Language Manual

Spanish

Language Manual: Spanish

Published 17 March 2011

This document was produced by Acapela Group. We welcome and consider all comments and suggestions. Please, use the *Contact Us* link at our website:
http://www.acapela-group.com

Table of Contents

List of Tables

Chapter 1. General

This document discusses certain aspects of text-to-speech processing for the European Spanish text-to-speech system, in particular the different types of input characters and text that are allowed.

This version of the document corresponds to the High Quality (HQ) voices Maria, Antonio and Inés and the High Density (HD) voice Javier.

Please note that the *User's Guide*, mentioned several times in the manual, is called *Help* in some applications.

Note: This language manual is general and applies to all Acapela Group HQ and HD Spanish voices specified above. One or more of the voices may be included in a certain Acapela Group product.

Note: For efficiency reasons, the processing described in this document has a different behaviour in some Acapela Group products. Those products are:

- Acapela TTS for Windows Mobile
- Acapela TTS for Linux Embedded
- Acapela TTS for Symbian

For these products, the default processing of numbers, phone numbers, dates and times has been simplified for the low memory footprint (LF) voice formats. Developers have the possibility to change the default behaviour from *simplified* to *normal* preprocessing by setting corresponding parameters in the configuration file of the voice. Please see the documentation of these products for more information. In the following chapters, each simplification will be described by the indication *[not SP]* following the description of the standard behaviour. The *SP* in the indication stands for *Simplified Processing*.

Chapter 2. Letters in orthographic text

Characters from the ranges *A-Z* and *a-z*, as well as *ñ, Ñ, á, Á, é, É, í, Í, ó, Ó, ú, Ú, ü, Ü* may constitute a word. Certain other characters are also considered as letters, notably those used as letters in other European languages, i.e. *è, õ, å*.

Characters outside of these ranges, i.e. numbers, punctuation characters and other non-alphanumeric characters, are not considered as letters.

Chapter 3. Punctuation characters

Punctuation marks appearing in a text affect both rhythm and intonation of a sentence. The following punctuation characters are permitted in the normal input text string: *, : ; “ ” . ¿ ? ¡ ! ( ) { } [ ]*

3.1. Comma, colon and semicolon

Comma '*,*', colon '*:*' and semicolon '*;*' cause a brief pause to occur in a sentence, accompanied by a small rising intonation pattern just prior to the character.

3.2. Quotation marks

Quotes '*“”*' appearing around a single word or a group of words cause a brief pause before and after the quoted text.

3.3. Full stop

A full stop '.' is a sentence terminal punctuation mark which causes a falling end-of-sentence intonation pattern and is accompanied by a somewhat longer pause. A full stop may also be used as a delimiter between thousands in full numbers or a decimal marker in a number (see chapter *Number processing*) and in abbreviations (see chapter *Abbreviations*).

3.4. Question mark

A closing question mark '*?*' ends a sentence and causes question-intonation, first rising and then falling. The opening question mark '*¿*' is ignored.

3.5. Exclamation mark

The closing exclamation mark '*!*' is treated in a similar manner to the full stop, causing a falling intonation pattern followed by a pause. The opening exclamation mark '*¡*' is ignored.

3.6. Parentheses, brackets and braces

Parenthesis '*()*', brackets '*[]*' and braces '*{}*' appearing around a single word or a group of words cause a brief pause before and after the bracketed text.

Chapter 4. Other non alphanumeric characters

4.1. Non-punctuation characters

The characters listed below are processed as non-letter, non-punctuation characters. Some are pronounced at all times and others are only pronounced in certain contexts, which are described in the following sections of this chapter.

Table 4.1. Non-punctuation characters

Symbol	Reading
/	barra
+	más
$	dólar
£	libra
€	euro
¥	yen
<	menor que
>	mayor que
%	por ciento
^	acento circunflejo
|	barra vertical
~	tilde
@	arroba
²	(see below)
³	(see below)
=	(see below
-	(see below)
*	(see below)

4.2. The ² and ³ signs

The reading of expressions with ² and ³ is:

Expression	Reading
mm²	milímetros cuadrados
cm²	centímetros cuadrados
m²	metros cuadrados
km²	kilómetros cuadrados
mm³	milímetros cúbicos
cm³	centímetros cúbicos
m³	metros cúbicos
km³	kilómetros cúbicos

4.3. Symbols whose pronunciation varies depending on the context

4.3.1. Equal Sign

The equal sign '=' is pronounced *son* if it follows an arithmetical expresion and is followed by a digit. In other cases, it is pronounced *igual a*.

