wireless Messaging" with a home node in "Slippery Rock, SD". The LEA will be known as "LEA1" and the Lawful Authorization identification number will be "PI314159265".

### A1 1 Message Examples Sent To Radio Receiving Devices

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The following examples are provided to illustrate typical messaging sent to radio receiving devices.

#### A1 1.1 Intercept Subject using Traditional Paging's Predefined Geographical Coverage

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This is a simple paging example using techniques covered by Standard 1 - CALEA Specification for Traditional Paging.

##### A1 1.1.1 Transaction Flow:

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- LEA (LEA1) presents a Lawful Authorization for a capcode or PIN intercept to the PSP (USA Wireless Messaging).
- PSP determines that the intercept subject has traditional paging features and programs the LEA-provided clone radio receiving device with the intercept subject's capcode.
- PSP receives a message for the intercept subject.
- PSP sends the message to the PSP's RF infrastructure.
- The RF infrastructure broadcasts the message in the intercept subject's predefined geographical coverage area.
- Both the subject and the clone radio receiving device receive the call content of the message at the same time.

##### A1 1.1.2 AMI-Delivered Information

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Since this is an example of a traditional paging application, there is no AMI Data Transfer.

## **A1 1.2 Intercept Subject with Voice Mail using Traditional Paging's Shadow Mailbox**

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This is a simple voice mail paging example using techniques covered by Standard 1 - CALEA Specification for Traditional Paging.

### **A1 1.2.1 Transaction Flow:**

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- LEA (LEA1) presents a Lawful Authorization for a Phone Number intercept to the PSP (USA Wireless Messaging).
- PSP determines that the intercept subject has traditional paging features including voice message retrieval services, programs the LEA-provided clone radio receiving device with the intercept subject's capcode, provisions a shadow mailbox, and provides the LEA with shadow mailbox access instructions.
- PSP receives a voice message through the voice message retrieval service for the intercept subject.
- PSP sends a voice message retrieval service pending notification message to the PSP's RF infrastructure.
- The RF infrastructure broadcasts the notification message in the intercept subject's predefined geographical coverage area.
- Both the subject and the clone radio receiving device receive the call content of the message at the same time.
- The LEA uses the provided shadow mailbox access information to unobtrusively obtain the voice message.
- The Intercept Subject retrieves the pending voice message from the voice message retrieval service.

### **A1 1.2.2 AMI-Delivered Information**

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Since this is an example of a traditional paging application, there is no AMI Data Transfer.

### A1 1.3 Intercept Subject Using Advanced Messaging's Subscriber Defined On-Demand Roaming

---

This example illustrates the transaction flow and AMI-delivered information for a message sent to an intercept subject who has redefined the available coverage area in which messages shall be sent.

#### A1 1.3.1 Transaction Flow:

---

- LEA (LEA1) presents a Lawful Authorization for a capcode intercept to the PSP (USA Wireless Messaging).
- PSP determines that the intercept subject has advanced messaging features and sets up monitoring within the PSP Infrastructure.
- PSP does not receive origin call-identifying information.
- PSP receives a message for the intercept subject.
- PSP sends the message as call content to the PSP Infrastructure's RF Network.
- PSP sends an AMI protocol message with this call content from the PSP's Data Delivery Point for LEA(s) for reception by the LEA-Provided CALEA Interface.
- PSP RF Network broadcasts the message in the intercept subject's current geographical coverage area.

#### A1 1.3.2 AMI-Delivered Information

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The following data transfer is sent via the AMI protocol from the PSP's Data Delivery Point for LEA(s).

