Currency

The Currency voice element captures from the caller a currency amount in dollars and cents. The currency amount can be entered using the keypad or spoken. The captured value will be stored in element data as a decimal value (without the $ character).

There are several different formats for speaking a currency amount or entering it through the keypad. Voice browsers may use different grammars and therefore accept different utterances. However, the spoken formats listed below should result in the same behavior for all supported browsers. The tables below list each input and the value that is stored in the element variable as a result. If some data is left out, the system assumes a default value for the missing information.

Note You cannot use the * character to represent a decimal point in the Currency voice element, if you have defined it as a **termchar** in the **Root Doc Settings**.

Utterance	Stored Value	Example	Description
[dollar] "dollar(s)" ("and") [cent] "cent(s)"	D.CC	"thirteen dollars and fifty cents " = 13.50	Dollars are whole numbers >= 0. Cents are from 00 to 99. The word *and* is optional.
[dollar] "dollar(s) "[cent]	D.CC	"thirteen dollars five" = 13.05	Dollars are whole numbers >= 0. Cents are from 00 to 99.
[dollar] "dollar(s)"	D.00	“three hundred fifty” = 350.00	A plain whole number is interpreted as dollars with no cents.
[cent] "cent(s)"	0.CC	"three cents" = 0.03	To specify cents only, the word *cents* to be uttered. Cents are from 00 to 99.

DTMF Entry	Stored Value	Example	Description
[D]*[CC]	D.CC	3*99 = 3.99	The decimal is represented by the * button.

There are other formats that are possible, particularly when entering via DTMF and inputting incomplete amounts. These inputs may yield differing results on various voice browsers. The returned variable will always be a decimal value with the appropriate number of padded zeros, if applicable.

Settings

Name (Label)	**Type**	**Req'd**	**Single Setting Value**	**Substitution Allowed**	**Default**	**Notes**
Inputmode (Input Mode)	string enum	Yes	`true`	`false`	both	The type of entry allowed for input. Possible values are: `voice` | `dtmf` | `both`.
noinput_timeout (Noinput Timeout)	string	Yes	`true`	`true`	5s	The maximum time length allowed for silence or no keypress before a noinput event is thrown. Possible values are standard time designations including both a non-negative number and a time unit, for example, 3s (for seconds) or 3000ms (for milliseconds). Default = 5s
max_noinput_count (Max NoInput Count)	int ≥ 0	Yes	`true`	`true`	3	The maximum number of noinput events allowed during currency input capture. 0 = infinite noinputs allowed.
max_nomatch_count (Max NoMatch Count)	int ≥ 0	Yes	`true`	`true`	3	The maximum number of nomatch events allowed during currency input capture. 0 = infinite nomatches allowed.
currency_confidence_level (Currency Confidence Level)	decimal (0.0 to 1.0)	Yes	`true`	`true`	0.40	The confidence level threshold to use during currency capture.
modal (Disable Hotlinks)	boolean	Yes	`true`	`true`	false	Whether or not to temporarily disable all hotlink grammars (global or local) and universal grammars. If set to true, only the currency grammars will be enabled for the duration of the element. Otherwise all active grammars will be enabled.
secure_logging (Secure Logging)	boolean	Yes	`true`	`true`	false	If set to true, user DTMF input for the element is considered secure and the attributes utterance, interpretation, value, nbestUtteranceX and nbestInterpretationX are masked in VXML server logs. The format used to render secure element attributes is to add a *_secureLogging*

						suffix. For example `nbestUtterance1_secureLogging,*****`.
maxnbest (Maxnbest)	int ≥ 1	Yes	`true`	`true`	1	The maximum number of speech recognition results that can be generated per voice input.

Note Refer to the Element Data table below for information about `nbestUtteranceX` and `nbestInterpretationX`.

Element Data

Name	Type	Notes
Value	string	The currency amount captured. This will always be a decimal number with the appropriate number of padded zeros (up to 2).
value_confidence	float	This is the confidence value of the captured utterance. When n-best recognition is enabled, this stores the confidence score of the top hypothesis in the n-best list.
nbestLength	int ≥ 1	This stores the number of n-best hypotheses generated by the speech engine.
nbestUtterance1 nbestUtterance2 … nbestUtteranceX	string	This set of element data stores the captured n-best utterances. While the maximum number of nbestUtteranceX values is equal to the maxnbest setting value, the actual number of these values available is determined by speech recognition at runtime, where nbestUtterance1 holds the utterance of the top hypothesis in the n-best list and nbestUtteranceX holds the utterance of the last hypothesis.
nbestInterpretation1 nbestInterpretation2 … nbestInterpretationX	string	This set of element data stores the interpretations of captured n-best utterances. While the maximum number of nbestInterpretationX values is equal to the maxnbest setting value, the actual number of these values available is determined by speech recognition at runtime, where nbestInterpretation1 holds the interpretation of the top hypothesis in the n-best list and nbestInterpretationX holds the interpretation of the last hypothesis.
nbestConfidence1 nbestConfidence2 … nbestConfidenceX	float	This set of element data stores the confidence scores of captured n-best utterances. While the maximum number of nbestConfidenceX values is equal to the maxnbest setting value, the actual number of these values available is determined by speech recognition at runtime, where nbestConfidence1 holds the confidence score of the top hypothesis in the n-best list and nbestConfidenceX holds the confidence score of the last hypothesis.
nbestInputmode1 nbestInputmode2	string	This set of element data stores the input modes of captured n-best utterances.

… nbestInputmodeX		

Exit States

Name	Notes
max_nomatch	The maximum number of nomatch events has occurred. If the nomatch max count is 0, this exit state will never occur.
max_noinput	The maximum number of noinput events has occurred. If the noinput max count is 0, this exit state will never occur.
done	The currency capture was completed.

Audio Groups

Currency Capture

Name (Label)	Req'd	Max 1	Notes
initial_audio_group (Initial)	Yes	Yes	Played when the voice element first begins.
nomatch_audio_group (NoMatch)	No	No	Played when a nomatch event occurs.
noinput_audio_group (NoInput)	No	No	Played when a noinput event occurs.
help_audio_group (Help)	No	No	Played when the caller asked for help. If not specified, by default help is treated as a nomatch.

End

Name (Label)	Req'd	Max 1	Notes
done_audio_group (Done)	No	Yes	Played when the currency capture is completed and the voice element exits with the *done* exit state.

Folder and Class Information

Studio Element Folder Name	Class Name
Commerce	com.audium.server.voiceElement.currency.MBasicCurrency

Events

Name (Label)	Notes
`Event Type`	You can select **Java Exception**, **VXML Event**, or **Hotlink** as event handler for this element.