Texthelp™ and ABBYY Increase the Access to Information for People with Dyslexia or Literacy Difficulties

Customer Overview

texthelp™

Name

Texthelp Ltd.

Location

Antrim, Ireland

Industry

Assisted software solutions

Web

www.texthelp.com

Challenge

Find the most accurate OCR technology for integration with existing Read&Write software program on Windows and Macintosh platforms

Solution

Implementation of the FineReader Engine for image recognition, PDF conversion and field-level recognition

Results

· Improved recognition accuracy

· Easy integration with the existing software

· Optimal literary assistance for students with special needs including reading of inaccessible text on web pages

Read&Write GOLD is Texthelp's literacy support software designed to assist students of all ages who require extra help with reading and writing. The software assists people with learning disabilities by reading text aloud. Through the integration of ABBYY FineReader Engine, Texthelp is able to substantially increase Read&Write GOLD's functionality and benefits to customers. The recognition quality gives users better quality of information.

Background

Dyslexia is a specific learning difficulty that affects memory and processing speed which impacts on literacy development, mathematics, memory, organisation and sequencing skills to varying degrees. Dyslexia can occur at any level of intellectual development. It is neurological in origin and is seen to run in families. It affects up to 10% of the UK & US population at some level and can affect anyone of any age and background.

Texthelp's Read&Write GOLD software assists users with reading, writing or composing text. The Screenshot Reader allows users to read inaccessible text on webpages aloud. One of the many problems facing someone with dyslexia is that some webpages are built using inaccessible Flash or simply contain images that have text embedded within them. These texts are not able to be read by screenreaders and therefore a student with reading difficulties is at a distinct disadvantage.

The Screenshot Reader allows a user to select an area of the page containing the text and have it spoken back to them with synchronous dual-colour highlighting. In addition to this the software offers support functionalities frequently absent in mainstream MS Windows and Macintosh applications including a host of study features to assist any user with research and composition.

The read-back facility alone is a perfect aid for research and proofreading - even the calculator and spellchecker have speech options. Coping with homophones and similar sounding words, can be especially difficult but the software's homophone feature allows

users to identify and change words that are used in the wrong context. Read&Write GOLD's scan and read facility ensures that books and reports are accurately scanned into MS Word, HTML, PDF or EPUB formats.

Challenge

In order for inaccessible Web content like Flash to be processed and read aloud, OCR technology is needed to convert the images of text into text that can be processed and read aloud by Texthelp's software. Graphics, images or pictures generally decrease the accuracy of recognition quality, putting the dyslexic user at a further disadvantage. The majority of student literature, whether books or the internet, contain graphic elements. This calls for OCR software that can recognise images as well as text without needing a lot of development.
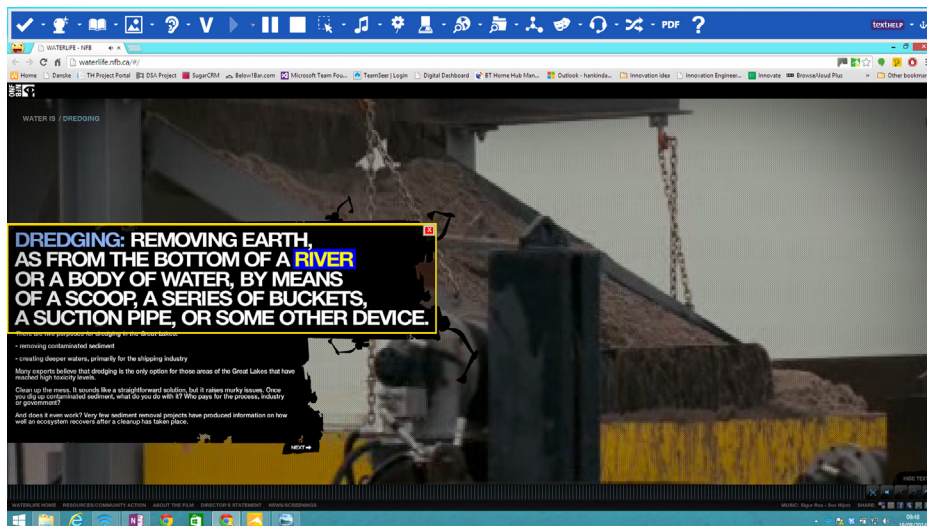
Solution

Texthelp implemented ABBYY FineReader Engine, a SDK flexible enough for any type and size of application. ABBYY FineReader Engine can easily be integrated with most types of software architecture. It was important for Texthelp to find OCR software that could be implemented in their software without having to make significant development changes.

One important requirement was to be able to read text within images. PDF conversion and field-level (zonal) recognition is the reason why ABBYY FineReader Engine is the perfect solution for the accuracy problems Texthelp wished to overcome. ABBYY FineReader Engine has high quality recognition of zones, or snippets of images, containing valuable data.

This data is converted through intricate algorithms and then made available to the users. To ensure that users have the best possibility to receive correct information, accuracy is crucial. ABBYY FineReader Engine is based on ABBYY's award-winning technology which ensures high accuracy.

About ABBYY

ABBYY is a leading global provider of technologies and solutions that help businesses effectively action information.

Outcome

Texthelp continually upgrades and improves their award-winning Read&Write GOLD software to ensure their users have optimal literary assistance. The implementation of ABBYY FineReader Engine is another addition to improve the user's experience.

"My favourite feature on the Read&Write toolbar is the Screenshot Reader because it breaks down the barrier of access presented by locked PDF files which are always about in the university world. It has made it much easier for my students and for us. No more waiting for file conversion!" Kim Appleton, Queensland University of Technology.

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