iREAD Forms Product Information

Overview

CharacTell's iREAD Forms™ version 4.2 is a library of sophisticated character recognition engines and functions (callable as DLLs) that are intended for integration into or the creation of applications. The primary engine is based on CharacTell's revolutionary Advanced Character Recognition™ (ACR™) – the only engine available anywhere that can easily learn new languages, characters, and writing styles. Voting in conjunction with other available engines, iREAD Forms supports multiple languages, and is designed for high accuracy, low error rates, and operation under difficult conditions. With our one of a kind ability to train on fonts, special characters, or writing styles (individual and population), very high recognition results are achieved.

iREAD Forms also offers a wider range of powerful functions that are needed by developers to create robust form processing applications as part of the complete library or, for users with more specific needs, CharacTell offers several subsets:

- Form processing basic library
- Form recognition library
- JustICR™, a lower cost solution to specific recognition needs
- CMC7 Reader™ for gray level check reading at near 100% accuracy
- Optical Mark Reading (OMR) library

SDK/No. Run-Time (RTL) Licenses*	Form Processing Kernel (included in all products) CT-Basic	Bar-code & Patch Reading (DLL support only) CT-10	Form Recognition CT-20	JustICR & Specific Fonts CT-40	iREAD Forms & Specific Fonts CT-120	CMC7Reader CT-160
** SDK price includes one RTL for development	Read & Write TIFF Files, Despeckle, Clip, Deskew, Rotate, English OCR	Twelve 1-D Barcode and Patch Code Types, PDF417, Datamatrix	Form Library Creation, Form ID, Form Registration, OMR	JustICR, Custom Classifier Training and Creation	JustICR, Second Voting ICR Engine, Specific Fonts	Gray-Level Checks
SDK**	$195	$295	$395	$745	$745	$495
1-4	$54	$109	$259	$345	$695	$329
5-9	$49	$99	$229	$295	$565	$279
10-24	$44	$89	$206	$245	$510	$239
25-49	$39	$79	$183	$195	$440	$189
50+	$34	$69	$159	$175	$395	$149
Combinations Pack	Library price equals highest priced item	Run-time (RTL) price of combinations is the highest of all selected options + 70% of each other selected option. Please visit http://www.charactell.com/iread.htm for more information. * For pricing purposes number of RTL is determined either as the number purchased at one time on a single purchase order, or subject to the terms and conditions of a volume purchasing agreement.				

All packages come complete with documentation, evaluation guide, statistics generation tools, sample code, and a five minutes demo. The training tool gives developers all they need to evaluate the products, which, in most cases, can be done – using your own material – within several hours without writing a singe line of code(!) and without opening the user's manual…

Why Form Processing Technology from CharacTell?

Where best to use CharacTell engines?

iREAD Forms may be used in numerous settings, but are most recommended for image or document processing applications that need accurate and flexible ICR/OCR capabilities, such as:

- Processing of machine-readable forms filled in by hand
- Archiving and document processing applications
- Applications that require searching for and treatment of fonts prior to document recognition
- Processing field containing postal address information

Easily trainable recognition engine

The key feature of iREAD Forms is its ability to train on a new font or handwriting style in a very short period and using very small sample sets of only several hundred characters. In most form processing applications there are "problematic" fields that you wish to recognize better than the results that can be obtained from the "off-the-shelf" recognizers. For example:

- Low quality handwritten fields: in some cases poor quality scanning in handwritten fields results may result in broken or "dirty" characters. In these cases the recognition results of the best "off-the-shelf" engines is often significantly reduced. Training these fields specifically with iREAD Forms typically results in much better results. Another way, is to use voting between several engines, a technology that is also offered by iREAD Forms.

- Low quality machine print fields: there are cases that the printed field is of poor quality, such as the case of "stamped field" commonly found in shipping and air courier forms (such these used by companies as FedEx, Airborne, and others in the transportation industry), credit card vouchers, airline tickets, and many others.

- For applications outside US, the handwriting style may be different than the handwriting expected by the "off-the-shelf" engines. We have many examples for this case (probably every country except US, Germany and UK...). This is the reason that in many census projects our engine played a significant role to win the project. In this case, according to our experience, the best results achieved by using voting methods with other engines.

100% accurate recognition

Many applications contain a "sensitive field," mostly machine-printed, that must be read at 100% accuracy. Teaching iREAD Forms this unique font, accomplishes this target in nearly all cases.

Searching for a font in a form

Often, one number, perhaps printed in a unique font (OCRA or even a custom font), stands out in a form, and can be used to identify the form type (different variants of the same form still have the same number). If this is the case, iREAD Forms can be trained on this font, and can find it anywhere in the form, and use the presence of the form and the content of that field ID the form.

Dictionaries

It is possible to give to JustICR engine dictionaries. The dictionary may be a large dictionary (such as the full English/Spanish/German... vocabulary, which may contain 100,000 to 1,000,000 words). The recognition results are improved significantly even if the dictionary is not full (it does not contain all the possible words). One example can be from an application in Germany in which one of the fields was a First Name (hand print). The recognition rate jumped from 89% per character to more than 97% per character by using a dictionary of first names. Equivalent results achieved with geographic places, or "descriptive fields" in which the field contains a phrase that describes something (such as: occupation, religion, etc.).

City, State, Zip field recognition

iREAD Forms can recognize, verify and return in one operation the City, State, Zip of US-based addresses found in a field or combination of fields. This is a powerful feature for anyone in need of extracting address data from form fields.

The following are examples of City, State, Zip combinations that are successfully recognized by iREAD Forms (notice the difficult conditions present – overlapping characters, noisy images, spelling errors, line interference, broken characters, nearly indiscernible characters, etc.):

Westmont	IL	60559	Little Rock	aA.	72223
Charlotte	NC	28210	Fort Mill	s S.	29715
Atlanta	GA	30329	Stone Mountain	GA	30083

In all these cases, the engine returns the correct City, State, Zip combination despite serious deficiencies and complexities in the images.

Complete and Flexible Packaging

With iREAD Forms you get everything you need to create, or to add robust recognition, form processing and image processing technology to, your applications. Moreover, you have the freedom to select the components of the library you need, or all of it. This means you only pay for what you need.

Large installed base

iREAD Forms technology is installed in hundreds of demanding production sites around the world, so you know the technology is field-proven and tested.

Systems Requirements:

Operating System: Windows 95/98/ME/NT 4.0 or later/2000/XP

Runtime environment and Compilers: Dynamic Link Library (DLL) runtime, C/C++/Delphi/VB

User Interface Language: English

Minimum Hardware Required:

Intel 486 or greater

1X CD-ROM drive (optional)

400 MB free disk space

64 MB RAM