

# Language Manual

# **HQ British English**

## Language Manual: HQ British English

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## Chapter 1. General

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

This version of the document corresponds to High Quality (HQ) voices Rachel, Peter, Lucy, and Graham.

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 British English voices. 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 *A-Z* and *a-z* may constitute a word. Certain other characters are also considered as letters, notably those used as letters in other European languages, i.e.  $\tilde{n}$ , c,  $\dot{e}$ . These letters are not pronounced as in their native languages though, they are pronounced as regular *n*, *c*, *e* when occurring in a word

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 decimal marker in a number (see chapter *Number processing*) and in abbreviations (see chapter *Abbreviations*).

#### 3.4. Question mark

A question mark '?' ends a sentence and causes question-intonation, first rising and then falling.

#### **3.5. Exclamation mark**

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

#### 3.6. Parentheses

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.

| Symbol | Reading      |
|--------|--------------|
| 1      | slash        |
| +      | plus         |
| \$     | dollar       |
| £      | pound        |
| €      | euro         |
| ¥      | yen          |
| <      | less than    |
| >      | greater than |
| %      | percent      |
| ٨      | circumflex   |
|        | pipe         |
| ~      | tilde        |
| @      | at           |
| =      | equals       |
| 2      | (see below)  |
| 3      | (see below)  |
| -      | (see below)  |
| *      | (see below)  |

#### Table 4.1. Non-punctuation characters

## 4.2. The <sup>2</sup> and <sup>3</sup> signs

The reading of expressions with <sup>2</sup> and <sup>3</sup> is:

| Expression      | Reading             |
|-----------------|---------------------|
| mm²             | millimeters squared |
| Cm <sup>2</sup> | centimeters squared |
| m²              | meters squared      |
| km²             | kilometers squared  |
|                 |                     |
| mm³             | millimeters cubed   |
| CM <sup>3</sup> | centimeters cubed   |
| m³              | meters cubed        |
| km³             | kilometers cubed    |
|                 |                     |

## 4.3. Symbols whose pronunciation varies depending on the context

#### 4.3.1. Hyphen

A hyphen '-' is pronounced *minus* in two cases:

- 1. if followed by a digit and no other digit is found in front of the hyphen, i.e. as in the pattern -X but not in X-Y or X -Z where X, Y, and Z are numbers.
- 2. if followed by a digit and an equals sign '=', i.e. as in the pattern X-Y=Z. Space is allowed between digits, hyphen and equals sign.

If there is no equals sign, as in X-Y or X -Z, the hyphen is pronounced *dash*.

In certain date formats, in between days or years, the hyphen is pronounced *to*. In other cases the hyphen is never pronounced.

| Expression    | Reading  |          |
|---------------|--|----------|
| -3            | minus three                                    |          |
| 44-3          | forty-four dash three                          |          |
| 44-3=41       | forty-four minus three equals forty-one        |          |
| 44 - 3 = 41   | forty-four minus three equals forty-one        |          |
| 15-20 October | the fifteenth to twentieth of October          | [not SP] |
| 6-10 Nov      | the sixth to tenth of November                 | [not SP] |
| 1998-2004     | nineteen ninety-eight to two thousand and four |          |
| 02-02-2002    | the second of February two thousand and two    |          |
| low-income    | low income                                     |          |
| mother-in-law | mother in law                                  |          |

#### 4.3.2. Asterisk

Asterisk '\* is pronounced *multiplied by* if enclosed by digits and followed by equals sign '='. In other cases it is pronounced *asterisk*.

| Expression | Reading                            |
|------------|------------------------------------|
| 2*3        | two asterisk three                 |
| 2*3=6      | two multiplied by three equals six |
| *bc        | asterisk 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                                 |
| 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 comma (not full stop). In order to achieve the right pronunciation the grouping must be done correctly.