Expression	**Reading**
2+3=5	2 más 3 son 5
2+3=	2 más 3 igual a
2*3=6	2 por 3 son 6
2*3=	2 por 3 igual a
A+B=C	A más B igual a C

4.3.2. Hyphen

A hyphen '-' is pronounced *menos* only if the input matches the patterns '*X*-*Y*=' or '-*X*'. The hyphen is also used as a delimiter in dates (see chapter *Dates*), [not SP] and it can also indicate a range of years, days or hours. In these cases the hyphen is pronounced *a*.

In isolation and between digits in other formats than the above mentioned, the hyphen is pronounced *guión*. Multiple occurrences of hyphen are pronounced *guión guión guión*…. In other cases the hyphen is never pronounced.

Expression	**Reading**	
-3	menos 3	
44-3	44 guión 3	
44-3=41	44 menos 3 son 41	
44 - 3 = 41	44 menos 3 son 41	
02-02-2002	dos de febrero de dos mil dos	
2-3 PM	2 a 3 de la tarde	[not SP]
Enero 12-14	enero 12 a 14	[not SP]
Feb 6-10	febrero 6 a 10	[not SP]
1998-2004	mil novecientos noventa y ocho a dos mil cuatro	[not SP]
ex-ministro	ex ministro	

4.3.3. Asterisk

Asterisk '*' is pronounced *por* if enclosed by digits and followed by an equals sign '='. In other cases it is pronounced *asterisco*.

Expression	**Reading**
2*3	dos asterisco tres
2*3=6	2 por 3 son 6
2*3=	2 por 3 igual a
*bc	asterisco b c

Chapter 5. Number Processing

Strings of digits that are sent to the text-to-speech converter are processed in several different ways, depending on the format of the string of digits and the immediately surrounding punctuation or non-numeric characters. To familiarise the user with the various types of formatted and non-formatted strings of digits that are recognised by the system, we provide below a brief description of the basic number processing along with examples. Number processing is subdivided into the following categories:

Full number pronunciation
Leading zero
Decimal numbers
Currency amounts
Ordinal numbers
Arithmetic operators
Mixed digits and letters
Time of day
Dates
Telephone numbers

5.1. Full number pronunciation

Full number pronunciation is given for the whole number part of the digit string.

Example	
2425	full number
2.425	full number
24,25	24 is a full number, 25 is the decimal part

Numbers denoting thousands, millions and billions (numbers larger than 999) may be grouped using space or full stop (not comma). In order to achieve the correct pronunciation the grouping must be done correctly.

The rules for grouping of numbers are the following:

- Numbers are grouped in groups of three starting from the end.
- The first group in a number may consist of one, two, or three digits.
- If a group, other than the first, does not contain exactly three digits, the sequence of digits is not interpreted as a full number.
- The highest number read is 999999999999 (twelve digits). Numbers higher than this are read as separate digits.

Number	**Reading**
2580	dos mil quinientos ochenta
2 580	“
2.580	“
25800	veinticinco mil ochocientos
25 800	“
25.800	“
2580350	dos millones quinientos ochenta mil trescientos cincuenta

Number	Reading
2 580 350	“
2.580.350	“
1000000000	mil millones
123456789012	ciento veintitrés mil cuatrocientos cincuenta y seis millones setecientos ochenta y nueve mil doce
2123456789012	dos uno dos tres cuatro cinco seis siete ocho nueve cero uno dos

5.2. Leading zero

Numbers that begin with 0 (zero) are read as a zero followed by the number read as a whole.

Number	Reading
09253	cero nueve mil doscientos cincuenta y tres
020	cero veinte

5.3. Decimal numbers

In Spanish, comma is used when writing decimal numbers. However, the system also manages decimals written with full stop, as long as the format cannot be interpreted as a full number. I.e., a number containing a full stop followed by exactly three digits is not read as a decimal number but as a full number, following the rules in the section *Full number pronunciation* .

The full number part of the decimal number (the part before comma or full stop) is read according to the rules in the section *Full number pronunciation* . If the decimals (the part after comma or full stop) are more than three, the decimal part is read as separate digits.

