ReadSpeaker® docReader

ReadSpeaker docReader ("docReader") speech enables the content of online documents to enable site visitors to listen to the text.

Product Description

A docReader button is displayed next to online documents on the customer's website:

When a visitor to the customer's website ("user") clicks on the docReader button, the document will be converted into docReader format and opened in docReader in a new browser window or tab, showing the first page of the document, a toolbar with which to access docReader's features and a sidebar for navigation through the document. The user can navigate to other pages in the document in various ways.

On any page, the user can now listen to the text of that page by pressing the Listen button in the toolbar. docReader then reads the content out loud whilst highlighting the sentence and the word currently being read in two different colors. The text on the page will be read section by section in the order defined in the document.

The docReader toolbar shows buttons for the following features:

- Show/hide the sidebar for document navigation
- Select document page
- Start, stop, pause or restart the reading
- Select layout mode - original document layout
- Select text mode - text oriented version of the document; the advantage of text mode is that the user can change the way the text is presented for easier reading
- More tools - expand the toolbar to show more features
- Help - opens an instruction web page for docReader

In the extra toolbar shown when More tools is selected in the standard toolbar, there can be buttons for the following features (some features can be disabled and therefore not shown):

- Settings - opens a pop-up window where the user can adjust general settings and highlighting setting which apply in both layout and text mode:
  - the reading speed
  - the language for the user interface
  - whether docReader will start reading automatically when the user clicks in a text section
  - whether docReader will automatically flip to the next page and continue reading when the end of a page is reached
  - word highlighting: choose color or underlining or turn off
  - sentence highlighting: choose color or underlining or turn off

  and text mode settings which apply only in text mode:
  - size, font, color and background color for the text in the document when in text mode
- Page Mask - a reading tool that brings out a horizontal bar on the screen by masking the rest of the screen above and below it. The user can move it down along with the reading for better focus.

- Reading Ruler - a reading tool that brings out a gray horizontal bar on the screen that can be moved along under the text as it is being read, to help the reader focus on the line being read.
- Highlighter - highlight important sentences in the document and collect them to produce a summary that can be saved as PDF (can be disabled)
- Show or hide the highlights made with the highlighter (can be disabled)
- Download an audio version of the page content in an mp3 file (can be disabled)
- Save document in its original format (can be disabled)
- Print document (can be disabled)

The user can also look up the meaning of words he does not understand with the Dictionary feature.

The audio is generated using ReadSpeaker text-to-speech technology. The customer can purchase licenses for one or multiple languages and for one or multiple voices in each language.

docReader allows site visitors who are not able to view a document in its original format (e.g. PDF) to view (and listen to!) the document through docReader.

docReader is a SAAS (Software As A Service) that can be made available to users by inserting a section of HTML code after each link on the customer's web pages that links to a document that should be speech-enabled.

Features

Accessibility

The docReader button and all the buttons on the docReader toolbar, and therefore docReader's full functionality, are fully keyboard accessible. Tab/shift+tab can be used to navigate and the enter or space key to activate a certain feature.

Text to speech

docReader can read text out loud using state-of-the-art text to speech (TTS). The user can click the Listen button in the toolbar to listen to the current page or select a section of text and choose Listen from the drop-down menu that appears automatically when text is selected.

Dynamic toolbar and menu for accessing all features

A toolbar with user-friendly icons/buttons is shown at the top of the docReader screen and allows for quick access to all docReader features. The most used features are shown in the default view of the toolbar. The toolbar can be expanded using the More tools button to show more features.

If the size of the browser window is too small to show the complete toolbar, some or all of the toolbar buttons will become accessible through a menu button in the top right corner of the screen.

Help for Users

The Help button in the docReader toolbar will open an extensive document in docReader format on how to use docReader in a new browser window or tab. It explains all docReader features and how to use them.