The rules for grouping of numbers are the following:

- Numbers are grouped in groups of three starting at 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.

| Number | Reading                              |
|--------|--------------------------------------|
| 2580   | two thousand five hundred and eighty |
| 2 580  | "                                    |
| 2,580  | "                                    |
| 25800  | twenty-five thousand eight hundred   |
| 25 800 | "                                    |
| 25,800 | "                                    |
|        |                                      |

| Number         | Reading   |
|----------------|---|
| 2580350        | two million five hundred and eighty thousand three hundred and fifty                                      |
| 2 580 350      | "   |
| 2,580,350      | "   |
| 100000000      | one billion   |
| 23 456 789 012 | twenty-three billion four hundred and fifty-six million seven hundred and eighty-nine thousand and twelve |
| 1234567890123  | one two three four five six seven eight nine zero one two three   |

#### 5.2. Leading zero

Numbers that begin with 0 (zero) are read as a whole number, with a zero preceding it.

| Number | Reading  |
|--------|--|
| 09253  | zero nine thousand two hundred and fifty-three |
| 020    | zero twenty                                    |

#### 5.3. Decimal numbers

Comma or full stop may be used when writing decimal numbers.

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*. The decimals (the part after comma or full stop) are read as separate digits. Note: A number containing a comma 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*.

| Number   | Reading  |
|----------|--|
| 16.234   | sixteen point two three four                           |
| 3.1415   | three point one four one five                          |
| 1251.04  | one thousand two hundred and fifty-one point zero four |
| 1,251.04 | one thousand two hundred and fifty-one point zero four |
| 2,50     | two comma five zero                                    |
| 2.50     | two point five zero                                    |
| 3,141    | three thousand one hundred and forty-one               |

#### 5.4. Currency amounts

The following principles are followed for currency amounts:

- Numbers with zero or two decimals preceded or followed by either the currency markers *£*, *\$*, *¥* or € or the abbreviations *EUR*, *USD* or *DM* are read as currency amounts.
- Numbers with zero or two decimals followed by the words *pounds, dollars, yen* or *euros* (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 *and nn pence*, *and nn cents*, or *and nn pfennigs* respectively.

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

| Example     | Reading                                      |          |
|-------------|--|----------|
| \$15.00     | fifteen dollars                              |          |
| 15.00 USD   | fifteen dollars                              | [not SP] |
| 15.00£      | fifteen pounds                               |          |
| 15.00 euros | fifteen euros                                | [not SP] |
| 15.00 EUR   | fifteen euros                                | [not SP] |
| € 200.50    | two hundred euros and fifty cents            |          |
| 15.45 DM    | fifteen deutschmarks and forty-five pfennigs | [not SP] |
| 1,000,000 ¥ | one million yen                              |          |

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

| \$ 1 million | one million dollars |
|--------------|---------------------|
|--------------|---------------------|

#### 5.5. Ordinal numbers

Numbers are read as ordinals in the following cases:

- The number is followed by a month name or one of the month name abbreviations and the number is smaller or equal to 31. The number may be preceded by a day or an abbreviation for a day.
- The number consists of a day interval followed by a month name/abbreviation.
- The number is followed by *st, nd, rd, th, d*.

The valid abbreviations for months are: Jan, Feb, Mar, Apr, Jun, Jul, Aug, Sept, Oct, Nov, and Dec.

The valid abbreviations for days are: Mon, Tue, Wed, Thu, Thurs, Fri, Sat, and Sun.

The abbreviations above are only expanded to names of months and days when appearing in correct date contexts.

| Expression            | Reading                               |          |
|-----------------------|---------------------------------------|----------|
| 3 January             | the third of January                  | [not SP] |
| 3 Jan                 | the third of January                  | [not SP] |
| Tuesday 3 Jan         | Tuesday the third of January          | [not SP] |
| 15-16 January         | the fifteenth to sixteenth of January | [not SP] |
| 2nd May               | the second of May                     | [not SP] |
| 4th Jun 2007          | the fourth of June 2007               | [not SP] |
| the 21st Century      | the twenty-first century              |          |
| her 22nd novel        | her twenty-second novel               |          |
| in 3rd place          | in third place                        |          |
| a 77th birthday party | a seventy-seventh birthday party      |          |