Number	Reading
16,234	dieciséis coma doscientos treinta y cuatro
3,1415	tres coma uno cuatro uno cinco
1251,04	mil doscientos cincuenta y uno coma cero cuatro
1.251,04	mil doscientos cincuenta y uno coma cero cuatro
2,50	dos coma cincuenta
2.50	dos punto cincuenta
3,141	tres coma ciento cuarenta y uno
3.141	tres mil ciento cuarenta y uno

5.4. Currency amounts

The following principles are followed for currency amounts:

- Numbers with zero or two decimals preceded or followed by the currency markers *£, $, ¥* or *€* are read as currency amounts.
- [not SP] Numbers with zero or two decimals followed by the words *peseta, pta, libra, dólar, yen* or *euro* (singular or plural) are read as currency amounts.
- Accepted decimal markers are comma ',' and full stop '.'.
- The decimal part (consisting of two digits) in currency amounts is read as *y nn centavos* for dollars, *y nn peniques* for pounds, and *y nn céntimos* for all other currencies.

- If the decimal part is *00* it will not be read.

Expression	Reading	
$15.00	quince dólares	
15.00£	quince libras	
15.00 euros	quince euros	[not SP]
€ 200.50	doscientos euros y cincuenta céntimos	
1.000.000 ¥	un millón de yenes	

There is also the possibility of writing large amounts as follows:

$ 1 millón	un millón de dólares

5.5. Ordinal numbers

Numbers are read as ordinals in the following cases:

- The number is *1.er, 1er, 3.er, 3er*.
- The number is followed by a full stop and a *o, a, °, ª*.
- The number is followed by a *o, a, °, ª*.

[not SP] The valid abbreviations for months are: *ene, feb, mar, mzo, abr, jun, jul, ago, set, sept, oct, nov* and *dic*.

Expression	Reading
1er trimestre	primer trimestre
3.er grado	tercer grado
2.o año	segundo año
3a clase	tercera clase
4.ª parte	cuarta parte
5° piso	quinto piso

5.6. Arithmetic operators

Numbers together with arithmetical operators are read according to the examples below.

Expression	Reading
-12	menos doce
3-1	tres guión uno
3-1=2	tres menos uno son dos
+24	más veinticuatro
3+1=4	tres más uno son cuatro
2*3	dos asterisco tres
2*3=6	dos multiplicado por tres son seis
2/3	dos tercios
2/3=0.67	dos dividido por tres son cero punto sesenta y siete
25%	veinticinco por ciento
3,4%	tres coma cuatro por ciento

5.7. Mixed digits and letters

If a letter appears within a sequence of digits, the groups of digits will be read as numbers according to the rules above. The letter marks the boundary between the numbers. The letter will also be read.

Expression	Reading
77B84Z3	setenta y siete B ochenta y cuatro Z tres
0092B87-B	cero cero noventa y dos B ochenta y siete B

5.8. Time of day

The colon and the full stop are used to separate hours, minutes and seconds.

Possible patterns are:

a. *hh:mm*, *h:mm*, *hh.mm* or *h.mm*

b. *hh:mm:ss*, *h:mm:ss*, *hh.mm.ss* or *h.mm.ss*

c. *hh* or *h*

d. *hh-hh* or *h-h*

h = hour, *m* = minute, *s* = second.

The patterns that use full stop as delimiter must be followed by a time format indicator. Other patterns may or may not need time format indicators to be recognised as a time expression, see below. Time format indicators can be abbreviations such as *a.m.*, *m.* or *p.m.*, symbols such as *h*, or words like *hora* or *horas*. Some alternative spellings are also recognised. When a string is recognised as a time expression, the delimiter symbol is never read.

[not SP]In pattern a:

This pattern should be followed by a time indicator. When the *mm*-part is equal to *00*, this part will not be read.

In pattern b:

After the *hh*-part *horas* will be added. After the *mm*-part *minutos* will be added. And after the *ss*-part, *segundos* will be added. If the *ss*-part is equal to *00*, the expression will be read as pattern a. [not SP] This pattern can followed by time indicators.

[not SP]In pattern c:

The hours can appear alone but must be followed by a time indicator.

In pattern d:

[not SP] The hours can appear in a time range and must then be followed time indicators. An *a* will then be added between the numbers.

