

The logo consists of a gray square containing the letters 'SC' in a white, serif font.

STREEM COMMUNICATIONS

Technical Documentation Series

Data Interface Format Guide

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STREEM COMMUNICATIONS

Data Interface Format

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Data Interface with Stream

Data interchange with Stream Cast or Stream Alert is based on the Common Alerting Protocol (CAP) 1.1 Standard. The full CAP specification is available at <http://www.oasis-open.org/specs/index.php#capv1.1>. The following sections give a brief overview of the CAP standard and detail the subset of mandatory and optional fields specific to interacting with Stream. The Stream-specific version of the CAP data file will be referred to as “Data File” in the following sections.

CAP 1.1

The CAP standard is an XML-based data structure that has become an approved standard by OASIS. OASIS (Organization for the Advancement of Structured Information Standards) is a non-profit, international consortium that oversees the development, convergence, and adoption of e-business standards. More information on OASIS can be found at www.oasis-open.org. CAP was created as a means to standardize data for critical communications. This standard is in use by such organizations as NOAA (National Oceanic And Atmospheric Administration) and DMIS (Disaster Management Interoperability Services) to disseminate emergency/critical information.

Data File Components

There are 4 main components to the data file that is to be passed to Stream. These components are Alert, Info, Resource, and Area. The Alert component is the parent component of the data file and is required. The Info component, though not required by CAP, is required for interfacing with Stream and is the main information component. The Resource component is optional and is used by Stream for message attachments. The Area component is optional and is planned for future Stream handling of geographic contact information. Following is a high-level view of the structure of the components.

```

<alert>
  <info>
    <eventCode>
      <valueName></valueName>
      <value></value>
    </eventCode>
    <resource>
      </resource>
    <area>
      </area>
    </info>
  </alert>

```

Alert Component

The following chart details the elements that make up the Alert Component.

Element Name	Required	Notes
Identifier	Yes	Unique identifier for this message (can not contain "<" or "&") Stream format: username_dateTime
Sender	Yes	Globally unique identifier of the initiating user Stream format: user's email address
Sent	Yes	Date/Time of message creation in dateTime format (2006-01-30T16:30-06:00) Timezones follow the time and are in the format of +/-00:00
Status	Yes	Cap Standard code values: "Actual" - Actionable by all targeted recipients "Exercise"- Actionable only by designated exercise participants; exercise identifier should appear in <note> "System" - For messages that support alert network internal functions. "Test" - Technical testing only, all recipients disregard "Draft" – A preliminary template or draft, not actionable in its current form. Stream currently will act upon the data file identically, regardless of the value present here

Element Name	Required	Notes
msgType	Yes	CAP Standard values: "Alert" - Initial information requiring attention by targeted recipients "Update" - Updates and supercedes the earlier message(s) identified in <references> "Cancel" - Cancels the earlier message(s) identified in <references> "Ack" - Acknowledges receipt and acceptance of the message(s) identified in <references> "Error" indicates rejection of the message(s) identified in <references>; explanation SHOULD appear in <note> Stream currently supports only "Alert"
Scope	Yes	CAP Standard codes: "Public" - For general dissemination to unrestricted audiences "Restricted" - For dissemination only to users with a known operational requirement (see <restriction>, below) "Private" - For dissemination only to specified addresses (see <address>, below) Stream currently supports only "Public"

Info Component

The following chart details the elements that make up the Info Component.

Element Name	Required	Notes
Language	No	Natural Language identifier per RFC 3066. If not present the implicit default value is en-US. Null value is also considered the default value of en-US. Stream currently supports only the default
Category	Yes	CAP Standard codes: "Geo" - Geophysical (inc. landslide) "Met" - Meteorological (inc. flood) "Safety" - General emergency and public safety "Security" - Law enforcement, military, homeland and local/private security "Rescue" - Rescue and recovery "Fire" - Fire suppression and rescue "Health" - Medical and public health "Env" - Pollution and other environmental "Transport" - Public and private transportation "Infra" - Utility, telecommunication, other non-transport infrastructure "CBRNE" - Chemical, Biological, Radiological, Nuclear or High-Yield Explosive threat or attack "Other" - Other events Stream currently will act upon the data file identically, regardless of the value present here
Event	Yes	The text denoting the type of the subject event of the alert message Stream usage: Title of Broadcast