#### **5.6. Arithmetic operators**

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

| Expression | Reading                            |
|------------|------------------------------------|
| -12        | minus twelve                       |
| 14-2       | fourteen dash two                  |
| 14-2=12    | fourteen minus two equals twelve   |
| +24        | plus twenty-four                   |
| 2+3        | two plus three                     |
| 2+3=5      | two plus three equals five         |
| 2*3        | two asterisk three                 |
| 2*3=6      | two multiplied by three equals six |
| 2/3        | two thirds                         |
| 6/2=3      | six divided by two equals three    |
| 25%        | twenty-five percent                |
| 3.4%       | three point four percent           |

#### 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    | seventy-seven B eighty-four Z three   |
| 0092B87-B  | zero zero ninety-two B eighty-seven B |

#### 5.8. Time of day

The colon is used to separate hours, minutes and seconds. Abbreviations such as *A.M.* and *P.M.* (possible variants: *a.m., am, AM, p.m., pm, PM*) may follow or precede the time, with a space inserted between the time and the abbreviation.

In pattern *a* below, the letter *h* or *H* may replace colon. Full stop is also a valid separator if one of the mentioned abbreviations is used.

Time intervals can be denoted using a hyphen: 8-10 pm.

Possible patterns are:

- a. hh:mm or h:mm
- b. *hh:mm:ss* or *h:mm:ss*
- c. hh:mm'ss" or h:mm'ss"

Example: 12:30'45"

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

In pattern a:

If the *mm*-part is equal to *00*, this part will not be read. Instead, *o'clock* will be added if the hours are less than 13, or *hundred hours* will be added if the hours are greater than or equal to 13.

| Expression | Reading                |          |
|------------|------------------------|----------|
| 9:00       | nine o'clock           |          |
| 9h00       | nine o'clock           | [not SP] |
| 9:30 pm    | nine thirty p m        |          |
| 9h30 pm    | nine thirty p m        | [not SP] |
| 9.30 pm    | nine thirty p m        | [not SP] |
| 13:00      | thirteen hundred hours |          |
| 13h00      | thirteen hundred hours | [not SP] |
| 12:00      | noon                   |          |
| 12h00      | noon                   | [not SP] |
| 0:00       | midnight               |          |
| 0h00       | midnight               | [not SP] |

In pattern b:

An *and* will be inserted before the *ss*-part, and *seconds* will be added after it. If the *ss*-part is equal to *00*, this part will not be read.

| Expresion     | Reading                            |
|---------------|------------------------------------|
| 10:24:00      | ten twenty-four                    |
| 10:24:00 A.M. | ten twenty-four a m                |
| 10:24:20      | ten twenty-four and twenty seconds |

In pattern c:

Pattern (c) follows the rules for pattern (b).

#### 5.9. Year

Numbers between 1100 and 1999 are always read as hundreds (year reading) with the exception of numbers containing decimals. Years (2 or 4 digits) can also be followed by s or s to indicate decades.

| Expression     | Reading  |          |
|----------------|--|----------|
| 1988           | nineteen eighty-eight                                      | [not SP] |
| 1939-45        | nineteen thirty-nine to forty-five                         | [not SP] |
| 1088           | one thousand eighty-eight                                  |          |
| 1988.0         | one thousand nine hundred and eighty-eight point zero      |          |
| 1988.32        | one thousand nine hundred and eighty-eight point three two |          |
| September 1999 | September nineteen ninety-nine                             | [not SP] |
| 1980s          | nineteen eighties  | [not SP] |
| 70's           | seventies  |          |
| 1980's         | nineteen eighties  | [not SP] |

#### 5.10. Dates

The valid formats for dates are:

- 1. *dd-mm-yyyy*, *dd.mm.yyyy*, and *dd/mm/yyyy*
- 2. *dd-mm-yy*, *dd.mm.yy*, and *dd/mm/yy*