Expression	Reading	
2:40 p.m.	2 40 de la tarde	[not SP]
2.40 a.m.	2 40 de la madrugada	[not SP]
9:00	nueve	
12:00	medio día	

Expression	Reading	
13:15	13 15	
00:00	media noche	
12:13:55	12 horas, 13 minutos, 55 segundos	
4:30:00	4 horas, 30 minutos	
12 h	12 horas	[not SP]
10-11 a.m.	10 a 11 de la mañana	[not SP]

5.9. Dates

The valid formats for dates are:

1. *dd-mm-yyyy*, *dd.mm.yyyy*, *dd/mm/yyyy*

2. *dd-mm-yy*, *dd.mm.yy*, *dd/mm/yy*

3. *dd-MM-yyyy*, *dd.MM.yyyy*, *dd/MM/yyyy*

4. *dd-MM-yy*, *dd.MM.yy*, *dd/MM/yy*

yyyy is a four-digit number, *yy* is a two-digit number, *mm* is a month number between 1 and 12, *MM* is a month number between 1 and 12 in roman numerals, and *dd* a day number between 1 and 31. Hyphen, full stop, and slash may be used as delimiters. In all formats, one or two digits may be used in the *mm* and *dd* part. Zeros may be used in front of numbers below 10.

Examples of valid formats and their readings:

Type 1:

10-02-2003 or 10-2-2003	diez de febrero de dos mil tres
10.02.2003 or 10.2.2003	“
10/02/2003 or 10/2/2003	“

Type 2:

10-02-03 or 10-2-03	diez de febrero de dos mil tres
10.02.03 or 10.2.03	“
10/02/03 or 10/2/03	“

Type 3: [not SP]

10-II-2003	diez de febrero de dos mil tres
10.II.2003	“
10/II/2003	“

Type 4: [not SP]

10-II-03	diez de febrero de dos mil tres
10.II.03	“
10/II/03	“

[not SP] Ranges of days and years are also supported.

Expression	Reading
1998-1999	mil novecientos noventa y ocho a mil novecientos noventa y nueve
1939-45	mil novecientos treinta y nueve a cuarenta y cinco
2002/3	dos mil dos a tres
14-15 enero	catorce a quince de enero
abril 2-3	abril dos a tres

Other possible formats include:

- Lunes, 15 de enero
- Jueves, 30 de abril de 1999
- 3 de mayo de 1953

5.10. Telephone numbers

In this section the patterns of digits that are recognized as phone numbers are described. In the pronunciation of phone numbers each group of digits is read as a full number (see also *Leading zero* section) with a pause between groups of numbers. Groups that contain more than three digits are read out digit by digit.

5.10.1. Ordinary phone numbers

Sequences of digits in the following formats are treated as phone numbers.

The following sequences of digits can be separated by a space or a [not SP] hyphen:

- xxx xxxxxx
- xxx xxxxx
- xxx xxx xxxx
- xxx xxx xx xx
- xxx xxx xx
- xx xxx xxxx [not SP]
- xx xxx xxx
- xx xxx xx xx
- xxx xx xx xx

[not SP]The following sequences can only appear in these formats:

- (xxx) xxx-xxxx
- xx- xxx xxx
- xx- xxx-xxx
- xx- xxx-xx-xx
- xx- xxx xx xx

- (+34) xxx xxx xxx

5.10.2. International phone numbers

International phone numbers follow the pattern below:

International prefix + *Country code* + *space or [not SP] hyphen* + *Local number*.

International prefix:	00 or +
Country code:	1-3 digits
Local number:	8-10 digits

[not SP] Examples:
0034 (971) 123-4567
0034 971 123456
001 21- 123-45-56

Chapter 6. How to change the pronunciation

6.1. User lexicon

Words that are not pronounced correctly by the text-to-speech converter can be entered in the user lexicon (see *User's guide*). When writing translations for entries in the user lexicon to change the way a word is pronounced, one method is to modify the spelling of the word (see section *Alternative spelling*) and another is to write a phonetic transcription of the word (see chapter *Spanish Phonetic Text*). Phonetic transcriptions can also be entered directly in the text, using a *PRN* or *PRX* tag (see *User's guide*).

6.2. Alternative Spelling

Sometimes, the quickest way of changing the pronunciation of a word is to change the spelling of the word directly in the text. Changing a single letter, or adding a hyphen, can often make it sound better. This is specially useful when it comes to foreign words. Try to write the foreign words as they sound.

Correct spelling	**Alternative spelling**
light	lait
Wolksvagen	Bolsbaguen
Renault	Renó
eau de Cologne	Ode coloñ
profile	prófail
photo	foto
sube y baja	subeibaja/subibaja

Chapter 7. Spanish Phonetic Text

The Spanish text-to-speech system uses the Spanish subset of the SAMPA phonetic alphabet (*Speech Assessment Methods Phonetic Alphabet*) with some modifications and expansions. The HQ voices (*Maria* and *Antonio*) have an aditional symbol set that represent a more detailed description of allophonic variations in Spanish. Futhermore, the HQ voices also cover some foreign sounds common in loan words from English. Those symbols are not recognised in the HD system (*Javier*).

