Run3TV Implementation Guidelines:
AEAT Feed Specification

Version: 1.1 (Pre-release)

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Framework version: 2.3

This document is a pre-release version, intended to gather early feedback.
Please be aware that the information presented here is not final and may be revised in subsequent releases.

Revision history

Version	Date	Framework Version	Update
1.0 (Beta Release)	March 13th 2022	2.2	Initial draft
1.1 (Pre-release)	**May 31st 2024**	**2.3**	Move to R3TV document ID range (and associated formatting). Removed RSS-specific text. Reference to [A/311] updated from 2021 to 2024-04 version. Split out location definitions and included ZipCode details. Added example XML for an AEA message. Added example screenshots of the alert tickers.

Copyright notice

Contents

1. Glossary

Glossary of unfamiliar words and acronyms.

Term	Definition

2. References

ID	Publisher	Document
A/344	ATSC	ATSC Standard:Signaling, Delivery, Synchronization, and Error Protection Doc. A/331 (Various versions)
R3TV-IG-0203	Run3TV	Run3TV Implementation Guidelines: Run3TV SDK APIs
R3TV-IG-0205	Run3TV	Run3TV Implementation Guidelines: Common Settings

3. Introduction

This document describes the Alerting functionality of the Run3TV Framework.

It is intended to be read by Application developers creating ATSC 3.0 Broadcast Applications on the Run3TV Framework.

1. Advanced Emergency Alert Table (AEAT)

The Advanced Emergency Alert Table (AEAT) contains one or more Advanced Emergency Alert (AEA) messages as defined in Section 6.5.1 ([A/331]).

Data from this table is available in the Run3TV Framework through the following functions and events:

- `fmw.alerting()`
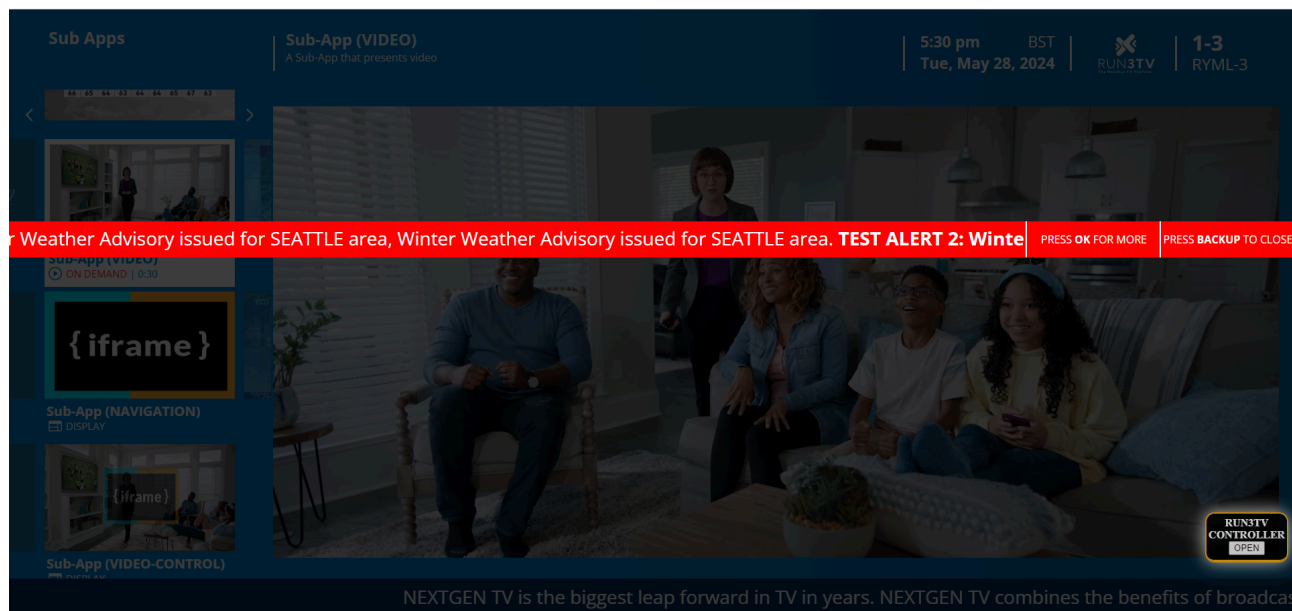- `fmw.aeat()`
- `onAlert()`

For details on the functions and events above, see [R3TV-IG-0203].