*yyyy* is a four-digit number, *yy* is a two-digit number, *mm* is a month number between 1 and 12 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:                 | Reading                                      |
|-------------------------|--|
| 10-02-2003 or 10-2-2003 | the tenth of February two thousand and three |
| 10.02.2003 or 10.2.2003 | "  |
| 10/02/2003 or 10/2/2003 | "  |
|                         |  |

| Туре 2:             | Reading                                      |
|---------------------|--|
| 10-02-03 or 10-2-03 | the tenth of February two thousand and three |
| 10.02.03 or 10.2.03 | и  |
| 10/02/03 or 10/2/03 | ű  |

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

| Expression    | Reading                                       |
|---------------|---|
| 1998-1999     | nineteen ninety-eight to nineteen ninety-nine |
| 1939-45       | nineteen thirty-nine to forty-five            |
| 2002/3        | two thousand two to three                     |
| 14-15 January | the fourteenth to fifteenth of January        |
| October 19-20 | October the nineteenth to twentieth           |

[not SP] Other possible formats include:

| Expression         | Reading  |
|--------------------|--|
| Monday, 15 January | Monday the fifteenth of January                |
| Monday 15 January  | Monday the fifteenth of January                |
| Mon, January 15    | Monday January the fifteenth                   |
| Mon January 15     | Monday January the fifteenth                   |
| 19 April 2007      | the nineteenth of April two thousand and seven |
| April 19 2007      | April the nineteenth two thousand and seven    |
| May 1953           | May nineteen fifty-three                       |
| 3 May              | third of May                                   |

#### 5.11. Phone numbers

In this section the patterns of digits that are recognized as phone numbers are described. [not SP] In the pronunciation of phone numbers, all numbers are read out digit by digit with pauses between groups of numbers. The abbreviations *tel* and *mob* can be used in front of all the formats recognized by the system

#### 5.11.1. 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 hyphen:

#### Format

(area code) xxxx xxxx (area code) xxxxxxx (area code) xxxxxx (area code) xxxxxx (area code) xxx xxxx (area code)-xxx-xxxx

The area code is a sequence of 0 followed by 2 to 7 digits.

The following sequences can only appear in these formats:

#### Format

XXXX/XXX-XXXX XXX/XXX-XXX XXX-XXX-XXX (X)-XXX-XXX (X)-XXX-XXX (X)-XXX-XXX (X).XXXX.XXX.XXX (X)-XXXX-XXX-XXX (XX)-XXXX-XXX-XXX (XX)-XXXX-XXX-XXX (XXX)-XXXX-XXX-XXX

The sequence *xxx-xxx* is recognized as a phone format only if preceded by *tel, mob, tel:, mob:*.

#### 5.11.2. International phone numbers

All preceding formats can be recognised if preceded by international prefix and a space:

| 00x   | +x   | 00(x)   | +(x)   |
|-------|------|---------|--------|
| 00xx  | +xx  | 00(xx)  | +(xx)  |
| 00xxx | +xxx | 00(xxx) | +(xxx) |

## Chapter 6. How to change the pronunciation

Words that are not pronounced correctly by the text-to-speech converter can be entered in the user lexicon (see *User's guide*). In this lexicon, the user enters a phonetic transcription of the word (see chapter *British English Phonetic Text*). Phonetic transcriptions can also be entered directly in the text, using the *PRN* tag (see *User's guide*).

## Chapter 7. British English Phonetic Text

The British English text-to-speech system uses the British English subset of the SAMPA phonetic alphabet (*Speech Assessment Methods Phonetic Alphabet*) with some modifications. The symbols are written with a space between each phoneme.

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* tag.

