

Writing for Text to Speech (TTS).

Introduction.

Visual presentation.

Writing for TTS.

Details.

1. **Punctuation.**
2. **Numbers.**
3. **Layout.**
4. **Abbreviations.**
5. **Words.**

Amending pronunciation for individuals.

Amendments for Audio files.

In Summary:

Do:

Don't:

We cannot help these:

The following observations arise from using Word and PDF files, with:

- Texthelp Read & Write v10 voice Cereproc Tina;
- ClaroRead v6.2.7 and SaySo voice v1.04 Nuance RealSpeak Daniel;
- Kurzweil 3000 v12.17 voice NeoSpeech VW Julie;
- Free Ivona MiniReader Microsoft Anna and Acrobat Reader X default voice.

Most of the 'funnies' come from B.D.A. publications.

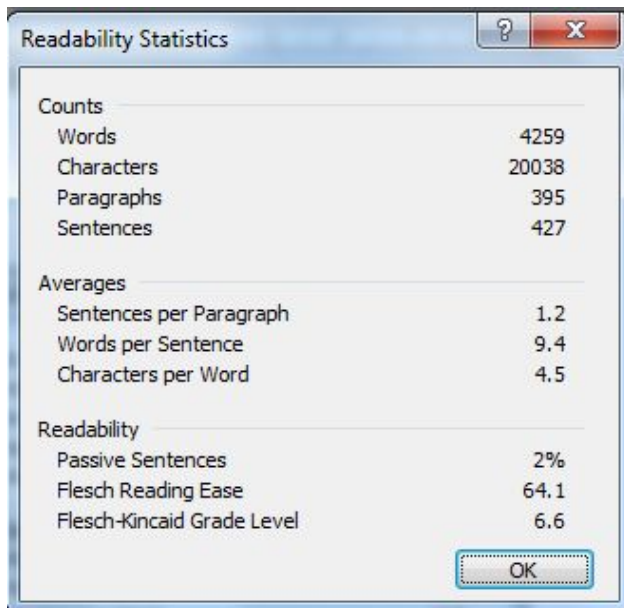
Introduction.

Visual presentation.

Organisations such as [R.N.I.B.](#), [TechDis](#), [Call Scotland](#) and [Load2Learn](#) give advice about setting out visual presentation of documents for easier reading by dyslexic readers.

As stated in the [B.D.A. dyslexia style guide](#), we recommend:

- **PDF files** to preserve the display in printed versions, and very adaptable **Word files** for setting one's own preferences.
- **Styles** in Word for Headings for Word Navigation Pane or Document Map, for Bookmarks in PDF files, and other Styles for consistency. (In Word, Home ribbon, the link 'Styles' is on the right of the bottom row of options.)
- **Bookmarks** for internal links in Word, which will also operate in PDF files.
- Thick, matt, cream or pastel **paper** for printing.
- Sans serif **font**, 12 to 14 point, dark colour on light background.
- **Bold** for headings or emphasis, but not italics, underlining or capitals.
- **Left justified, line length** 60 to 70 character, **line-spacing** of at least 1.5, **letter-spacing**, try 0.1 point or more.
- **Bullet points** and manual **numbering** to break up text, (see [comment about automated numbering](#)), **borders** but not text boxes (see [samples](#)).
- **Short**, simple sentences, **active** not passive verbs, **concise** text and short **paragraphs**. Visual reading and TTS are time-consuming and exhausting for dyslexic users.
- Checking **Readability**.



Readability Statistics	
Counts	
Words	4259
Characters	20038
Paragraphs	395
Sentences	427
Averages	
Sentences per Paragraph	1.2
Words per Sentence	9.4
Characters per Word	4.5
Readability	
Passive Sentences	2%
Flesch Reading Ease	64.1
Flesch-Kincaid Grade Level	6.6

Writing for TTS.

There is very little information about writing documents so that they sound sensible with TTS (Text to Speech). [Text2Go](#) provision for audio files gives some pointers about pauses, vocalising hyphens in number ranges and removing references, all of which are included in this document.

The speech engines are improving, but still say some odd things. We cannot avoid some 'funnies', so we should do everything possible to amend ones that we can express more suitably.

The only way to identify the funnies is to listen, which is very time-consuming. And, listen without following in the text! Can you hear every word?

However, do not assume that what your software says is what everyone else hears. Each family of voices say different 'funnies' and vary in different applications and platforms. For example, speech within Kurzweil 3000 is slightly different from an audio file made using the same Julie voice. Serena says different funnies in ClaroRead and SaySo. The voices may pronounce words differently in context and singly.

[Page 4.]

The file of the best possible source document will sound good in anyone's computer or device, in any application, in any platform, and will need fewer amendments for other formats, such as audio files.

1. Punctuation.

The easiest improvement is punctuation. If a human reader would pause and let his or her voice drop, we need to indicate this in text.