AMI Data Transfer - Outbound Message from the PSP to the Radio Transceiving Device:

```
POST /cgi-bin/process_ami.asp HTTP/1.1
Host: www.LEA1.gov
From: PI314159265@Slippery_Rock.USA_Wireless_Messaging.com
Date: Sun, 15 Jun 1998 18:13:23 GMT
MIME-Version: 1.0
Content-Type: multipart/mixed; boundary=--content
Content-Length: 225
(mandatory blank line)
--content
Content-Type: text/x-vcard; charset=us-ascii; name="destination.vcf"
(mandatory blank line)
BEGIN:VCARD
VERSION:2.1
N:Public;John
ADR;;;27;05;;
X-PCIA-CAPCODE:987654321
END:VCARD
(mandatory blank line)
--content
Content-Type: text/plain; charset=us-ascii
(mandatory blank line)
```

[actual text content]  
(*mandatory blank line*)  
--content--

## A1 1.4 Intercept Subject with Voice Mail Using Advanced Messaging's AMI

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This example illustrates the transaction flow and AMI-delivered information for a voice message retrieval service notification message sent to an intercept subject.

### A1 1.4.1 Transaction Flow:

---

- LEA (LEA1) presents a Lawful Authorization for a Phone Number intercept to the PSP (USA Wireless Messaging).
- PSP determines that the intercept subject has advanced messaging features including voice message retrieval services and sets up monitoring within the PSP Infrastructure.
- PSP receives a voice message through the voice message retrieval service for the intercept subject.
- PSP does not receive origin call-identifying information.
- PSP sends a voice message retrieval service pending notification message as call content to the PSP's RF infrastructure.
- PSP sends an AMI protocol message with this call content and with the voice message from the voice message retrieval service from the PSP's Data Delivery Point for LEA(s) for reception by the LEA-Provided CALEA Interface.
- The RF infrastructure broadcasts the notification message in the intercept subject's geographical coverage area.
- The Intercept Subject retrieves the pending voice message from the voice message retrieval service.

### A1 1.4.2 AMI-Delivered Information

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The following data transfer is sent via the AMI protocol from the PSP's Data Delivery Point for LEA(s).

AMI Data Transfer - Outbound Message from the PSP to the Radio Transceiving Device plus voice message from voice message retrieval service:

```
POST /cgi-bin/process_ami.asp HTTP/1.1
Host: www.LEA1.gov
From: P1314159265@Slippery_Rock.USA_Wireless_Messaging.com
Date: Sun, 15 Jun 1998 18:13:23 GMT
MIME-Version: 1.0
Content-Type: multipart/mixed; boundary=--content
Content-Length: 225
(mandatory blank line)
--content
Content-Type: text/x-vcard; charset=us-ascii; name="destination.vcf"
(mandatory blank line)
BEGIN:VCARD
VERSION:2.1
N:Public;John
ADR;;;27;05;;
TEL:987654321
END:VCARD
```

*(mandatory blank line)*  
--content  
Content-Type: text/plain; charset=us-ascii  
*(mandatory blank line)*  
[actual text content of notification message]  
*(mandatory blank line)*  
--content  
Content-Type: audio/wav  
*(mandatory blank line)*  
[voice message .wav data]  
*(mandatory blank line)*  
--content--

## A1 1.5 Intercept Subject Forwards to Alternate Radio Receiving Device

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This example illustrates the transaction flow and AMI-delivered information for a message sent to an intercept subject who has defined an alternate destination to which messages shall be sent.

### A1 1.5.1 Transaction Flow:

---

- LEA (LEA1) presents a Lawful Authorization for a capcode intercept to the PSP (USA Wireless Messaging).
- PSP determines that the intercept subject has advanced messaging features and sets up monitoring within the PSP Infrastructure.
- PSP does not receive origin call-identifying information.
- Intercept subject has implemented forwarding to an alternate radio receiving device PIN.
- PSP receives a message for the intercept subject and forwards to alternate radio receiving device PIN.
- PSP sends the message as call content to the PSP Infrastructure's RF Network for delivery to the alternate radio receiving device.
- PSP sends an AMI protocol message with this call content and alternate address from the PSP's Data Delivery Point for LEA(s) for reception by the LEA-Provided CALEA Interface.

### A1 1.5.2 AMI-Delivered Information

---

The following data transfer is sent via the AMI protocol from the PSP's Data Delivery Point for LEA(s).

