



Acapela TTS

SSML Documentation

Ref. : AcaMul-SSML



Acapela TTS

SSML

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AcaMul-SSML

Document revisions

Version	Date	Subject	Author(s)
1	21/04/22	SSML tag interpreter	FMa
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1 Introduction

The TTS supports SSML elements (tags) defined in SSML v1.1:

<https://www.w3.org/TR/speech-synthesis11/>

All elements that don't have any effect on TTS are removed.

For example containers : **meta**, **metadata** are filtered.

NOTE :

SSML space name (ss:) is not supported.

2 Activation the SSML tag interpreter

The SSML tag interpreter is active automatically when < speak > is detected

3 List of SSML Tags and attributes supported by TTS

3.1 speak

3.1.1 Attributes

- **xml:lang**

supported in:

- speak
- paragraph
- sentence

example : < speak xml:lang="en-US" > </ speak >

- **xml:base**

supported for the audio src attribute

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3.1.2 Unsupported attributes

- **onlangfailure**
- **trimming attribute**

3.2 paragraph

3.2.1 Attributes

- **xml:lang**

example : `<paragraph xml:lang="de-DE"> </paragraph>`

3.2.2 Unsupported attributes xml:id

- **onlangfailure**

3.3 sentence

3.3.1 Attributes

- **xml:lang**

example : `<sentence xml:lang="fr-FR"> </sentence>`

3.3.2 Unsupported attributes

- **xml:id**
- **onlangfailure**

3.4 lang

3.4.1 Attributes

- **xml:lang**

example : `<lang xml:lang="it-IT"> </lang>`

3.4.2 Unsupported attributes

- **onlangfailure**

3.5 voice

3.5.1 Attributes

- **xml:lang**
- **gender**
- **name**
- **required**
- **age**
- **languages (only one language)**

examples : `<voice xml:lang="it-IT" gender="female"> ... </voice>`

`<voice name="Ryan"> ... </voice>`

3.5.2 Unsupported attributes

- **variant**
- **ordering**
- **onvoicefailure**

3.5.3 List of known ISO language identifiers

ISO	Identifier	Language
ar-SA	1025	Arabic (Saudi Arabia)
nl-NL	1043	Dutch
nl-BE	2067	Dutch (Belgium)
en-US	1033	English (United States)
en-UK	2057	English (United Kingdom)
fr-FR	1036	French
fr-CA	3084	French (Canada)
de-DE	1031	German
it-IT	1040	Italian
pl-PL	1045	Polish
pt-BR	1046	Brazilian
ru-RU	1049	Russian
es-ES	1034	Spanish
es-US	21514	Spanish (United States)
cs-CZ	1029	Czech
tr-TR	1055	Turkish
da-DK	1030	Danish
gr-GR	1032	Greek
pt-T	2070	Portuguese
fi-FI	1035	Finnish

sv-SE	1053	Swedish
no-NO	1044	Norwegian
ca-ES	1027	Catalan
sv-FI	2077	Finland Swedish
en-AU	3081	Australian
sc-SE	62493	Scanian Swedish
gb-SE	58397	Gothenburg Swedish
ja-JP	1041	Japanese
zh-CN	2052	Chinese
ko-KR	1042	Korean
sco-SCO	1537	Scottish English
fo-FO	1080	Faroese

3.6 mark

3.6.1 Attributes

- **name**

value length is limited to 50 chars

example : `<mark name="mrk01"> ...</mark>`

3.7 emphasis

supported on single word only

example : That is a `<emphasis>` big `</emphasis>` car!

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3.8 sub

3.8.1 Attributes

- **alias**

example : `_{...}`

3.9 audio

3.9.1 Attributes

- **src**

URI :

local file :

example : `<audio src="c:\audiofile.pcm" > ... </audio>`

network file:

example : `<audio src="http://127.0.0.1/audiofile.pcm" > ... </audio>`

NOTE :

Supported Protocols: HTTP, FTP

Supported Format: only PCM, same sampling rate as voice

For network file the file is first downloaded if it is not present in the cache folder.

- **maxage**
- **clipbegin**
- **clipend**

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3.9.2 Unsupported attributes

- **fetchtimeout**
- **fetchhint**
- **maxstale**

3.10 break

3.10.1 Attributes

- **time**
in milliseconds (ms) or in seconds (s)

example :

```
<break time="2s"> ... </break>
```

```
<break time="2000"> ... </break>
```

- **strength**

example :

```
<break strength="weak"> ... </break>
```

3.11 say-as

3.11.1 Attributes

- **interpret-as**

3.11.2 Supported types

- **characters**
- **spell-out**
- **cardinal**

```
example <say-as interpret-as="characters">ABCDEF</say-as>
```

3.11.3 Unsupported attributes & types

Attributes

- **format**
- **detail**

Types

- **currency**
- **measure**
- **telephone**
- **phone**
- **address**
- **number**
- **number:digits**
- **number ordinal**
- **number telephone**
- **digits**
- **ordinal**
- **date:dmy**
- **date:mdy**
- **date:ymd**
- **date:ym**
- **date:my**
- **date:md**
- **time:hms**
- **time:hm**
- **duration:hms**
- **duration:hm**
- **net:email**
- **net:uri**

3.12 prosody

3.12.1 Attributes

- **pitch**

value = Label or Numeric value

example : <prosody pitch="value"> ... </prosody>

Label

- x-low
- low
- medium
- high
- x-high
- default

Numeric value

Value	Description
N	Changes the current value to the (absolute) value of N.
+N	Increase the current value by N.
-N	Decrease the current value by N.
[+]N%	Increase the current value by N percent.
-N%	Decrease the current value by N percent.

NOTE :

Values expressed in semi-tones (st) are not supported.



▪ **rate**

value = Label or Numeric value

example : `<prosody rate="value"> ... </prosody>`

Label

- x-slow
- slow
- medium
- fast
- x-fast
- default

Numeric value

Value	Description
N	Changes the current value to the (absolute) value of N.
N%	Multiplies the current value by N%.
+N	Increase the current value by N.
-N	Decrease the current value by N.
+N%	Increase the current value by N percent.
-N%	Decrease the current value by N percent.

▪ **Volume**

value = Label or Numeric value

example : `<prosody volume="value"> ... </prosody>`



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Label

- silent
- x-soft
- soft
- medium
- loud
- x-loud
- default

Numeric value

Value	Description
N	Changes the current value to the (absolute) value of N.
N%	Multiplies the current value by N%.
+N	Increase the current value by N.
-N	Decrease the current value by N.
+N%	Increase the current value by N percent.
-N%	Decrease the current value by N percent.

NOTES:

- For numeric values, only integer values are accepted : decimal values will be truncated.
- At channel initialization, the volume is set by default at its maximum value. In this case, increasing its value has no effect.
- Values expressed in decibel (DB) are not supported.

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3.12.2 Unsupported attributes

- **contour**
- **duration**
- **range**

3.13 phoneme

3.13.1 Attributes alphabet (IPA and x-aca only)

- **ph**

example : `<phoneme alphabet="ipa" ph="tɒmɑtoʊ">... </phoneme>`

NOTE:

Phoneme element in IPA is only supported for the following languages :

French, UK & US English, German, Italian, Spanish, Dutch, Belgian Dutch, Portuguese, Brazilian, Arabic, Czech, Swedish, Norwegian, Danish, Finnish, Turkish, Korean, Polish and Russian.

3.14 Unsupported elements/tags

These elements have no effect on TTS.

- **meta,**
- **metadata,**
- **lexicon,**
- **lookup,**
- **token,**
- **w.**

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