1.1. Titles and sub headings.

Some TTS will pause at hard return line ends, but not all. So **always put stops**. (Moreover, stops will appear to improve reading level calculations, because they show shorter sentences.) One dyslexic adult has said that stops in headings give her visual stress. An ingenious solution was very pale coloured stops which were invisible. These have to be formatted manually, and would show if the reader used a tinted background colour.

Try these:

Without stops

Main heading

Sub-heading 1

Sub-heading 2

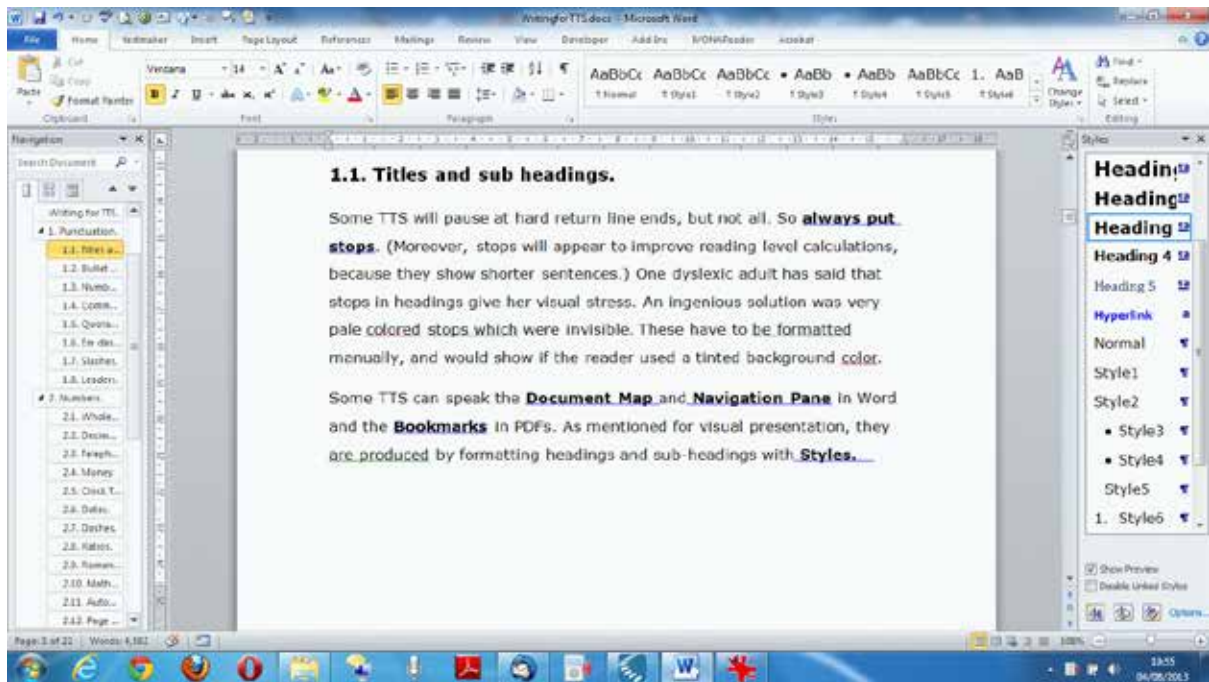
With stops.

Main heading.

Sub-heading 1.

Sub-heading 2.

Some TTS can speak the **Document Map** in Office XP and **Navigation Pane** in Office 2007 and 2010 and the **Styles** in Word and the **Bookmarks** in PDFs. As mentioned for visual presentation, they are produced in Word by formatting headings and sub-headings with **Styles**.



1.2. Bullet points.

Use stops or semi-colons after each bullet point. It is quite grammatically suitable to put them, but writers often do not bother with them. Otherwise, TTS may rattle through them at a gabble (and they too will be considered as very long sentences for reading levels.) Even where it seems ungrammatical, stops are best for TTS that high-lights one sentence at a time. A very long list of bullet points, without stops, appears to be just one sentence, which would be unhelpful for eye tracking.

Try these:

- Bullet one
- Bullet two
- Bullet three
- Bullet four;
- Bullet five;
- Bullet six.

TTS may vocalise bullet points, especially fancy ones. SaySo even says the basic ones,

Try these:

- It is odd to hear an ordinary bullet say 'middle dot'.

[Page 6.]

- o An empty circle may say 'oh'.
- ∅ An arrow may say something indecipherable.
- § A square dot may say 'section'.

1.3. Numbered lists.

Stops after manual numbers in lists are even more necessary. Don't you pause when reading numbered lists aloud? 2 and 4 sound the same as 'to' and 'four', which, if not separated by stops, may confuse comprehension of the text. (See below re [automated list numbers](#).)

Try these:

Without stops:

- 1 One two three;
- 2 Four five six;
- 3 Seven eight nine;
- 4 Ten eleven twelve.

