



INFORMATION

Location: Markham, Ontario
 Industry: Business Solutions

CHALLENGE

Develop a system that can easily recognize the content of scanned business forms, extracting, verifying and exporting the data to another system for high volume documents.

SOLUTION

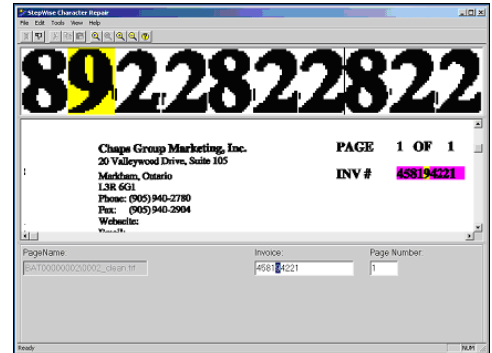
Affinity Systems created the server framework, StepWise, that distributes work through a sequence of processing steps, distributing work across an arbitrary number of decentralized servers.

TECHNOLOGIES

- Windows Server
- FileNET
- COM
- C ++
- SQL Server
- ODBC
- SMP
- ICR
- CCITT G4
- PixTrans
- MFC
- VB

StepWise makes document processing automatically easier for businesses

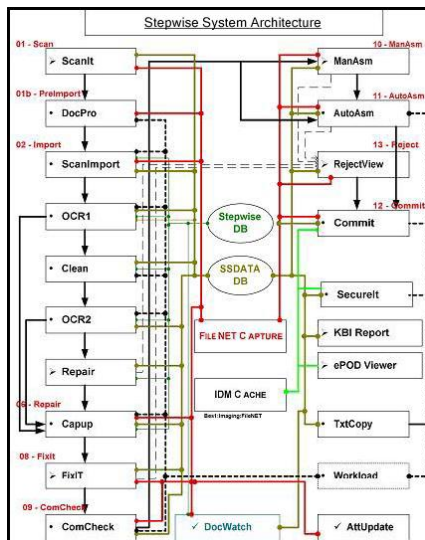
Chaps Group Marketing (CGS) is one of Canada's leading providers of turnkey Integrated Document Management solutions, developing leading edge business solutions that integrate imaging, workflow, and COLD. CGS is also a leading developer of custom software solutions featuring advanced SQL databases and Intelligent Character Recognition.



CGS approached Affinity Systems to develop a system to automate the process of scanning business forms, recognizing their content, extracting relevant data, verifying the data for correctness, and exporting the data to another system. The stipulated goals of the system were to offer a solution that was able to handle high volumes of documents, extend its capabilities easily, integrate third-party tools, and be resalable as a product.

OUR SOLUTION

Affinity Systems designed and implemented a product called StepWise, which is a server framework that exposes a number of document-related objects and processing interfaces. The framework distributes work across an arbitrary number of decentralized servers that synchronize through a central relational database, providing a highly scalable solution.



The framework is responsible for moving objects through a sequence of processing steps. Each step is implemented as a COM object, which can be hosted by a Stepwise server either as an in-proc or an out-of-process object. Steps may be completely automatic, requiring no user intervention, or may consist of a user interface component, requiring a person to complete the operation. Affinity Systems developed a number of generic steps, such as character repair applications, scanning subsystems, and automated document assembly processes.

Each StepWise server can be configured to perform one or more of these steps, and automatically picks up work from the centralized queue when free to do so. In the case when a server goes down unexpectedly, a long work queue can build up at a particular step, leaving other steps starving for work. As long as there are redundant servers, StepWise detects such cases and takes an appropriate action to correct the backlog.



BENEFITS

- The processing steps within StepWise can be made automatic.
- Generic steps include character repair applications, scanning subsystems and automated document assembly processes.
- StepWise servers can be configured to run more than one step simultaneously, automatically picking up work from the centralized queue when not in use.

Stepwise is installed at many large corporations in North America, including one of the world's largest beverage companies. One company processes over 250,000 documents per day using StepWise.



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