#### 7.1. Consonants

| Word              | Phonetic text  | Comment   |
|-------------------|--|---|
| bad               | b {1 d   |   |
| stop<br>tomorrow  | s t Q1 p<br>t @ m Q1 r @U  |   |
| top               | t_h Q1 p   |   |
| sport<br>potato   | s p O:1 t<br>p @ t_h el1 t @U  |   |
| pad               | p_h {1 d   |   |
| date              | d el1 t  |   |
| scone<br>campaign | s k O1 n<br>k { m p_h el1 n  |   |
| cone              | k_h @U1 n  |   |
| gag               | g {1 g   |   |
| man               | m {1 n   |   |
| nose              | n @U1 z  |   |
| rose              | r @U1 z  |   |
| let               | l e1 t   |   |
| adult             | {1 d V L t   |   |
| ring              | r  1 N   |   |
| fat               | f {1 t   |   |
| vote              | v @U1 t  |   |
| sat               | s {1 t   |   |
| Z00               | z u:1  |   |
| shin              | S I1 n   |   |
| chin              | tS I1 n  |   |
| measure           | m e1 Z @   |   |
| gin               | dZ l1 n  |   |
| this              | D  1 s   |   |
| thin              | T l1 n   |   |
| wait              | w el1 t  |   |
| yacht             | j Q1 t   |   |
| hit               | h l1 t   |   |
| exhume            | e k s hj u:1 m   |   |
|                   | bad<br>stop<br>tomorrow<br>top<br>sport<br>potato<br>pad<br>date<br>scone<br>campaign<br>cone<br>gag<br>man<br>nose<br>rose<br>let<br>adult<br>ring<br>fat<br>vote<br>sat<br>zoo<br>shin<br>chin<br>measure<br>gin<br>this<br>thin<br>wait<br>yacht<br>hit | badb {1 dstopst Q1 ptomorrowt@ m Q1 r @Utopt_h Q1 psports p O:1 tpotatop @ t_h el1 t @Upadp_h {1 ddated el1 tscones k O1 ncampaignk { m p_h el1 nconek_h @U1 ngagg {1 gmanm {1 nnosen @U1 zroser @U1 zletl e1 tadult{1 d V L tringr l1 Nfatf {1 tvotev @U1 tsats {1 tzooz u:1shinS I1 nchint S I1 nmeasurem el Z @gindZ I1 nthisD I1 sthinT I1 nwaitw el1 tyachtj Q1 thith I1 t |

#### Table 7.1. Symbols for the British English consonants

| Symbol | Word     | Phonetic text | Comment            |
|--------|----------|---------------|--------------------|
| hl     | Llandaff | hl {1 n d @ f | Welsh allophone    |
| x      | loch     | l Q1 x        | Scottish allophone |

#### 7.2. Vowels

#### Table 7.2. Symbols for the British English vowels

| Symbol | Word        | Phonetic text       | Comment                           |
|--------|-------------|---------------------|-----------------------------------|
| A:     | father      | f A:1 D @           |                                   |
| O:     | four        | f O:1               |                                   |
| I      | bit         | b l1 t              |                                   |
| i:     | neat        | n i:1 t             |                                   |
| u:     | Z00         | z u:1               |                                   |
| V      | hut         | h V1 t              |                                   |
| U      | put         | p_h U1 t            |                                   |
| {      | pat         | p_h {1 t            |                                   |
| е      | net         | n e1 t              |                                   |
| @      | allow       | @ I aU1             |                                   |
| el     | main        | m el1 n             |                                   |
| al     | high        | h al1               |                                   |
| OI     | boy         | b Ol1               |                                   |
| @U     | nose        | n @U1 z             |                                   |
| aU     | pout        | p_h aU1 t           |                                   |
| 3:     | fur         | f 3:1               |                                   |
| Q      | dot         | d Q1 t              |                                   |
| I@     | near        | n I@1               |                                   |
| e@     | there       | D e@1               |                                   |
| U@     | sure        | S U@1               |                                   |
| i      | locally     | l@U1k@li            |                                   |
| u      | punctual    | p_h V1 N k tS u @ L |                                   |
| A~     | renaissance | r e n el1 s A~ s    | French vowel                      |
| E~     | vin         | v E~1               | French vowel                      |
| 0~     | avignon     | {1 v i n j O~       | French vowel                      |
| =      | battleaxe   | b {1 t l= { k s     | only before vowels                |
| L=     | battle      | b {1 t L=           | word finally or before consonants |
| m=     | atheism     | el1 Tilzm=          |                                   |
| n=     | sudden      | s V1 d n=           |                                   |
| r=     | history     | h  1 s t r= i       |                                   |

#### 7.3. Lexical stress

A lexical accent is used to indicate the level of prominence (or emphasis) of a syllable in a word. In British English, some words can be differentiated by the position of this lexical accent.