Only the symbols listed here may be used in phonetic transcriptions. Symbols not listed here are not valid in phonetic transcriptions and will be ignored if included in the user lexicon or in a *PRN* or *PRX* tag. In a phonetic transcription, the symbols are written with a space between each phoneme.

7.1. Consonants

The table below lists the phonetic symbols used for the Spanish consonants along with example words and their transcriptions.

Table 7.1. Symbols for the Spanish consonants

Symbol	Word	Phonetic text	Comment
p	pala	p a1 l a	
t	tela	t e1 l a	
k	cala	k a1 l a	
b	bala	b a1 l a	
d	dama	d a1 m a	
g	gala	g a1 l a	
m	mata	m a1 t a	
n	nata	n a1 t a	
J	ñapa	J a1 p a	
f	fama	f a1 m a	
tS	chica	tS i1 k a	
T	cero	T e1 r o	
s	sala	s a1 l a	
r	pero	p e1 r o	
rr	perro	p e1 rr o	
x	jamón	x a m o1 n	
l	lama	l a1 m a	
L	llama	L a1 m a	
jj	ayer	a jj e1 r	
w	cuento	k w e1 n t o	

7.2. Vowels

The table below lists the phonetic symbols used for the Spanish vowels along with example words and their transcriptions.

Table 7.2. Symbols for the Spanish vowels

Symbol	Word	Phonetic text
a	ala	a1 l a
e	eje	e1 x e
i	vivir	b i B i1 r
o	ojo	o1 x o
u	tul	t u1 l

7.3. HQ Spanish allophones and foreign sounds

The table below lists the phonetic symbols used in the HQ voices for the Spanish allophones and foreign sounds along with example words and their transcriptions.

Table 7.3. Symbols for Spanish allophones and foreign sounds

Symbol	Word	Phonetic text	Comment
j	miedo	m j e1 D o	In diphthongs
B	haba	a1 B a	Fricative/Approximant /b/
D	hada	a1 D a	Fricative/Approximant /d/
G	haga	a1 G a	Fricative/Approximant /g/
dZ	cónyuge	k o1 n dZ u x e	initial and after nasal, even for English words
	John	dZ o1 n	
W	huella	W e1 L a	approximant, even for English words
	Washinton	W a1 S i n t o n	
S	shop	S o1 p	English words
h	happy	h a1 p i	English words

7.4. Lexical stress

In words with more than one syllable, one (and normally only one) of the syllables is more prominent than the others. This is referred to as word stress, or lexical stress. Words of one syllable also have word stress when spoken in isolation, although many may lose the stress in certain contexts. For the correct pronunciation of a word, it is important to include the symbol marking the word stress.

In the phonetic transcriptions the word stress is indicated by the symbol '*1*' placed directly after the stressed vowel (with no space between the vowel symbol and the stress symbol).

7.5. Glottal stops

A glottal stop, represented by the phonetic symbol */?/* , is a small sound which is often used to separate two words when the second word starts with a stressed vowel. It is also useful when transcribing abbreviations. This sound can be inserted in a transcription in order to improve the pronunciation.

Example:

SFM ? e s e ? e f e ? e1 m e

7.6. Pause

An underscore /_/ in a phonetic transcription generates a small pause.

Chapter 8. Abbreviations and symbols

The current version of the Spanish text-to-speech system expands a great amount of abbreviations and symbols following (when possible) the *Diccionario Panhispánico de Dudas*. The tables below present some of them.

Table 8.1. Abbreviations

Abbreviation	Reading
A/A	a la atención
aa. vv.	autores varios
Abg., Abg.do, Abg.da (Abgs.)	Abogado, Abogada (Abogados)
a. C., a. de C.	antes de Cristo
a. de J. C., a. J. C.	antes de Jesucristo
a/c	a cuenta
admón.(admones.)	administración (administraciones)
adm.or, adm.ora (admres.)	administrador, administradora (administradores)
Alfz.	Alférez
Almte.	Almirante
apdo. (apdos.)	apartado (apartados)
art.º, art. (arts.)	artículo (artículos)
Arz.	Arzobispo
atte.	atentamente
av., avd., avda.	avenida
Barna.	Barcelona
Bco. (Bcos.)	Banco (Bancos)
Bibl. (Bibls.)	Biblioteca (Bibliotecas)
Bo., B.º	barrio
Bs. As.	Buenos Aires
c/	calle
Cap. Fed., C. F.	Capital Federal
cap.º, cap. (caps.)	capítulo (capítulos)
cf.	compárese
ch/	cheque
Cía., C.ía, Comp., C.ª (Cías., C.ías, Comps.)	Compañía (Compañías)
Cmdt., Cmte., Comte.	Comandante
Cnel.	Coronel
cp.	compárese
C. P.	Código Postal
c/c, cta. cte. (ctas. ctes.)	cuenta corriente (cuentas corrientes)
Cte.	Comandante
c/u	cada uno
D.ª, Dña.	Doña
d. C., d. de C. (d. de J. C.)	después de Cristo (después de Jesucristo)