Two viewing modes

In docReader, a document can be viewed in two ways:

- Layout mode (default): In layout mode, docReader tries to preserve the original layout of the document, including fonts, colors, positioning, and images, even though the document is technically no longer displayed in its original format, but as an image.
- Text mode: In text mode, document text is converted into HTML text, and the information of the original style and positioning is removed to display a text-only version of the pages of the document, showing only images that have an alt text. In this mode, the user's text mode settings will determine how the text will be displayed.

The document viewing area will adapt its size automatically to fit in the browser window. In text mode, the text will reflow.

The user can change the mode by clicking the Layout Mode and Text Mode buttons in the toolbar. A green dot on the button shows the corresponding mode is enabled.

Document Navigation

Navigating between pages in a document can be done in several ways depending on the document format, screen size, and the user's settings:

- Thumbnails: by clicking the thumbnails (miniatures) of each page displayed in the left sidebar of the docReader screen (unless sidebar is hidden). Thumbnails are shown only for page-based document formats.
- Table of contents (ToC): if the document has a ToC, a Show thumbnails/Show outline button will be shown so the user can choose (unless sidebar is hidden). When the document's outline is shown, the user can click on a section header to navigate straight there. Table of contents is supported only for certain document formats.
- Next page/previous page buttons: clicking the left or right arrows that are displayed when the mouse pointer is moved close to the edge of the page (not supported for touch screen devices; when the browser window is smaller, the user will find previous/next page buttons in the toolbar instead).
- Page list dropdown: by selecting a page in the dropdown in the toolbar. Not available when the browser window is smaller.

Zoom

When the document is viewed in text mode any built-in web browser zoom function will be fully supported. In layout mode, however, the web browser's zoom function will work only on the toolbars and menus and not on the page content. For this reason, docReader has its own zoom feature.

When in layout mode, the user can zoom in and out of the document using the Zoom in and Zoom out buttons at the bottom of the page. If product customization has been purchased, this bottom toolbar can be disabled, and the zoom buttons will be shown in the toolbar at the top of the page with all the other buttons.

Synchronized Highlighting

Words and/or sentences can be simultaneously highlighted as they are read. By default, both words and sentences are highlighted. For non-Western languages (like Japanese and Chinese), only sentence highlighting is available.

The user can personalize the settings for synchronized highlighting from the settings pop-up window to highlight only words, only sentences, both, or to turn highlighting off.

Colors for Highlighting

A default combination of colors is provided for highlighting words (light blue) and sentences (light green). Nine colors are available as background color for highlighting sentences and/or words: light green, light blue, light yellow, yellow, grey, black, dark red, dark green, dark blue. Underlining can be chosen as an alternative.

The user can personalize the settings for synchronized highlighting from the settings pop-up window.

Colors, Size and Font for Document Text in Text Mode

A default combination of colors is provided for the text color (black) and background color (white) of the document text when shown in text mode.

12 text and background color combinations are available for the document text in text mode: black (text) on yellow (background), black on white, black on light blue, black on light pink, red on white, red on light yellow, red on light blue, blue on yellow, blue on white, light blue on black, or blue on light pink.

The text can be shown in 6 different sizes and in the following fonts: Arial, Times New Roman, Helvetica, Courier, and Comic Sans.

The user can personalize the colors, font size and font for the document text in text mode from the settings pop-up window. The settings pop-up window has a

preview area where the user can see what the text will look like with the selected settings.

Reading Speed

Five speeds are available: very slow, slow, medium, high and very high. The default speed is medium.

The user can personalize the reading speed from the settings pop-up window.

Reading selected text

If text is selected, only the selected text will be read out when the Listen button is clicked, rather than the entire content of the page. This feature requires "Mouse selection" to be the chosen way for selecting reading area (see Select Reading Area below).

Pop-up menu for selected text

When text is selected a pop-up menu will show near the cursor with buttons for up to three features.

The user can enable and disable the pop-up menu for selected text and choose how long the pop-up menu will show. This feature requires "Mouse selection" to be the chosen way for selecting reading area (see Select Reading Area below).