The Framework will present alerts as tickers over Live TV or over any running Framework Application. The design of these tickers can be modified in **fmw.json**, as detailed in [R3TV-IG-0205].

An example of the standard alert ticker (over live TV) is shown below.

An example of the standard alert ticker (over the Q-Bar application) is shown below.

Each AEA message contains four basic blocks of information:

- 0 or one **Header**
- 0 or more **AEAtext**
- 0 or one **LiveMedia**
- 0 or more **Media**

An example AEA message (targeted to a single zip code) is provided below:

```
<AEA aeaId="AEAT-1-290621" aeaType="alert" audience="public" issuer="WZAZ" priority="1" wakeup="false">
    <Header effective="2016-03-23T12:00:00-05:00" expires="2024-08-23T13:00:00-05:00">
        <EventCode type="SAME">HUW</EventCode>
        <EventDesc lang="en">TEST ALERT: HURRICANE WARNING</EventDesc>
        <Location type="ZIPCODE">46239</Location>
    </Header>
    <AEAText lang="en">TEST ALERT: HURRICANE Warning issued for WANAMAKER. Stay tuned for updates.</AEAText>
    <Media contentType="image/jpeg" lang="en" mediaDesc="Winds chart png" url="wind_charts.jpg"/>
</AEA>
```

1.1. AEA Table

Element / Attribute	Description	Required	mRSS XML	Comment
aeaId	Identifier of AEAT Table	M	/item/<guid>$aeaId$</guid>	
issuer	Version of this fragment. The newer version overrides the older one starting from the time specified by the 'validFrom' attribute, or as soon as it has been received if no 'validFrom' attribute is given	M	/item/<source>$issuer$</source>	
audience	Intended distribution of the AEA message. ● public ● restricted ● Private ● run3tv ● <reserved values>	M		Only public or run3tv items are used, others are ignored.
subAudience	Subgroup for non-public message This field shall appear when the audience attribute is not public	O		
aeaType	The type of message ● alert ● update ● cancel ● other values	M	/item/<category>$aeaType$</category>	Always set as alert
refAEAId	Referenced identifier of the AEA message. Shall only appear when aeaType is "update" or "cancel"	M		
priority	The priority of the message; it shall appear when aeaType = "alert" or "update". 4 - Maximum Priority 3 - High Priority 2 - Moderate Priority 1 - Low Priority 0 - Minor Priority	M		Used to define the positioning of the alert and how they are viewed. The priority may be grouped to provide color coding to help draw the attention of the viewer. RED = 4 ORANGE = 3 YELLOW = 2 GREEN = 1 or 0
category	A code identifying the event category. ● ADVISORY ● HEALTH ● WEATHER ● EMERGENCY ● SCHOOL ● COMMUNITY ● TRANSIT ● OTHER ● other	M	/item/<category>$category$</category>	
wakeup	Indication that the AEA is associated with a wake-up event	O		

1.2. Header Table

Element / Attribute	Description	Required	mRSS XML	Comment
@effective	The effective time of the AEA message. If omitted the default is immediate	O		
@expires	The expiration time of the AEA message	O		
EventCode	A code identifying the event time of the AEA Message	O		
EventCode@type	A national-assigned string designating the domain of the code	O		
EventDesc	A short plain text description of the emergency event	M		
EventDesc@lang	The code denoting the language of the respective element of the eventDesc	M		
Location	The geographic code delineating the affected area of the AEA message.	O		
Location@type	The national-assigned string designating the domain of the code. Run3TV supports the following: Run3TV specific: • ZIPCODE Run3TV does **not** currently support the following: • FIPS (6 digits) • SGC • polygon • circle	O		See Location @type and examples for more details

Location @type and examples

The table below summarizes the various supported type values. For more information, see [A/331].