With stops:

1. One two three;
2. Four five six;
3. Seven eight nine;
4. Ten eleven twelve.

1.4. Commas and colons.

An [e-learning technology blog](#) says: "The judicious use of punctuation goes a long way towards making the voices more expressive and precise, **especially the comma and the colon.**"

Compare:

Notice where you pause when reading aloud and put relevant punctuation.	Notice where you pause, when reading aloud, and put relevant punctuation.
---	---

1.5. Quotation marks.

Some TTS vocalises 'smart single quotes', or 'curly quotes', so please use **'straight single quotes'**, (for apostrophes too) and therefore **"straight double quotes"** for consistency".

[Page 7.]

A real funny happens if a single quote ends with a number, TTS may say **'feet'**, and a double quote after a number might say **'inches'**. That happened in an audio file but not directly in the software with the same voice.

Try these:

B.D.A. celebrated its fortieth year with a '40 by 40' list of tips.

B.D.A. celebrated its fortieth year with a "40 by 40" list of tips.

1.6. Dashes.

Rules vary for use of **hyphens**, - , **en dash**, – , and **em dash**, — , with and without spaces. When they are between words, TTS usually ignores them suitably. An **em dash** may insert a half second pause, but don't rely on it. If you want a pause, it is probably better to put a comma or colon or a stop. Dashes in number ranges are discussed in the [Numbers section](#).

Try these:

- half-an-hour.
- The rest – as they say – is history.
- B.D.A. website — www.bdadyslexia.org.uk

1.7. Slashes.

Would you say 'slash' when you were reading aloud? It sounds even worse if the slash is ignored.

Try these:

- **dyslexia/dyspraxia**, (even with spaces **dyslexia / dyspraxia**).
- **S/he** is not spoken sensibly.
- However, TTS usually says **'and/or'** suitably as 'and or'.

Apart from 'and/or', do not use slashes with words. See [Dates](#) for slashes with numbers.

1.8. Leaders.

Leader lines in contents list etc. are good visually for drawing one's eye across the page to the relevant number. However, TTS sometimes verbalises them as 'horizontal ellipsis', 'dash' or 'underscore' repeated many, many times, in a PDF, even if not in the source Word file.

Try these:

First article. 3.

Second article. ----- 5.

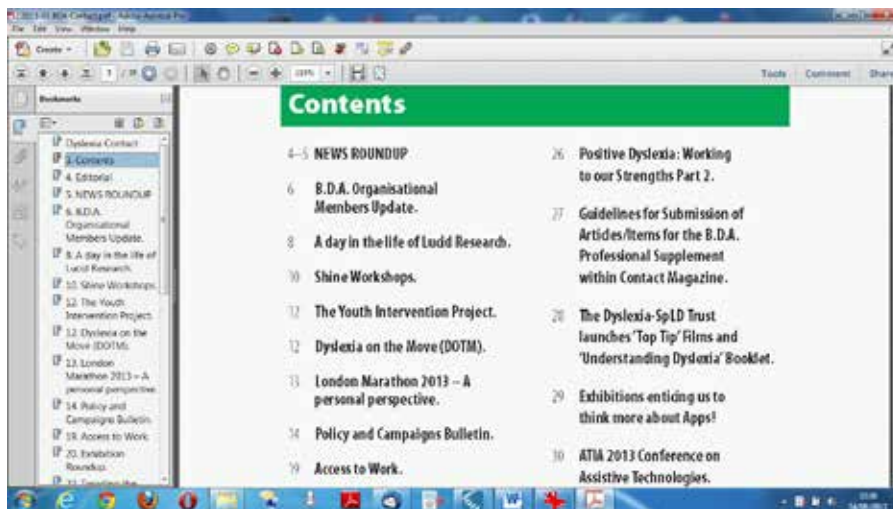
Third article. _____ 7.

Avoid leaders in contents lists, by putting the page numbers first (remembering stops for pauses).

3. First article.

5. Second article.

7. Third article.



1.9. Horizontal ellipsis.

Try this:

TTS may vocalise those three dots, which occasionally trail off a sentence in a book, a magazine article, a newspaper ... They do not even pause, so it would be better to put 'etc.'

2. Numbers.

2.1. Whole numbers.

We say millions, thousands and hundreds and so does most TTS. However, we say, e.g. Charity Numbers and ISBNs as single digits. TTS does not. We cannot do anything about that.

Try these:

Population **1,234,567** and Registered Charity Number **1234567890**.

2.2. Decimals.

Try this:

We say **123.456** as whole number, point, single digits. All TTS does that.

2.3. Telephone numbers.

We say them as single digits, starting with Oh or Zero, sometimes saying e.g. double six. All TTS says the area code as digits, but there is no version of the ending that all TTS say suitably.

Try these:

- Tel: 01234 566789.
- Tel: 01234 566 789.
- Tel: 01234-566-789.
- Tel:01234 566 789.

Tel: 01234 566 789 suits more TTS, and looks the best visually for reading in chunks. Some TTS say Telephone in full.

2.4. Money.

TTS does well with money.

Try these:

[Page 10.]

- TTS says **£123.45**, as pounds and pence;
- and **\$123.45** as dollars and cents;
- and **€123.45** as euros and cents.