AMI Data Transfer - Outbound Message from the PSP to the Radio Transceiving Device:

```
POST /cgi-bin/process_ami.asp HTTP/1.1
Host: www.LEA1.gov
From: PI314159265@Slippery_Rock.USA_Wireless_Messaging.com
Date: Sun, 15 Jun 1998 18:13:23 GMT
MIME-Version: 1.0
Content-Type: multipart/mixed; boundary=--content
Content-Length: 225
(mandatory blank line)
--content
Content-Type: text/x-vcard; charset=us-ascii; name="destination.vcf"
(mandatory blank line)
BEGIN:VCARD
VERSION:2.1
N:Public;John
ADR:;;;;;
X-PCIA-CAPCODE:987654556
END:VCARD
(mandatory blank line)
--content
Content-Type: text/x-vcard; charset=us-ascii; name="termination.vcf"
```

*(mandatory blank line)*  
BEGIN:VCARD  
VERSION:2.1  
N:not;available  
TEL;PAGER:5553535  
END:VCARD  
*(mandatory blank line)*  
--content  
Content-Type: text/plain; charset=us-ascii  
*(mandatory blank line)*  
[actual text content]*(mandatory blank line)*  
--content--

## A1 2 Message Examples Sent To and From Radio Transceiving Devices

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The following examples are provided to illustrate typical messaging sent to and from advanced messaging radio transceiving devices.

### A1 2.1 Intercept Subject in Good Coverage Area

---

This example illustrates the transaction flow and AMI-delivered information for a message sent to an intercept subject in a good coverage area.

#### A1 2.1.1 Transaction Flow:

---

- LEA (LEA1) presents a Lawful Authorization for a PIN intercept to the PSP (USA Wireless Messaging).
- PSP determines that the intercept subject has advanced messaging features and sets up monitoring within the PSP Infrastructure.
- PSP receives origin call-identifying information.
- PSP receives a message for the intercept subject.
- PSP sends the message as call content to the PSP Infrastructure's RF Network.
- PSP sends an AMI protocol message with this call content from the PSP's Data Delivery Point for LEA(s) for reception by the LEA-Provided CALEA Interface.
- PSP RF Network broadcasts the message in the intercept subject's last known geographical coverage area.
- PSP RF Network receives acknowledgment message from the intercept subject's radio transceiving device.
- PSP RF Network sends the acknowledgment message to the PSP Home Node of the intercept subject.
- PSP sends an AMI protocol message with this acknowledgment message call content from the PSP's Data Delivery Point for LEA(s) for reception by the LEA-Provided CALEA Interface.

#### A1 2.1.2 AMI-Delivered Information

---

The following two data transfers are sent via the AMI protocol from the PSP's Data Delivery Point for LEA(s).

AMI Data Transfer #1 - Outbound Message from the PSP to the Radio Transceiving Device:

```
POST /cgi-bin/process_ami.asp HTTP/1.1
Host: www.LEA1.gov
From: PI314159265@Slippery_Rock.USA_Wireless_Messaging.com
Date: Sun, 15 Jun 1998 18:13:23 GMT
MIME-Version: 1.0
Content-Type: multipart/mixed; boundary=--content
Content-Length: 353
(mandatory blank line)
--content
```

```

Content-Type: text/x-vcard; charset=us-ascii; name="origin.vcf"
(mandatory blank line)
BEGIN:VCARD
VERSION:2.1
N:not;available
TEL:5055551212
END:VCARD
(mandatory blank line)
--content
Content-Type: text/x-vcard; charset=us-ascii; name="destination.vcf"
(mandatory blank line)
BEGIN:VCARD
VERSION:2.1
N:Public;John
ADR;;;27;05;;
TEL;PAGER:1234567
UID:733456
END:VCARD
(mandatory blank line)
--content
Content-Type: text/plain; charset=us-ascii
(mandatory blank line)
[actual text content]
(mandatory blank line)
--content--

