
Language Supplement



Speechify 3.0 for es-MX
(Mexican Spanish)

Document History

Date	Release Name
August 2003	Fourth Edition – for Speechify 3.0
January 2003	Third Edition, Update 3 – for Speechify 2.1.5
September 2002	Third Edition, Update 2 – for Speechify 2.1.3
June 2002	Third Edition, Update 1 – for Speechify 2.1
May 2002	Third Edition – for Speechify 2.n Mexican Spanish - Javier voice beta
April 2002	Second Edition, update – for Speechify 2.n
March 2002	Second Edition – for Speechify 2.0
January 2002	First Edition, update – for Speechify 2.0
December 2001	First Edition – for Speechify 2.0 - Mexican Spanish Beta release

Notice

Copyright © 1995–2003 by SpeechWorks International, Inc. All rights reserved.

The information in this document is subject to change without notice.

U.S. Patent Nos. 5,995,928; 5,809,494; 5,765,130; 6,061,651; and 6,173,266. One or more patents may be pending in the United States and other countries.

SpeechWorks, DialogModules, SADL, SMARTRecognizer, SpeechCare, SpeechCookie, Speechify, SpeechSecure, SpeechSite, SpeechSpot, SpeechWorks Here, the SpeechWorks logo and the SpeechWorks Here logo are trademarks or registered trademarks of SpeechWorks International, Inc. in the United States and other countries. All other trademarks are property of their respective owners. Windows NT is a registered trademark of Microsoft Corporation.

Portions of Speechify software are subject to copyrights of GlobeTrotter Software, Inc.

Published by:

SpeechWorks International, Inc.
695 Atlantic Avenue
Boston, MA 02111

Table of Contents

1. Introduction

Overview	1
New and changed information	1
Getting started	2

2. Embedded Tags

Customizing currency expressions	3
--	---

3. Symbolic Phonetic Representations

Vowels.....	5
Consonants.....	6
Syllable stress.....	7
Syllable boundary.....	7

4. Phoneme marks

5. User Dictionaries

Main dictionary.....	12
Valid main dictionary entries.....	12
Main dictionary examples	12
Abbreviation dictionary	13
Valid abbreviation dictionary entries	13
Abbreviation dictionary examples	13
Root dictionary	14
Allowable root dictionary entries	14
Root dictionary examples	14

6. W3C SSML



Introduction

Overview

This document contains language-specific reference information for application developers using SpeechWorks Speechify 3.0 and higher.

Speechify™ is a Text-To-Speech (TTS) system.

New and changed information

Information about installing voices has been moved from this supplement to the *Speechify User's Guide*.

There are small improvements throughout this document.

See the *Speechify Migration Guide* for a complete list of changes in Speechify 3.0.

Getting started

To get started, we recommend that you are familiar with the *Speechify User's Guide*, which provides comprehensive installation, programming, and reference information about the Speechify product. You should also review the release notes distributed with this product for the latest information, restrictions, and known problems.

Other documents in the Speechify documentation set:

- ❑ *Speechify E-Mail Pre-processor Developer's Guide* explains the types of input that the SpeechWorks E-mail Pre-processor handles, how it processes the messages, the modes that the application can take advantage of at runtime, the layout and use of the E-mail substitution dictionary, and provides the API function prototypes, types, error codes and constants.

Information about installing voices has been moved from this supplement to the *Speechify User's Guide*.

The “Rick” voice is being de-supported in favor of the new “Tom” voice.

There are small improvements throughout this document.

See the *Speechify Migration Guide* for a complete list of changes in Speechify 3.0.

Support services

To receive technical support from SpeechWorks International, Inc., use the following methods:

- ❑ Check the FAQs, visit the Knowledge Base, or ask a question at:

<http://techsupport.speechworks.com/>

- ❑ Ask for “technical support” at +1 617 428-4444



Embedded Tags

Embedded tags are special codes that can be inserted into input text to customize Speechify's behavior in a variety of ways. The *Speechify User's Guide* describes the Speechify tag format and functionality. Below is the description of a tag that is specific to Mexican Spanish.

Customizing currency expressions

In es-MX, the default interpretation of a currency expression containing a dollar sign (\$) is *pesos*. You can change the interpretation by explicitly declaring dollars, as in *USD \$50*, *US\$50*, or *\$US50*.