2.5. Clock Times.

Try these:

- Logically, TTS says **12.45** as a decimal.
- Put a colon and write **12:45** to hear twelve forty-five.

Some TTS says 'am' as a word.

Try these:

- 12:45am,
- 12:45a.m.,
- 12:45 am,
- 12:45 a.m.

12:45a.m., or 12:45 a.m. suit more TTS.

2.6. Dates.

Most voices say First, Second, Third, Fourth, (1st, 2nd, 3rd, 4th) etc. automatically for the **day** numbers. So you do not need to put 'st, nd, rd, th', which is an odd convention anyway. US TTS is likely to say the **month** first in numbered dates. UK voices may say numbered dates as digits. TTS says **years** recognisably, tho one says 1945 oddly.

Try these:

- TTS says **2013** well, but one says 1945 oddly.
- UK voices say **10/04/2013** as numbers or as tenth April 2013.
- US voices say **10/04/2013** as October fourth!

[Page 11.]

- **So please put the month as a word, e.g. 10 April 2013.**

Some TTS says **2011/12** as December 2011, or as digits, or say slash, or even think it is a division sum and say 2011 over 12.

Try this:

- Access to apprenticeships fell to 8.2 per cent in **2011/12**.

If you mean '2011 **and** 2012', please write it.

2.7. Dashes.

We do not want any vocalisation for hyphens, en dashes or em dashes between words, and TTS complies. However, in number ranges, the dash means '**to**' so please write it. House styles vary about which dash to use, and whether to have spaces on either side. TTS may say 'to' suitably, but is more likely to pause, or say 'dash', or 'minus' or even '5 the 10th July', or even 'May 10 July'.

Try these:

- In dates, 5-10 July means 5 to 10 July.
- In ages, 5–10 years means 5 to 10 years.
- In times, 5—10pm means 5 to 10pm.
- In references, pp 5–10 means pp 5 to 10.
- In years, 1923—2008, means 1923 to 2008.

An obituary notice 1923 — 2008 really did say 1923 **minus** 2008!

2.8. Ratios.

Try this:

- We say **1:1** as one **to** one, so please write it. TTS says variously to, colon or ignores the sign.

2.9. Roman numerals.

Logically, TTS says most of them as words or letter-names, particularly if they are in lower case. **So do not write roman numerals.**

Try these:

- | | | |
|----------------------|----------------------|-----------------------|
| i) roman numerals. | (iv) roman numerals. | vii. roman numerals. |
| ii) roman numerals. | (v) roman numerals. | viii. roman numerals. |
| iii) roman numerals. | (vi) roman numerals. | ix. roman numerals. |
| | | x. roman numerals. |

Capitals letters of roman numerals are better.

Try these:

- Charles I, Elizabeth II, Richard III, George IV, Edward V, George VI, Edward VII, Edward VIII, Louis IX, Louis X.

VI may be spoken as letter names meaning Visually Impaired or Vi as for the name Violet or as 6, not necessarily correctly for the contexts.

2.10. Maths signs.

Nearly all TTS will say plus for + and divided by for ÷, but understandably does not say minus for – which is usually ignored, (but might for an en dash) or times for x, which is said as the letter name. We cannot do anything about this.

Try these.

- $6+4=10$ and $24\div 6=4$ are usually said better than $10-6=4$ and $6\times 4=24$.

2.11. Automated numbers.

Some TTS do not say automated numbers, so please **use manual number lists**. Dyslexic visual readers and listeners all like numbers for

[Page 13.]

reference and navigation. We need stops after numbers to make the voices pause.

Try these:

Automated:

1. Green grass.
2. Blue sky.
3. Red rose.
4. White wedding.

Manual

1. Green grass.
2. Blue sky.
3. Red rose.
4. White wedding.

2.12. Page numbers.

Visual readers may want to increase the font size or the spacing, which changes the pagination. So we should show the original **page numbers manually, at the top of the page**, for reference to the contents list and the printed copy. TTS does not speak page numbers and other text in headers or footers in Word. It usually says them in derived PDF files, but not necessarily in a suitable reading order. For audio files it is essential to have page numbers spoken at the top of the page, for anyone wanting to refer to the printed copy.

Try this:

- Load2Learn advocates putting **[p7]** manually as reference to the printed version. SaySo says that as 'page', but the other TTS just say the letter-name, so it is better to put **[page 7.]**.

It is disconcerting when TTS says page numbers in the middle of a sentence split between one page and the next, (sometimes even in the middle of a hyphenated word!) but we cannot help that.

2.13. Footnotes.

Do not use footnotes. TTS does not speak the footnote text that appears in a little window when you hover over the number. Dyslexic

[Page 14.]

readers, who scroll to the bottom of the page to hear the footnote, may not be able to find the place in the page again.

Footnote text, at the bottom of a page, is usually in very small font-size, particularly the footnote number, which has a link back to the context. TTS ignores footnotes and carries on to the next page.