```

AMI Data Transfer #2 - Inbound Acknowledgment from the Radio Transceiving Device to the PSP:

```

POST /cgi-bin/process_ami.asp HTTP/1.1
Host: www.LEA1.gov
From: PI314159265@Slippery_Rock.USA_Wireless_Messaging.com
Date: Sun, 15 Jun 1998 18:13:56 GMT
MIME-Version: 1.0
Content-Type: multipart/mixed; boundary=--content
Content-Length: 345
(mandatory blank line)
--content
Content-Type: text/x-vcard; charset=us-ascii; name="origin.vcf"
(mandatory blank line)
BEGIN:VCARD
VERSION:2.1
N:Public;John
ADR;;;01;05;;
TEL;PAGER:1234567
END:VCARD

```

*(mandatory blank line)*

--content

Content-Type: text/x-vcard; charset=us-ascii; name="destination.vcf"

*(mandatory blank line)*

BEGIN:VCARD

VERSION:2.1

N:System;

UID:733456

END:VCARD

*(mandatory blank line)*

--content

Content-Type: text/plain; charset=us-ascii

*(mandatory blank line)*

[actual text content]

*(mandatory blank line)*

--content--

## A1 2.2 Intercept Subject Out of Coverage Area when Message Is Received by PSP

---

This example illustrates the transaction flow and AMI-delivered information for a message sent to an intercept subject when the intercept subject is out of the coverage area.

### A1 2.2.1 Transaction Flow:

---

- LEA (LEA1) presents a Lawful Authorization for a capcode intercept to the PSP (USA Wireless Messaging).
- PSP determines that the intercept subject has advanced messaging features and sets up monitoring within the PSP Infrastructure.
- PSP receives origin call-identifying information.
- PSP receives a message for the intercept subject.
- PSP sends the message as call content to the PSP Infrastructure's RF Network.
- PSP sends an AMI protocol message with this call content from the PSP's Data Delivery Point for LEA(s) for reception by the LEA-Provided CALEA Interface.
- PSP RF Network broadcasts the message in the intercept subject's last known geographical coverage area.
- PSP RF Network does not receive acknowledgment message from the intercept subject's radio transceiving device. It is unknown to the PSP whether or not the intercept subject has received the message.

### A1 2.2.2 AMI-Delivered Information

---

The following data transfer is sent via the AMI protocol to the LEA-Provided CALEA Interface.

AMI Data Transfer - Outbound Message from the PSP to the Radio Transceiving Device:

```
POST /cgi-bin/process_ami.asp HTTP/1.1
Host: www.LEA1.gov
From: PI314159265@Slippery_Rock.USA_Wireless_Messaging.com
Date: Sun, 15 Jun 1998 18:13:23 GMT
MIME-Version: 1.0
Content-Type: multipart/mixed; boundary=--content
Content-Length: 353
(mandatory blank line)
--content
Content-Type: text/x-vcard; charset=us-ascii; name="origin.vcf"
(mandatory blank line)
BEGIN:VCARD
VERSION:2.1
N:not;available
TEL:5055551212
END:VCARD
(mandatory blank line)
--content
Content-Type: text/x-vcard; charset=us-ascii; name="destination.vcf"
(mandatory blank line)
BEGIN:VCARD
```

```
VERSION:2.1
N:Public;John
ADR;;;27;05;;
X-PCIA-CAPCODE:987654321
UID:733498
END:VCARD
(mandatory blank line)
--content
Content-Type: text/plain; charset=us-ascii
(mandatory blank line)
[actual text content]
(mandatory blank line)
--content--
```

PSP queues the unacknowledged message to be resent as shown in the previous examples. When the message is resent, a new AMI data transfer will accompany it using the same UID.

### A1 2.3 Intercept Subject's Radio Transceiving Device Sends Message to Another Radio Transceiving Device

---

This example illustrates the transaction flow and AMI-delivered information for a message sent from an intercept subject to another person using radio techniques.

#### A1 2.3.1 Transaction Flow:

---

- LEA (LEA1) presents a Lawful Authorization for a PIN intercept to the PSP (USA Wireless Messaging).
- PSP determines that the intercept subject has advanced messaging features and sets up monitoring within the PSP Infrastructure.
- PSP receives a message from the intercept subject's radio transceiving device destined for another radio transceiving device within the same PSP.
- PSP sends an AMI protocol message with this call content from the PSP's Data Delivery Point for LEA(s) for reception by the LEA-Provided CALEA Interface.