Listen button for reading selected text

The user can select text and click the Listen button from the pop-up menu that appears (or the main Listen button) to have the selected text read out. This allows for quick access to the reading function for selected text. This feature requires "Mouse selection" to be the chosen way for selecting reading area (see Select Reading Area below).

Automatic Page Flip

Provided this setting has been been activated by the user, docReader will automatically show the next page and continue reading once it has read to the end of a page. This feature works slightly differently on mobile devices. docReader will flip to the next page automatically, but to continue the reading, the user must click the Listen button.

The user can set automatic page flip to yes or no from the settings pop-up window.

Support Tools for Easy Reading

There are two tools available to users in the toolbar that will be valuable for readers that have difficulty reading, allowing the user to follow the text being read more easily.

- Page Mask: a horizontal bar over the page moves up and down with the user's mouse movement highlighting a few lines of text, while the rest of the page is shaded.
- Reading Ruler: a grey horizontal bar over the page moves up and down with the user's mouse which can be used as if the user were moving along a ruler under the text being read.

Select Reading Area

This feature requires the use of a mouse or other compatible pointing device and is not available on touchscreen devices. From the settings pop-up window, the user can choose between three ways to select text to be read:

- Mouse Selection: If text is selected on the web page, only the selected text will be read out when the Listen button is clicked, rather than the entire content of the page.
- Region: If the user clicks anywhere within the text on the page, docReader will read the section of text in which the user has clicked (usually a paragraph). docReader will highlight the section the mouse is hovering over, so the user can see what will be read. There is no need to click the Listen button. Just a mouse click is enough to start the reading (point and click).
- From mouse pointer to page end: similar to "Region" but now docReader will read from the section clicked in to the end of the document page. docReader will highlight the section the mouse is hovering over and all subsequent sections on the page.

Downloadable Audio File

The user can download an mp3 file with an audio version of the content of the page by clicking the Download mp3 of Page button in the toolbar. The customer can enable/disable this feature.

Download the document from within docReader

The user can save or download the document by clicking the Save document button in the toolbar. The document will be saved or downloaded in the same way as it would be downloaded directly from the customer's site. Where and in

which format the document will be saved depends on the customer's settings and is not influenced by docReader. The customer can enable/disable this feature.

Print the document from within docReader

The user can print the document by clicking the Print document button in the toolbar. The customer can enable/disable this feature.

Translation

The user can select text (if in a language supported for translation), click the Translate button from the pop-up menu that appears, and select a language to translate into from the languages shown. The translation is shown in a pop-up window. This feature is supported only for some languages. For a complete and up-to-date list of languages supported for translation, go to our languages web page. The customer can disable this feature. This feature requires "Mouse selection" to be the chosen way for selecting reading area (see Select Reading Area above).

Dictionary

Dictionary is a tool for reading support. The user can select a word and click the Dictionary button from the pop-up menu that appears. docReader will show the dictionary entry for the selected word from an online dictionary for the reading language in a pop-up window.

This feature is supported only for some languages. See the requirements and limitations section below. For a complete and up-to-date list of languages supported for Dictionary, go to our languages web page. The customer can disable this feature. This feature requires "Mouse selection" to be the chosen way for selecting reading area (see Select Reading Area above).

Highlighter

The highlighter allows the user to highlight text sections in the document in 4 different colors and collect and save the highlighted texts into a separate document, which can be saved as a PDF document. The user can delete the highlights per page or for the whole document at once. The user can choose to have borders as well as colors to mark the highlights.

The highlights are stored locally in the user's browser using localStorage and sent to docReader when the user chooses Collect highlights from the menu.

The customer can enable/disable the highlighter and show/hide highlights button.

Always the latest document version

docReader converts the document 'on the fly', i.e. the document is converted to docReader format anew each time the docReader button is clicked. This means the user will always be shown and read the latest version of the published document.