Element Name	Required	Notes
Urgency	Yes	CAP Standard codes: "Immediate" - Responsive action SHOULD be taken immediately "Expected" - Responsive action SHOULD be taken soon (within next hour) "Future" - Responsive action SHOULD be taken in the near future "Past" - Responsive action is no longer required "Unknown" - Urgency not known Stream currently will act upon the data file identically, regardless of the value present here
Severity	Yes	CAP Standard codes: "Extreme" - Extraordinary threat to life or property "Severe" - Significant threat to life or property "Moderate" - Possible threat to life or property "Minor" - Minimal threat to life or property "Unknown" - Severity unknown Stream currently will act upon the data file identically, regardless of the value present here
Certainty	Yes	CAP Standard codes: "Observed" – Determined to have occurred or to be ongoing. "Likely" - Likely (p > ~50%) "Possible" - Possible but not likely (p <= ~50%) "Unlikely" - Not expected to occur (p ~ 0) "Unknown" - Certainty unknown Stream currently will act upon the data file identically, regardless of the value present here
eventCode	Yes (Stream)	ValueName/Value pairs used by Stream to denote distribution method and recipient addresses. See the eventCode detail below
Effective	Yes (Stream)	Date/Time value in dateTime format (2006-01-30T16:30:06:00) Timezones follow the time and are in the format of +/-00:00 Stream usage: Scheduled date/time
senderName	Yes (Stream)	Stream usage: user's full name
Headline	Yes (Stream)	Stream usage: subject line for non-voice messages
Instructions	Yes (Stream)	Stream usage: message body or a message id in the format "MessageID=xxx" where xxx is the message Id.
Parameter	Yes (Stream)	ValueName/Value pairs used by Stream to denote distribution method and recipient addresses. See the parameter detail below

eventCode Detail

The eventCode elements define the distribution method and recipient addresses for the given distribution method. This is handled in the data file by means of the eventCode tag and children tag pairs valueName and value. There must be at least one valueName/value pair and a valueName/value pair for each distribution method required for the message. The valid valueName codes are listed in the chart below. The value data is a recipient address in the form dictated by the distribution method set in the valueName element.

eventCode valueName codes	Value format
Fax	fax number (numeric only) Example: 1234567890
Email	email address Example: him@my.org
Phone	phone number (numeric only) Example: 1234567890
Cell	cell phone number (numeric only) Example: 1234567890
SMS	text messaging address Example: 1234567890@vtext.com
Pager	pager number
Distribution	Distribution list id
FirstName	First name of recipient
LastName	Last name of recipient
PreMessage	Recipient-level pre-Message. If specified, this overrides the broadcast-level pre-message.
Instructions	Recipient-level instructions. If specified, this overrides the broadcast-level instructions.
AckMessage	Recipient-level ack-message. If specified, this overrides the broadcast-level ack-message.
Post-Message	Recipient-level post-Message. If specified, this overrides the broadcast-level post-message.

parameter Detail

The parameter elements define the remaining information for a Stream broadcast. The parameter valueName/value pairs are dependent upon the eventCode elements within the data file. The following table details the valid valueName/value pairs for each eventCode valueName. Note that all of these elements are optional.