If you click on a footnote, TTS speaks all the footnotes in the documents continuously.

If the footnote item is a number, all TTS will include the footnote number, e.g. will say **2013**¹ as twenty thousand one hundred and thirty-one.

¹ Footnotes are very difficult for TTS.

3. Layout.

3.1. Borders, not boxes.

Text-boxes like these two are advocated for breaking up dense blocks of text, and are spoken well in PDF files.

TTS ignores textboxes in continuous reading in Word. Users have to click on each box in turn to hear it.

Please use **borders**, like this one, instead of text-boxes. In Word, continuous reading will include text in borders. It may be easier if you type plain text, insert the border and then format your text with bullet points etc.

3.2. No empty lines.

RNIB and Load2Learn say that empty lines are difficult for screen readers for visually impaired people. So please **use styles** to control line spacing, and insert page breaks.

3.3. No interruptions in articles.

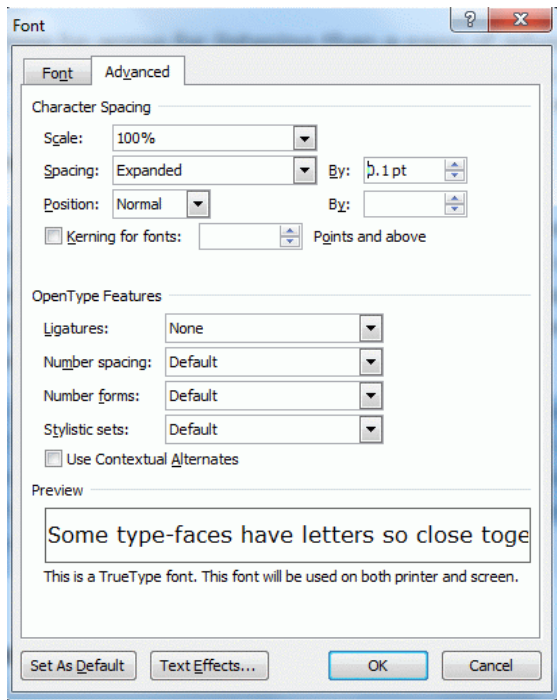
Could anything be worse for listening than a page of advertisements in the middle of a multi-page article? Yes, a page of adverts in the middle of a sentence, or even in the middle of a hyphenated word!

3.4. Letter-spacing.

Some type-faces have letters so close together that scanners may convert them, or TTS may speak them as if joined, e.g. cl as d, fi as fl, rn as m, as in 'modern' interpreted as 'modem'. Even minimal expanded letter spacing of .1 point may help this situation. Research suggests that expanded line spacing may help children with reading.

Try this version using .1 expanded letter spacing.

Some type-faces have letters so close together that scanners may convert them, or TTS may speak them as if joined, e.g. cl as d, fi as fl, rn as m, as in 'modern' interpreted as 'modem'. Even minimal expanded letter spacing of .1 point may help this situation. Research suggests that expanded line spacing may help children with reading.



4. Abbreviations.

4.1. Capital letter initialisms and acronyms.

BDA or B.D.A.? This is perhaps the most controversial item in writing for TTS. It is conventional for British publishers not to put stops. Stops are more common in American house styles. All TTS says BDA as letter names, but it is a good idea, as a principle, to put B.D.A. with stops, as a reminder of all the recommendations in this document!

Stops in headings and in initialisms cause visual stress to one dyslexic reader. One dyslexic adult says stops widen sets of initials so that he takes in fewer words in each eye movement. We sympathise with them, but B.D.A. Chief Executive ruled that **we should give priority to dyslexic people who are dependent on Text to Speech** by making initialisms sound right for them.

House styles recommend consistency, i.e. stops in all initialisms or none. Stops are unnecessary in consonant initialisms, e.g. BBC, BT and PhD, which TTS says suitably as letter-names. However, TTS will say initialisms with vowels as words. We want to hear acronyms like SENCo and AMBDA

as words, but not initialisms such as NUT, HE, OBE, and many more.

Put stops in vowel initialisms that we do not say as words.

Writing convention says that one should give the full term in the first instance of an initialism, and that letters are acceptable thereafter.

However, dyslexia readers may not be able to remember what they mean, nor be able to find the full term again, nor return to the reading place. They have similar difficulties with a glossary. Listeners to audio files cannot jump about anyway. So it is really better to use the full terms all the time.

Try these with your TTS.

- ADD means Attention Deficit Disorder, so try A.D.D.
- ADHD means Attention Deficit with Hyperactivity Disorder, so try A.D.H.D.
- AT means Assistive Technology, so try A.T.
- BA means Bachelor of Arts, so try B.A.
- BDA is spoken correctly by TTS, but as a matter of principle, try B.D.A.
- CEO means Chief Executive Officer, so try C.E.O.
- DfE means Department for Education, so try D.f.E.
- EAL means English as an additional language, so try E.A.L.
- FE means Further Education, so try F.E.
- HE means Higher Education so try H.E.
- HEI means Higher Education Institute, so try H.E.I.
- ICT means Information and Communication Technology, so try I.C.T.
- IT means Information Technology, so try I.T.
- ITT means Initial teacher training, so try I.T.T.
- LA may mean Local Authority but also means Los Angeles.
- NUT means National Union of Teachers, so try N.U.T.
- OBE means Order of the British Empire, so try O.B.E.