Language for Menus (GUI)

The user interface can be presented in many languages. For a complete and up-to-date list of available UI languages go to our languages web page.

The user can personalize the user interface language from the settings pop-up window.

Supported Languages for Text to Speech

docReader can read documents in 40+ languages. For a complete and up-to-date list of languages supported go to our languages web page.

Reading Multiple Languages

This feature is available if the customer has purchased a license for more than one language and the document texts are correctly marked up for the target language with language tags according to the W3C standard.
docReader can read one language per document unless the reading language selection feature is enabled.

Reading language selection

If the customer has purchased multiple reading languages and this feature is enabled the user will be able to select a reading language from a drop-down menu in the toolbar showing the licensed languages.

Note that documents that are marked up with language tags may not work correctly with all reading languages.
The customer can enable/disable this feature.

Pronunciation Dictionaries

docReader can be customized to pronounce words or sequences of words in a specific way to increase the quality of the reading. The linguists at ReadSpeaker can improve or correct mispronunciations in the dictionary for the language used upon request. If a different pronunciation is site specific, it will be edited in the customer's personalized dictionary.

Tagged/untagged indicator

docReader shows whether the document was properly structured/tagged by the author. It is shown in the top toolbar unless the reading language selector is displayed (when there are multiple licensed languages) in which case it is shown in the footer.

For document formats (e.g. EPUB) where the indicator is not relevant the indicator will not be displayed.

Provides alternative access to documents

docReader allows site visitors who are not able to view a document in its original format (e.g. PDF) to view (and listen to!) the document through docReader.

Publishing Procedures

Since docReader converts and displays standard document types, there is no need for additional work or publishing procedures when producing the documents and making them available through docReader, other than following general authoring best practices.

Online Access to FAQ, Instructions, and Troubleshooting

All information about the customer's account, including user instructions for docReader, answers to frequently asked questions, and other documentation, is made available to the customer through the customer portal.

Technical specifications

Supported Document Formats

The following document formats are supported by docReader:

- .pdf (tested up to Adobe® PDF version 1.7)
- .doc (Microsoft® Word™ 2002-2003)
- .docx (Microsoft® Word™ 2007 and later)
- .odt (Apache OpenOffice™/LibreOffice Writer)

- .rtf (Rich Text Format)
- .epub (ePub2 document)
- .pps/.ppt/.pptx/ (Microsoft® PowerPoint™)
- .xls/.xlsx (Microsoft® Excel™)
- .odp (Apache OpenOffice™/LibreOffice Presentation)
- .ods (Apache OpenOffice™/LibreOffice Spreadsheet).

Regarding spreadsheet formats (.ods, .xls, .xlsx): docReader can read these but has very limited support for table reading and will essentially read everything as text.

Device Independent

docReader is a device-independent and cross-platform solution. It should work on all major platforms and in all major browsers.

Fully Server-Based, no software downloads or installation

Neither the customer nor the site visitors need to download or install any software for docReader to work on their computers and/or mobile devices. The customer does not need to host docReader since it is cloud-based and hosted by ReadSpeaker.

Simple Implementation

The customer uses instructions supplied by ReadSpeaker to add the ReadSpeaker Listen icon next to a published document link. The icon is a link to docReader and will be referred to as the docReader button.

docReader consists of a section of HTML code and an image for the docReader button.

The image is downloaded and saved by the customer. The customer can use the image provided by ReadSpeaker or another image of choice.

The HTML code is inserted on the customer's website next to each link to a document the customer wants the site visitor to be able to open with docReader. The HTML code contains a reference to the image for the docReader button. It also contains a link to start the docReader application call when the docReader button is clicked. The full URL to the document that must be opened in docReader is given as a parameter in the link.

If the customer has also implemented ReadSpeaker Enterprise Highlighting (ReadSpeaker's solution for speech-enabling website content), implementation is as simple as inserting a reference to docReader to the HTML code with the JavaScript link for that product. ReadSpeaker's standard docReader button will then automatically appear next to all document links that docReader supports. Clear implementation instructions are included and available to the customer through the customer portal.