eventCode valueName	Parameter valueName Code	Value format
Fax	Resolution	One of the following values: 1, 2 1 equates to normal 2 equates to high If missing, defaults to 1
Fax	CoverPage	One of the following values: null or blank (company default) "Company" (company-specified cover page) "Dept" (Department-specified cover page) "none" (no cover page) If missing, defaults to company default Note: On how to specify a custom cover page for a job, see the Resource section.
All eventCodes	ConfirmationTo	The name of the person that will receive the confirmation
All eventCodes	ConfirmationEmail	The email address of the person to receive the broadcast confirmation. If missing, then no confirmation is sent
All eventCodes	Priority	Broadcast priority – May be one of the following values: 1, 5, 9 1 equates to high priority 5 equates to normal priority 9 equates to low priority If missing, the priority defaults to 5
All eventCodes	BillingCode	Alpha-numeric value for billing purposes
All eventCodes	BatchID	Alpha-numeric value
All eventCodes	OffPeak	'Yes' schedules the job for "offpeak" hours (defined/customer)
All eventCodes	AckMessage	An optional acknowledgment message to be played during a voice call. Example: Will you be able to make the appointment? Note: Must be specified if recipient-level ack-messages are specified.
All eventCodes	AckResponses	A semicolon separated list of (digit, text) pairs of acceptable responses that can be entered after the acknowledgment message has been played during a voice call. Must be present if AckMessage has been specified. Example: 1, Yes; 2, No
All eventCodes	PreMessage	Custom Pre-Message. A pre-message precedes the main message specified in <instructions>. Note: Must be specified if recipient-level pre-messages are specified.
All eventCodes	PostMessage	Custom Post-Message.. A post-message follows the main message specified in <instructions>. Note: Must be specified if recipient-level post-messages are specified.
Distribution	This can be any of the above Parameter valueName/value pairs depending on the distribution methods within the distribution list	

Resource Component

The Resource component is used for related information such as remote documentation or, in Stream's case, attachments for non-voice (fax, email) messages. If a broadcast job does not require attachments, then this component can be left out entirely. The following chart details the elements that make up the Resource Component when the broadcast requires one or more attachments. Optionally, the resource component can take an attribute of **coverpage="true"**. If this is present the document specified by the **uri** element is treated as a custom cover page for a particular job.

Element Name	Required	Notes
resourceDesc	Yes	Text describing the content and type of file
Uri	Yes (Stream)	File name of attachment (attachment must be in same directory as the data file)

Area Component

The area component is an optional component and is not currently used by Stream. The purpose of this component is to provide geographical information that may be utilized to describe an area affected by the message. This component will be utilized by Stream in the future for GIS-type lookups of recipient addresses.

Sample Data File

```
<?xml version="1.1" encoding="UTF-8" standalone="yes"?>
<alert xmlns="http://www.incident.com/cap/1.1">
  <identifier>username_2006031416500823</identifier>
  <sender>username@mycompany.com</sender>
  <sent>2006-03-14T16:50:15-08:00</sent>
  <status>Actual</status>
  <msgType>Alert</msgType>
  <scope>Public</scope>
  <info>
    <language>en-US</language>
    <category>Met</category>
    <event>Fire Evacuation</event>
    <urgency>Immediate</urgency>
    <severity>Extreme</severity>
    <certainty>Very Likely</certainty>
    <eventCode>
      <valueName>Cell</valueName>
      <value>1234567890;8123450978;2137592800</value>
    </eventCode>
  </info>
</alert>
```

```

</eventCode>
<eventCode>
  <valueName>Email</valueName>
  <value>him@this.com;her@that.net;all@my.com</value>
</eventCode>
<effective>2006-03-14T16:50:15-08:00</effective>
<senderName>Firstname LastName</senderName>
<headline>Fire Evacuation - Immediate Attention required</headline>
<instructions>There is a large fire at 2100 Main Street. Engine companies
  12, 7, and 9 are responding. Immediate evacuation of a 4 block radius centering
  on 2100 Main Street is required.
</instructions>
<parameter>
  <valueName>ConfirmationEmail</valueName>
  <value>Me@mycompany.org</value>
</parameter>
<parameter>
  <valueName>Priority</valueName>
  <value>5</value>
</parameter>
<parameter>
  <valueName>BillingCode</valueName>
  <value>ABS12345</value>
</parameter>
<resource>
  <resourceDesc>area map</resourceDesc>
  <uri>main.pdf</uri>
</resource>
</info>
</alert>

```