[Page 18.]

- OM means Organisational Member. O.M. is ok but O.M.s is a problem.
- OT means Occupational Therapist, so try O.T.
- PE means Physical Education, so try P.E.
- RNIB means Royal National Institute for the Blind, so try R.N.I.B.
- RNID means Royal National Institute for the Deaf, so try R.N.I.D.
- SEN means Special Educational Needs, so try S.E.N.
- VI means Visually Impaired or 6. (see [Numbers, Roman numerals](#)).

We do want these spoken as words,

- **AMBDA** meaning Associate Member of the British Dyslexia Association, tho conversely some TTS says them as letters;
- **BATA**, meaning the British Assistive Technology Association is spoken as batter;
- **SENCo** meaning Special Education Needs Co-ordinator.

Funnies.

TTS says the full terms of a few consonant initialisms but not necessarily a relevant meaning for the context, e.g.

- **HR** as hours instead of Human Resources, so try H.R.
- **MS** Word and MS Anna as millisecond or manuscript or mizz as in Ms, or Mississippi, instead of Microsoft, so try M.S.

Fortunately, MS Anna says **TTS** as Text to Speech.

(Believe it or not, Daniel in ClaroRead in Word says the first MS Anna as manuscript and the second as Mississippi!)

A and **a** are usually indefinite articles, which we, and TTS, say suitably as a schwa ə, or 'uh'. So TTS cannot cope in other contexts.

Try these:

- A Level, A-Level, AS and A2 examinations,
- nor always with **a.** or **a)** in a lettered list.

4.2. Lower-case abbreviations.

Not all TTS knows that **No.** means Number, **Vol.** means Volume. **mins** means minutes not minimums, or that **pt**, as in Arial 12pt, means point, not pint, platinum, part or letter names.

Most TTS says **eg** and **eg.** as 'egg'. It says **e.g.** suitably as letter-names or 'for example', though Tina in Read & Write surprisingly still says 'egg'.

TTS sometimes say **ie** as 'ee', sometimes suitably as 'eye ee'. It says **i.e.** suitably as letter-names or 'that is', though Tina surprisingly still says 'ee'.

4.3. Days and months.

When we abbreviate **names of days and months**, most TTS will say the full words in context. However, it was strange to hear 'January' in "Well done Jan." And Sunday in "The article was in the Sun".

Oddly, TTS says days with stops as 3-letter words, and months with stops have too long a pause. So both are better without stops.

Try these.

- The event will be on **Sun** 1 **Jan** 2014 or **Sun.** 1 **Jan.** 2014.
- The event will be on **Mon** 1 **Feb** 2014 or **Mon.** 1 **Feb.** 2014.
- The event will be on **Tues** 1 Mar 2014 or **Tues.** 1 Mar. 2014.
- The event will be on **Wed** 1 Apr 2014 or **Wed.** 1 Apr. 2014.
- The event will be on **Thurs** 1 May 2014 or **Thurs.** 1 May 2014.
- The event will be on **Fri** 1 Jun 2014 or Fri. 1 **Jun.** 2014.
- The event will be on **Sat** 1 Jul 2014 or Sat. 1 **Jul.** 2014.
- The event will be on 1 **Aug** 2014 or 1 **Aug.** 2014.
- The event will be on 1 **Sep** 2014 or 1 **Sep.** 2014.
- The event will be on 1 **Oct** 2014 or 1 **Oct.** 2014.

[Page 20.]

- The event will be on 1 **Nov** 2014 or 1 **Nov.** 2014.
- The event will be on 1 **Dec** 2014 or 1 **Dec.** 2014.

4.4. Oddities.

TTS understandably has problems with **Dr** and **Dr.** meaning Doctor and Drive, and with **St** and **St.** meaning Saint and Street.

Try these:

- **Dr** Scott lives in Oxford **Dr** and **St** David's College is in Oxford **St**, London.
- **Dr.** Scott lives in Oxford **Dr.** and **St.** David's College is in Oxford **St.**

5. Words.

5.1. Compound words.

Put **hyphens in compound words**, because TTS does not always know where to split them. Hyphenated words are easier for visual readers too.

Try these:

- **Broadband** sounds better as **broad-band**.
- **Database** sounds better as **data-base**.
- **Downloaded** sounds better as **down-loaded**.
- **Email** is ok but **ebooks**, sounds better as **e-books**.
- **Freeware** sounds better as **free-ware**.
- **Fundraising** sounds better as **fund-raising**.
- **Hardware** sounds better as **hard-ware**.
- **Helpliners** sounds better as **help-liners**.
- **Mindmap** sounds better as **mind-map**.
- **Neurodiverse** sounds better as **neuro-diverse**.
- **Notepad** sounds better as **note-pad**.
- **Notetaker** sounds better as **note-taker**.
- **Placeholder** sounds better as **place-holder**.
- **Salesforce** sounds better as **sales-force**.