Examples:

Input	Pronunciation
\$34	treinta y cuatro pesos
USD \$34	treinta y cuatro dólares

Use the currency mode tag to customize the interpretation of the dollar sign:

Currency mode tags	Description
\cdd	Interpret the dollar sign as dollars.
\cdp	Interpret the dollar sign as pesos (default).

For example:

Input	Pronunciation
\$50, \cdd \$60, \cdp \$70	cincuenta pesos, sesenta dólares, setenta pesos

But note that the tag does not override textual specification of currency type:

Input	Pronunciation
\cdp USD \$50	cincuenta dólares

A currency tag remains in effect throughout the speak request until you switch the interpretation with another currency tag.



Symbolic Phonetic Representations

The following tables show the inventory of available symbols for use in es-MX Symbolic Phonetic Representations (SPRs). Use this chapter in conjunction with the SPR information found in the *Speechify User's Guide*.

Each sound symbol is accompanied by examples illustrating typical spellings of the sound in actual words, with the letters representing the given sound bolded. Due to dialectal differences, the SPR examples shown may not always agree with your own pronunciations.

Vowels

The following table includes the es-MX symbols for vowels.

Symbol	Example words
i	i gual
e	e ste
u	u ve
o	o so
a	a gua

Consonants

The following table includes the es-MX symbols for consonants.

Symbol	Example words
p	p arte, a p agar
b	b asta, hu b o
t	t oma, a t ar
d	d ar, na d a
k	c oger, ira k
g	g oma, ha g a
C	co ch e, ch ico
f	f laco, a f uera
s	s i, ca s a
z	mi s mo, de s de
S	Wa sh ington, sh ampoo [foreign words only]
j	j ota, g ente
m	m ano, a m or
n	n o, ma n o
N	Españ a
l	l oco, a l go
L	mi ll a, ll ueve
r	a r ena, pe r o
R	r opa, pe rr o
w	f uera, de u da
y	oi g o, t iesto

Syllable stress

You can mark syllables for stress with a digit. The following table includes the es-MX symbols for syllable stress.

0	no stress
1	primary stress (most prominent stress in the word)

If a word has more than one syllable, you can mark one of these syllables for primary stress, and mark others for secondary stress or no stress.

A syllable that is not marked for stress is assumed to have no stress, unless it is the only syllable of a word, in which case it is assigned a primary stress. The syllable stress marker should be within the boundaries of the syllable and to the left of the vowel.

Syllable boundary

The following table includes the es-MX symbol for a syllable boundary.

.	(period) beginning of a syllable
---	----------------------------------



Phoneme marks

The phoneme-mark data structure is useful for matching each moment of synthesized speech with the phonemes being spoken. This information is particularly useful when you synchronize facial animation with speech output.

The structure is returned to your application's callback function, which is described under “SWIttsCallback()” in the API reference section of the *Speechify User's Guide*. Each phoneme-mark contains the phoneme name, along with other information about the phoneme. The phoneme-mark symbols for es-MX are documented in the following table.

Note: The phoneme names used in phoneme marks are not necessarily the same as those used for SPR input.

Phone	Examples
a	ropa, a buelo
A	b ajo, grande
b	b asta, hu b o
C	co c he, ch ico
d	d ar, na d a
e	donde, e scapar
E	e sta, comer
f	f laco, a fuera
g	g oma, ha g a
i	i importante, m ilagro, o i go t iesta

Phone	Examples
I	am i go, hi j a
j	j ota, g ente
J	ll ave, mi ll a
k	c oger, ira k
l	l oco, al go
m	m i, a m or
n	n o, ma n o
N	ma ñ ana, a ñ o
o	un o , ba j o
O	d os, o nda
p	p arte, a p agar
pau	[Indicates a pause]
r	a r ena, pe r o
R	r opa, pe rr o
s	s i, ca s a
S	Sh anghai, Wa sh ington
t	t oma, a t ar
u	ay u dar, ru t ina
U	l una, u ve
w	f uera, de u da



User Dictionaries

This chapter describes Mexican Spanish behaviors for Speechify dictionaries. Use this chapter in conjunction with the dictionary information found in the *Speechify User's Guide*.