The word *record* is an example of this since it can be both a noun (*a record*: /r e1 k O: d/) or a verb (*to record*:  $/r I k_h O$ :1 d/). Practically all words in British English have a lexical accent even if it does not always serve to differentiate between two different words. It is therefore important to include stress marks when writing phonetic transcriptions.

In the phonetic transcriptions, primary accent is indicated by the symbol /1/ placed directly after (no space) the accented vowel. Secondary accent is indicated by the symbol /2/. Some examples:

| devastating | /d e1 v @ s t el2 t l N/ |
|-------------|--------------------------|
| devastation | /d e2 v @ s t el1 S n=/  |
| devote      | /d I v @U1 t/            |
| devotee     | /d e2 v @ t_h i:1/       |

#### 7.4. Glottal stop

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. This sound can be inserted in a transcription in order to improve the pronunciation.

#### 7.5. Pause

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

## **Chapter 8. Abbreviations**

In the current version of the British English text-to-speech system, the abbreviations in the table below are recognized in all contexts. These abbreviations are mostly case-insensitive (except for those indicated below by "\*") and require no full stop in order to be recognized as an abbreviation.

As previously mentioned, there are also abbreviations for the days of the week and the months (see chapter *Ordinal numbers*).

| Abbreviation | Reading             |
|--------------|---------------------|
| kg           | kilograms           |
| °C           | degrees Celsius     |
| °F           | degrees Fahrenheit  |
| °К           | degrees Kelvin      |
| asap         | ASAP                |
| b/f          | before              |
| blvd         | boulevard           |
| cm           | centimeters         |
| corp         | corporation         |
| DM*          | Deutschmark         |
| eg           | for example         |
| etc          | et cetera           |
| ft           | feet                |
| gal          | gallons             |
| gov          | governor            |
| hr           | hour                |
| hrs          | hours               |
| ie           | that is             |
| jr           | junior              |
| km           | kilometers          |
| Km/h         | kilometers per hour |
| mg           | milligrams          |
| ml           | milliliters         |
| mm           | millimeters         |
| mph          | miles per hour      |
| mr           | mister              |
| mrs          | missis              |
| ms           | miss                |
| mt           | mount               |
| prof         | professor           |
| sgt          | sergeant            |
| sr           | senior              |
| tsp          | teaspoon            |
|              |                     |

#### Table 8.1. Abbreviations

| Abbreviation | Reading    |
|--------------|------------|
| vs           | versus     |
| gen          | general    |
| Itd          | limited    |
| dept         | department |
| ct           | court      |
| rd           | road       |
| av           | avenue     |
| ctrl         | control    |
| lb           | pounds     |

Some abbreviations are expanded differently depending on their position in the sentence. For example, *dr* and *st* are expanded into *drive* and *street* if they appear after a capitalized noun. They are expanded into *doctor* and *saint* when they appear before a capitalized noun.

| Example     | Reading       |
|-------------|---------------|
| Main st.    | Main street   |
| St John.    | Saint John    |
| Bayview dr. | Bayview drive |
| Dr. Jones.  | Doctor Jones  |

*m*, *g* and *in*. are expanded only when appearing after a number.

| Example | Reading            |  |
|---------|--------------------|--|
| 25 m    | twenty-five meters |  |
| 30 in.  | thirty inches      | (note that the period is mandatory here) |
| 45 g    | forty-five grams   |  |

## 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 *dot*, hyphens '-' as *dash*, underscore '\_' as *underscore*, slash '/' as *slash*.
- *us, uk, fr* and all the other abbreviations for countries are spelled out letter by letter.
- The @ is read at.
- 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 dot acapela dash group dot com                              |
| http://www.acapela-group.com | h t t p colon slash slash w w w dot acapela dash group<br>dot com |
| smith@yahoo.uk               | smith arobas yahoo dot u k  |
| jane_smith@yahoo.uk          | jane underscore smith arobas yahoo dot u k                        |