#### A1 2.3.2 AMI-Delivered Information

---

The following data transfer is sent via the AMI protocol from the PSP's Data Delivery Point for LEA(s).

AMI Data Transfer - Inbound Message from the Radio Transceiving Device to the PSP:

```
POST /cgi-bin/process_ami.asp HTTP/1.1
Host: www.LEA1.gov
From: PI314159265@Slippery_Rock.USA_Wireless_Messaging.com
Date: Sun, 15 Jun 1998 18:13:23 GMT
MIME-Version: 1.0
Content-Type: multipart/mixed; boundary=--content
Content-Length: 353
(mandatory blank line)
--content
Content-Type: text/x-vcard; charset=us-ascii; name="origin.vcf"
(mandatory blank line)
BEGIN:VCARD
VERSION:2.1
N:Public;John
ADR;;;01;05;;
TEL;PAGER:1234567
END:VCARD
(mandatory blank line)
--content
Content-Type: text/x-vcard; charset=us-ascii; name="destination.vcf"
(mandatory blank line)
BEGIN:VCARD
VERSION:2.1
N:not;available
TEL;PAGER:5273841
```

```
UID:731987
END:VCARD
(mandatory blank line)
--content
Content-Type: text/plain; charset=us-ascii
(mandatory blank line)
[actual text content]
(mandatory blank line)
--content--
```

Any *destination* user-generated replies sent via the PSP will be treated as new messages when the latter is not known to be a response to the former by the PSP due to the connectionless nature of these transactions.

## A1 2.4 Intercept Subject's Radio Transceiving Device Sends Message to An External SMTP Email Address

---

This example illustrates the transaction flow and AMI-delivered information for a message sent from an intercept subject to a person with a wireline email address.

### A1 2.4.1 Transaction Flow:

---

- LEA (LEA1) presents a Lawful Authorization for a PIN intercept to the PSP (USA Wireless Messaging).
- PSP determines that the intercept subject has advanced messaging features and sets up monitoring within the PSP Infrastructure.
- PSP receives a message from the intercept subject's radio transceiving device destined for an external SMTP email address.
- PSP sends an AMI protocol message with this call content from the PSP's Data Delivery Point for LEA(s) for reception by the LEA-Provided CALEA Interface.

### A1 2.4.2 AMI-Delivered Information

---

The following data transfer is sent via the AMI protocol from the PSP's Data Delivery Point for LEA(s).

AMI Data Transfer - Inbound Message from the Radio Transceiving Device to the PSP:

```
POST /cgi-bin/process_ami.asp HTTP/1.1
Host: www.LEA1.gov
From: PI314159265@Slippery_Rock.USA_Wireless_Messaging.com
Date: Sun, 15 Jun 1998 18:13:23 GMT
MIME-Version: 1.0
Content-Type: multipart/mixed; boundary=--content
Content-Length: 353
(mandatory blank line)
--content
Content-Type: text/x-vcard; charset=us-ascii; name="origin.vcf"
(mandatory blank line)
BEGIN:VCARD
VERSION:2.1
N:Public;John
ADR;;;27;05;;
TEL;PAGER:1234567
END:VCARD
(mandatory blank line)
--content
Content-Type: text/x-vcard; charset=us-ascii; name="destination.vcf"
(mandatory blank line)
BEGIN:VCARD
VERSION:2.1
N:not;available
EMAIL;INTERNET:any_name@any_domain.org
```

UID:731987  
END:VCARD  
*(mandatory blank line)*  
--content  
Content-Type: application/msword; name="spec.doc"  
Content-Transfer-Encoding: Base64  
*(mandatory blank line)*  
[actual Base64-encoded MS Word file content]  
*(mandatory blank line)*  
--content--

Any *destination* user-generated replies sent via the PSP will be treated as new messages due to the connectionless nature of these transactions.



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