The maximum length for Mexican Spanish dictionary keys is 128 characters. The maximum translation length is 512 characters.

Main dictionary

The main dictionary is an all-purpose user dictionary for replacing a word in an input text with almost any type of input string. Main dictionary entries are case-sensitive.

Valid main dictionary entries

The following table summarizes the valid main dictionary keys and translations:

Key	Translation
Latin 1 letters, both upper and lowercase digits. Non-alphanumeric characters, including: @, #, \$, %, &, *, + Apostrophes, quotation marks, parentheses, brackets, etc. Punctuation, except as the final character.	Anything that is valid input to the text-to-speech engine, including white space, punctuation, SPRs, and embedded tags.
Disallowed: white space	Disallowed: SAPI tags, SSML tags, and bookmarks

Main dictionary examples

The following table shows examples of main dictionary entries:

Key	Translation
486DX	cuatro ochenta y seis d x
sen@mailer.org	s e n \[at] \[1mey.ler] . o r g
UE	Unión Europea

Abbreviation dictionary

The abbreviation dictionary handles word abbreviations that translate to one or more words in ordinary spelling. The entries are case-sensitive.

Valid abbreviation dictionary entries

The following table summarizes the format of valid keys and translations in the abbreviation dictionary:

Key	Translation
Sequences of one or more letters optionally separated by periods (x.x.x or xx.xx.xx). Sequences of letters, with or without the trailing period that may be considered part of the abbreviation (xxx. or xxx). Sequences of a single letter followed by a slash and one or more letters, with or without the trailing period that may be considered part of the abbreviation (x/xx or x/xx.). Upper or lower case letters.	One or more valid words in ordinary spelling, including both upper and lower case letters, separated by white space or hyphen.
Disallowed: digits, non-letter symbols, white space, or punctuation (except periods).	Disallowed: digits, punctuation, SPRs, tags.

Abbreviation dictionary examples

The following table shows examples of abbreviation dictionary entries:

Key	Translation
apdo	apartado
Cnel	coronel
SM	Su Majestad
V/.	Vale
s/c.	su cargo

Root dictionary

The root dictionary is used for ordinary words, like nouns (including proper names), verbs, or adjectives. Unlike the main and abbreviation dictionaries, it is not case-sensitive.

The es-MX root dictionary requires that all forms of a word must be entered separately. For example, both singular and plural forms of a noun must be entered in order to produce the desired pronunciation in both words.

Allowable root dictionary entries

The following table summarizes the format of valid keys and translations in the root dictionary:

Key	Translation
A single word in ordinary spelling, all lowercase letters.	A single word in ordinary spelling.
	A valid SPR.
Disallowed: digits, punctuation, or other non-letter characters; white space	Disallowed: digits, punctuation, or other non-letter characters, white space, tags

Root dictionary examples

The following table shows examples of root dictionary entries:

Key	Translation	Would apply to...
guetxo	guecho	Guetxo, guetxo
ertzaina	\[.0er.1Cay.0na]	Ertzaina, ertzaina
ertzainas	\[.0er.1Cay.0nas]	Ertzainas, ertzainas

Note that *ertzaina* and *ertzainas* are separate entries in the example; this ensures that both words are spoken with the specified pronunciation.



W3C SSML

Speechify includes support for input text formatted according to the W3C Speech Synthesis Markup Language (SSML).

In order to invoke the correct processing for Mexican Spanish text, the given W3C SSML input must have the `xml:lang` attribute set to “es-MX”. If this attribute is absent, Speechify assumes “en-US” as a default.

In addition to producing Mexican Spanish output, the W3C SSML processor for es-MX parses and expands tag content in a manner consistent with the Mexican locale. For example, the tag `<say-as type = "currency">10.20</say-as>` is pronounced "diez pesos y veinte centavos."

For more description of W3C SSML support in Speechify, see the *Speechify User's Guide*.

Index

Symbols

\cdd 3

\cdp 3

A

abbreviation dictionary 13

C

consonants 6

currency mode 3

D

dictionaries

 abbreviation 13

 main 12

 root 14

dollars 3

E

embedded tags 3

M

main dictionary 12

P

pesos 3

R

root dictionary 14

S

Spanish (Mexican) SPRs 5

support services 2

syllable boundary 7

syllable stress 7

V

vowels 5