Implementation Support

docReader includes implementation support by the ReadSpeaker support team, who will assist the customer in understanding and carrying out the implementation instructions provided by ReadSpeaker.

Product Hosting

docReader is hosted by ReadSpeaker in a high-security environment with a high level of redundancy and failover and with the following properties:

- double redundant enterprise load balancing and failover
- 100% Gigabit network (internally and to the Internet)
- IBM BladeCenter Linux Clusters
- redundant power supply
- highly scalable and high availability design

- environmentally friendly
- Storage Area Network (SAN) storage over Gigabit iScsi
- UPS and diesel engine power backup
- 24/7 video and audio surveillance
- Level 3 security
- Argonite-based automatic fire-fighting system
- automatic server monitoring every 3 seconds with alarm system
- automatic daily backup

Customer hosting

If agreed between ReadSpeaker and the customer, docReader can be hosted from the customer's own web server.

Streaming Audio

The audio containing the speech is streamed to the user from the hosting server. This means that the audio will start to play before it has been fully generated.

localStorage for the highlighter feature

The highlighter requires that the browser supports the Web Storage API, since the highlights are stored locally on the user's computer. Highlights will be saved between sessions if docReader is accessed from the same computer, using the same browser.

Cookie for User Settings

The settings the user selects through the settings pop-up window are saved as a cookie, so that docReader will have the same settings for that user, when it is restarted in the same browser on the same computer.

Graphical Design

For the docReader button shown next to online documents, the customer can use the image provided by ReadSpeaker or another image of choice. If product customization has been purchased, the customer can change the appearance of the docReader screen, including colors, typeface, skins, tool tips, and button combinations, through a link to a customer specific CSS file. An extensive manual is available for making changes to the graphical design.
NB This feature is not supported by Internet Explorer 6. If this browser is used, the default docReader screen will be shown.

Modifiable Reading Limit

The Product has a default reading limit of 20,000 characters, excluding spaces. This limit can be modified on a per customer basis.

Support for JavaScript, Flash or HTML5

To enjoy the full functionality of docReader, the customer must use a browser that supports JavaScript and either Flash or HTML5. If this is not the case, the basic functionality of docReader, i.e. opening and navigating through the document and listening to the content, will still be available. Synchronized highlighting and reading selected text are not available without JavaScript support.

Translation

For Translation, docReader uses translation software powered by Google Translate.

Dictionary

For Dictionary, docReader uses different third party dictionaries. For the languages presently (Q4, 2018) supported for this feature docReader uses the online Oxford dictionaries for English and Spanish and Wiktionary for the other supported languages.

Product components

SAAS application

The core of docReader is the ReadSpeaker docReader SAAS (Software As A Service) application, hosted by ReadSpeaker, and accessible to all users after successful implementation of the image and HTML code on the customer's website.

Image and HTML code

docReader consists of a section of HTML code, which contains a link to the SAAS application, and an image for the docReader button.

Implementation Instructions

Clear implementation instructions and other documentation such as FAQ are included and available to the customer through the ReadSpeaker customer portal.

Customer Portal

The Customer receives a username and password to login to the ReadSpeaker user portal. Here, the customer can access account information, implementation instructions, information on FAQs and how to contact support in case of questions or problems.

Options

Product Customization

docReader can be customized with regard to branding (using CSS styling) and functionality using a customer-specific configuration file. This file is located on the same server as docReader and is hosted by ReadSpeaker. The following can be customized:

- Link to customer-specific CSS file
- Link and alternative text for customer logo
- Allow user to download an audio file (default no)
- "Text Mode" function available (default yes)
- Allow user to download the source document (default yes)
- How long popup Listen button will show when text is selected (default 2 seconds, 0 = disabled)
- Zoom-toolbar available at bottom of page (default yes)
- Show Pause button on toolbar (default yes)

Customization options may be added over time; please refer to the docReader customization documentation (available to customers with this option) for the latest version.