- **Screenshot** sounds better as **screen-shot**.
- **Signup** sounds better as **sign-up**.
- **Slideshow** sounds better as **slide-show**.
- **Spokesperson** sounds better as **spokes-person**.
- **Stakeholder** sounds better as **stake-holder**.
- **Textreaders** sounds better as **text-readers**.
- **Toolbar** sounds better as **tool-bar**.
- **Touchpad** sounds better as **touch-pad**.
- **Webcam** sounds better as **web-cam**.
- **Webpages** sounds better as **web-pages**.
- **Wildlife** sounds better as **wild-life**.
- **Wordpad** sounds better as **word-pad**.

5.2. Two ways.

TTS makes mistakes with words with two pronunciations for different meanings. Some are related nouns and verbs with stress on different syllables. Some have totally unrelated meanings. TTS does remarkably well with these homographs, according to context, but not always.

Try these.

- Robin Hood had a **bow** and some arrows.
- David tied a **bow** in his trainers.
- You must **bow** to the Queen.

- The guests enjoyed the **buffet** at the reception.
- I saw the wind **buffet** the trees.

- I had the dog on the **lead**.
- The flag-bearer will **lead** the procession.
- The thieves stole the **lead** from the church roof.

- The boy **learned** his spellings for the test.
- The professor was a very **learned** man.

- Where do you **live**?
- The B.D.A. International Conference is at G **Live**, Guildford.

- Wait a **minute**.
- The dyslexic sculptor makes **minute** images.

- The boy went for a ride on his **moped**.
- The dog **moped** when the family went on holiday.

- I saw a valuable **object** on the Antiques Road-show.
- Does your aunt **object** to watching tennis matches.

- Will the Queen **present** the prizes?
- Is there a quorum of members **present**?
- A tennis racquet was my best birthday **present**.

- Can he **produce** his M.O.T. certificate?
- He sold the farm **produce** in the market.

- They worked together on their homework **project**.
- I hope we can **project** the image on the screen.

- How long will it take you to **read** the book?
- When I was on holiday, I **read** four books.

- B.D.A. used to have an office in **Reading**, Berkshire.
- The Oxford **Reading** Tree is a school scheme.

- Please **record** the television programme for later viewing.
- Do tell me, off the **record**.

- Did Mary **refuse** to help?
- Take the **refuse** out to the bins.

- Our seats were in the front **row** in the theatre.
- The sailors will **row** the boat across the lake.
- The man stormed out after a big **row**.

- John was nominated and **seconded** for the post.
- The staff member was **seconded** to the charity for a year.
- The film was so sad, the girl was in **tears**.
- The shredding machine **tears** up all the papers.
- You can **wind** a watch or **wind** up a speech.
- When the **wind** blows, the cradle will rock.

5.3. Other words.

TTS does say the majority of words suitably but **there are words that TTS does not get right yet.**

Dyslexic readers may:

- think they have always said the word wrongly;
- think that it is a new word for them to learn;
- not realise that the voice is doing a 'funny'.

Some voices do not say the following emboldened words correctly.

- Many web **addresses** sound very strange.
- **Bi-weekly** can mean every two weeks, or twice a week.
- Technology tools can be used to develop **compensatory** strategies.
- Please contact the Admissions **Coordinator**.
- Many students become frustrated and **demotivated**.
- Before they move in, they will make good the **dilapidations**.
- Verbal expression may be **disorganised** and not succinct.
- This book is very accessible but not **dumbed-down**.
- 100 Ideas for Supporting Pupils with **Dyspraxia**.
- The Kindle **e-ink** is good for reading in sunlight.
- The reports have **emphasised** the importance of training staff well.
- David **emphasises** the need for resilience.
- The student would benefit from more time in **exams**.
- This person will have some **expertise** and experience.

- A new digital pen vibrates to indicate bad spelling and **grammar**.
- Sometimes the TTS version of a word is **indecipherable**.
- These comparisons provide **irrefutable** evidence.
- Suits had wide **lapels** and trousers were flared.
- Dyslexic people tend to be **lateral** thinkers.
- We have full public **liability** and professional indemnity insurance.
- All pages have the B.D.A. **logo**.
- A further 6% have **milder** dyslexic difficulties.
- We manage our **monies** very carefully.
- You are committing a criminal **offence**.
- We have had visiting lectures from an **orthoptist**.
- The student is **penalised** for every mistake by deduction in marks.
- The **Phonics** Screening Check was introduced.
- **Phonological** skills were generally normal throughout.
- Be **proactive** in making requests for alternative formats.
- Avoid digital print **processing** which tends to leave paper shiny.
- Roger Federer is using a new type of tennis **racquet**.
- Words with the prefix '**re**': reprogram, rereleased, resell and revisit.
- They have **smallish** screens, smaller than normal keyboards.
- All students are encouraged to invent and share learning **strategies**.
- Each student had found a method of support which **suited** them best.
- Parents will have the same rights to bring cases to **tribunals**.
- They will ensure its financial **viability**.
- Consider whether there are any **viable** alternatives.
- It is strange to hear TTS **vocalise** bullet points.