Location@type value	Description	Example	Location(s) where alert is presented
ZIPCODE	Area as defined by one or more 5-digit zip codes. If multiple zip codes are provided, these must be separated with commas. No whitespace should be included	85234 85283 , 85284 * **Note** The Framework compares the values provided in the Alert's Location element with the zip code as entered by the viewer in the Framework's Settings screen. If the viewer has not entered a zip code, a geolocated zip code will be used, which may not be accurate	Zip Code within Gilbert, Arizona Zip Codes within Guadalupe and Tempe, Arizona All locations where the alert is received
FIPS	**Not supported** Federal Information Processing Standard Geographic Codes (USA only)	000000 004013 , 004027 999999	All locations (within the United States) Maricopa County, Arizona and Yuma County, Arizona All locations within the coverage area of the station from which this AEAT originated
SGC	**Not supported** Standard Geographical Classification (Canada only)	00 1304014 9999	All locations (within Canada) Johnston, New Brunswick All locations within the coverage area of the station from which this AEAT originated
polygon	**Not supported** Area as defined by polygon	51.50566178490850, -0.34396760963023715 51.50158830989742, -0.31014017483281914 51.49093566996258, -0.31290481312178725 Area within the polygon	
circle	**Not supported** Area as defined by circle	41.40338, 2.17403 45 Area within the circle	

1.3. AEAText Table

Element / Attribute	Description	Required	mRSS XML	Comment
AEAText	Contains the specific text of the emergency notification	M	/item/<description></description>	
AEAText@lang	The code denoting the language of the respective element of the AEAText based on BCP 47	O		

1.4. LiveMedia Table

Contains the information of emergency-related live AV service which is delivered via broadcast stream.

Element / Attribute	Description	Required	mRSS XML	Comment
LiveMedia@bsid	Contains the broadcast service id	O		
LiveMedia@serviceId	Contains the serviceId	O		This should change to globalserviceId instead of the serviceId. These are transparent
ServiceName	An optional field of a user friendly name for the service where LiveMedia is available	O		
ServiceName@lang	The code denoting the language of the respective element of the ServiceName based on BCP 47	O		

1.5. Media Table

Contains the component parts of the multimedia resources.

Element / Attribute	Description	Required	mRSS XML	Comment
Media@lang	The code denoting the language of the respective element of the Media	0		
Media@mediaDesc	Text describing the type content of the media file	0		
Media@mediaType	Text identifying the intended use of the associated media. ● EventDesciAudio ● AEAtextAudio ● EventSymbol	0		
Media@url	The URL of the media	0		
Media@alternateUrl	Alternative media file via the internet	0		
Media@contentType	MIME type of the associated media	0		
Media@contentLength	Size in bytes of the media content referenced by `Media@url`	0		
Media@mediaAssoc	Associated media URI.	0		

2. On Screen Notifications (OSN)

On screen message notification table contains one OnScreenMessageNotification message as defined in Section 6.5.1 of [A/331].

2.1. OSN Table

Element / Attribute	Description	Required	mRSS XML	Comment
aeaId	Identifier of AEAT Table	0	/item/<guid>$aeaId$</guid>	
issuer	Version of this fragment. The newer version overrides the older one starting from the time specified by the 'validFrom' attribute, or as soon as it has been received if no 'validFrom' attribute is given.	0	/item/<source>$issuer$</source>	
audience	Intended distribution of the AEA message. • public • restricted • Private • run3tv • \<reserved values\>	0		Only public or run3tv items are used, others are ignored.
subAudience	Subgroup for non-public message This field shall appear when the audience attribute is not public. .	0		
aeaType	The type of message • alert • update • cancel • other values	0	/item/<category>$aeaType$</category>	Always set as alert
refAEAId	Referenced identifier of the AEA message. Shall only appear when aeaType is "update" or "cancel"	0		
priority	The priority of the message; it shall appear when aeaType = "alert" or "update". 4 - Maximum Priority 3 - High Priority 2 - Moderate Priority 1 - Low Priority 0 - Minor Priority	0		Used to define the positioning of the alert and how they are viewed. The priority may be grouped to provide color coding to help draw the attention of the viewer. RED = 4 ORANGE = 3 YELLOW = 2 GREEN = 1 or 0

Element / Attribute	Description	Required	mRSS XML	Comment
category	A code identifying the event category. ● ADVISORY ● HEALTH ● WEATHER ● EMERGENCY ● SCHOOL ● COMMUNITY ● TRANSIT ● OTHER ● other	0	/item/<category>$category$</category>	
wakeup	Indication that the AEA is associated with a wake-up event			

    14