Customer-editable Dictionary

From the customer portal the customer can edit a basic customer specific dictionary to change the pronunciation of words by respelling those words.

Requirements and Limitations

Document Requirements

- For docReader to work optimally, the documents should be authored in an accessible way (in the case of PDF: tagged PDF), meaning that best practices have been applied in the production/authoring of the documents.
- Documents must be properly tagged. If not, docReader will be unable to show the correct structure, heading levels, bullet point lists, and paragraphs in text mode, and if it is not possible to determine which images are part of the layout and which are part of the content, layout images may appear in text mode. Auto-tagging functions are not guaranteed to be successful and the customer must not allow this feature to encourage the production of untagged PDFs.
- docReader cannot read text from a document that is a scanned image of text. The actual text needs to be present in the document.
- If images in a document contain an alternative text (alt-text) this will be read, but cannot be highlighted or selected. If images in the document have a caption, the text of the caption will be read and simultaneously highlighted.
- docReader does not support reading and viewing of documents where the font is embedded in the document (embedded fonts) and cannot read fully encrypted documents or other documents where the text cannot be extracted.
- Documents must be fully accessible to the application servers that host docReader through a unique and publicly accessible URL over the web (http or https).

Font availability

The fonts from which the user can choose in the settings pop-up window, can only be displayed correctly if the user's computer and browser support them.

Support for JavaScript and HTML5 or Flash

The site visitor must use a web browser with support for JavaScript and HTML5 (or Flash) to be able to enjoy the full functionality provided by docReader.

Translation

This feature is supported only for some languages. For a complete and up-to-date list of languages supported for Translation, go to our languages web page. For Translation, docReader uses translation software powered by Google Translate. Reasonable efforts are made to provide an accurate translation, however, no automated translation is perfect nor is it intended to replace human translators. Translations are provided as a service to the users, and are provided "as is." No warranty of any kind, either expressed or implied, is made as to the accuracy, reliability, or correctness.

Dictionary

This feature is supported only for some languages. For a complete and up-to-date list of languages supported go to our languages web page. Different dictionary databases are used for Dictionary. No dictionary tool is perfect nor is it intended to replace contextual definitions of words. The Dictionary tool is provided as a service to users, and is provided "as is." No warranty of any kind, either expressed or implied, is made as to the accuracy, reliability, or correctness.

Supported Languages for Text to Speech

For Hindi and Arabic only Unicode fonts are supported.

Synchronized highlighting is available only for sentences, not for words for non-Western languages.

docReader on mobile devices

The user interface on mobile devices with a touch screen is different from on laptops and computers. Features that require selecting text with a mouse or a similar input device are not available on touch-based devices. These include:

- Dictionary
- Highlighter
- Select Reading Area: the options "Mouse selection" and "From mouse pointer to page end"
- Automatic page flip will flip the page automatically but not continue the reading automatically on mobile devices

Intended Use

Customers may only use docReader, which is a licensed service for text to speech, in accordance with this product specification. It may be used only to allow visitors to the website(s) agreed upon in the order confirmation to listen to the customer's online documents in the supported formats by activating the service with the docReader button generated and displayed by docReader.

Any other use of docReader is not considered intended use.

Disclaimer

In document with a complex layout, docReader will make its best effort to preserve the layout, but there is no guarantee that the entire document will be correctly displayed with all layout elements.

docReader cannot represent interactive functions from source documents (for example, Adobe® PDF forms and embedded media objects).

If a document has not been authored with structure markup (e.g. untagged PDF), the Product will try to guess the structure of the source document and there is no guarantee that the structure shown in docReader will be equal to that of the source document. This applies to regions, words, paragraphs, and heading levels.

Features listed in this document are guaranteed only if docReader has been implemented according to our implementation instructions. Specifications and features as described in this product specification can be changed by the manufacturer without prior notice.