6. Amending pronunciations.

Some purchasable TTS programs, e.g. Read & Write, ClaroRead and Kurzweil 3000, but not SaySo yet, have facilities for amending

[Page 25.]

pronunciation of items that cannot be presented visibly more suitably. They will apply for all instances and for all files, but only in that particular computer, and only for individual voice families. For example, Kurzweil 3000 amendments for Paul only apply to the Paul and Julie voices.

School staff and adult support workers may know how to use the facility and what to put, but many dyslexia listeners will not be able to amend pronunciation for their own use.

The technical process is quite easy.

- In Kurzweil 3000, select the item and click on Control-F7,
- In Read & Write, type, or copy and paste, the item into Play options/Say like,
- In ClaroRead, type, or copy and paste, the item into Settings/Pronounce.
- Then in all cases, enter the new version, test, and save when satisfied.

It is more difficult to know what to put for the amended, unseen version of the word. It can be

- alternative phonemes for words;
- spaces for numbers to elicit single digit reading;
- spaces in postcodes, which TTS says as syllables or words,

Try these:

- BA12 7PL (bar and place, so B A 12. 7 P L).
- DY1 4AZ (die and as, so D Y 1. 4 A Z.).
- GU10 3AP (goo and app, so G U 10. 3 A P.).
- LL30 1RD (road or oddly as first, so 1 R D.).
- LN6 8ED (Ed so E D.).
- SO51 0ZS(so, so S O).
- SW6 6EG (south west and egg, so S W 6 6 E G).

[Page 26.]

And many web addresses, e.g.

www.bdadyslexia.org.uk as w w w b d ay dyslexia dot org dot uk.

It is particularly useful to put 'ay' when '**A**' should say the letter-name not 'uh', e.g. in A Level.

7. Audio files.

Most of the amendments apply in synthesised audio files made with those voices. We cannot amend the heteronyms. They may need the other pronunciation in another place in a document. Speech engines are getting better with such words in context, but are not good enough yet.

So you need a copy of the text that no one will ever see. Then you can write 'live' as /liv/ or /lyve/, 'read' as /reed/ or /red/, according to the pronunciation that is needed, so that the audio file says it correctly.

In Summary:

Do:

Use Styles for headings and sub-headings, to create bookmarks for pdfs and Navigation Pane for Word.

Use more punctuation, to make the voice pause and drop in tone.

- Put stops after headings and sub-headings.
- Use stops or semi-colons after each bullet point.
- Put stops after numbers in lists.
- Insert commas and colons.
- Use straight quotation marks and apostrophes.

Write numbers carefully.

- **Tel:** 01234 566 789 suits more TTS.
- For **clock times**, 12.45 would sound like a decimal, so put a colon, as in 12:45. Write a.m. for afternoon.
- In **dates**, put the month as a word, e.g. 10 April 2013.
- If you say '**to**' in a number range, e.g. 7-11, please write it.

- Use **Manual number lists**, with stops. TTS does not speak automated numbering in Word.
- Put **page numbers, manually**, at the top of each page. Dyslexic listeners need to hear them, for navigation in the file and in the printed copy, e.g. [page 7.].

Use layout options.

- Use borders, and try expanded letter spacing.

Listen to abbreviations.

- Put stops in **capital letter vowel initialisms** that we say by letter-name, if you do not want them spoken as words, e.g. not HE, NUT, OBE but H.E., N.U.T. and O.B.E.
- Put stops in e.g., and i.e.
- Put names of days and months in full.

Improve words.

- Put hyphens in **compound words**.

Don't:

- Use **dashes** if you would say 'to', e.g. 7-11 years.
- Insert **slashes**. Do you say 'dyslexia/dyspraxia' as 'dyslexia slash dyspraxia'?
- Put **leaders** in tabulated lists or **horizontal ellipses** in text or **colons** in ratios.
- Use **roman numerals** which TTS often says as words
- Insert **footnotes**, which are hard to navigate and break up the continuity of the speaking.
- Insert **text boxes** because you have to click on each one to hear it.
- Have **empty lines**, which confuse visually impaired listeners.
- Allow **interruptions** to the continuity of the text (e.g. adverts in mid article).
- Put **Vol., No., mins, pt**, when you mean Volume, Number, minutes, point.

We cannot cater for:

- Words and abbreviations with **two pronunciations**.
- **Some words** that TTS does not get right yet.
- **Items not in dictionaries:** postcodes, web addresses, many proper names.

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