Abbreviation	Reading
desct.º	descuento
D. F.	Distrito Federal
D. P.	Distrito Postal
Dr.	Doctor
Dra.,Dr.ª	Doctora
EE. UU.	Estados Unidos
etc.	etcetera
Exc.ª	Excelencia
f.ª	factura
FF. CC.	Ferrocarriles
FF. AA.	Fuerzas Armadas
f.º, fol.	folio
Gdor., Gob.	Gobernador
Gdora., Gdor.ª	Gobernadora
g/p, g. p.	giro postal
Gral.	General
Hna. (Hnas.)	Hermana (Hermanas)
Hno. (Hnos.)	Hermano (Hermanos)
igl.ª	iglesia
Ilmo., Ilma.	Ilustrísimo, Ilustrísima
Ing. (Ings.)	Ingeniero (Ingenieros)
Inst.	Instituto
Jhs.	Jesús
JJ. OO.	Juegos Olímpicos
Ltdo., Ltda.	Limitado, Limitada
Mons.	Monseñor
N.ª S.ª, Ntr.ª Sr.ª	Nuestra Señora
n.º, nro., núm.	número
Pdte., Pdta.	Presidente, Presidenta
p. ej.	por ejemplo
plza., pza. (plzas., pzas., pls.)	plaza (plazas)
p.º	paseo
ppal., pral.	principal
prof., prof.ª	profesor, profesora
prov.	provincia
Rep.	República
r.º	recto
RR. HH.	Recursos Humanos
Rte.	Remitente
ss.	siguientes
S. A.	Sociedad Anónima

Abbreviation	Reading
Sdad., Soc.	Sociedad
s. e., s/e	sin editorial
s. e. u o.	salvo error u omisión
s. f., s/f	sin fecha
S. L.	Sociedad Limitada
s. n., s/n	sin número
Sr.	Señor
Sra., Sr.ª,S.ª(Sras.)	Señora (Señoras)
Sres., Srs.	Señores
Srta. (Srtas.)	Señorita (Señoritas)
tel., teléf., tfno.	teléfono
tels., teléfs., tfnos.	teléfonos
Ud., Vd. (Uds., Vds.)	Usted (Ustedes)
Sto., Sta.	Santo, Santa
Univ.	Universidad
Vdo., Vda.	Viudo, Viuda
V.º B.º	Visto Bueno
vv. aa.	varios autores
Xto.	Cristo
TVE	Televisión Española

Table 8.2. Symbols

Symbol	Reading
°C	grados celsius
°K	grados kelvin
°F	grados fahrenheit
cl	centilitros
cm	centímetros
dl	decilitros
dm	decímetros
kg	kilogramos
km	kilómetros
mg	miligramos
ml	mililitros
min	minutos
mm	milímetros

The system also recognises abbreviations for the month names when they are part of a date expression. The valid abbreviations for months are: *Ene, Feb, Mar, Mzo, Abr, May, Jun, Jul, Ago, Set, Sept, Oct, Nov,* and *dic*.

Chapter 9. Web-addresses and email

Web-addresses and email-addresses are read as follows:

- *www* is read as three *w*'s spelled letter by letter.
- Full stops '.' are read as *punto*, hyphens '-' as *guión*, underscore '_' as *guión bajo*, slash '/' as *barra*.
- *es, uk, fr* and other abbreviations for countries are spelled out letter by letter.
- The @ is read *arroba*.
- Words/strings (including *org*, *com* and *edu*) are pronounced according to the normal rules of pronunciation in the system and in accordance with the lexicon.

String	**Reading**
www.acapela-group.com	w w w punto acapela guión group punto com
http://www.acapela-group.com	h t t p dos puntos barra barra w w w punto acapela guión group punto com
romero@yahoo.es	romero arroba yahoo punto e s
susana_romero@yahoo.es	susana guión bajo romero arroba yahoo punto e s