White Paper

The integration of Formate and Alchemy

Abstract:

This paper discusses the integration between the output management software Formate and the document management software Alchemy:

- Introduction

- Brief description of Formate and Alchemy

- Details of the Formate to Alchemy integration

- Why use Alchemy to store Formate documents

- Taking an existing Formate project and integrating with Alchemy

- Searching for documents held within an Alchemy database

- Alchemy bureau service

Introduction

This paper was written primarily for existing Formate users wishing to explore their options for the long term storage of electronic documents processed by Formate. However, we envisage it may also be useful for companies not yet using output management software, with a need to understand how output management can form the backbone of their document management strategy, by linking to the Alchemy document management system. In addition, existing users of Alchemy may find this paper of interest if they want a flexible way of automatically publishing documents from their business system (e.g. invoices, purchase orders, credit notes, picking lists etc) to their existing Alchemy archive. Existing users of Alchemy can also make use of Formate's email facility which will automatically email a subscriber if a new document arrives in an Alchemy folder which Formate is monitoring.

Formate can integrate with virtually any document management system with its batch load facility or a custom written API interface; the link specifically to Alchemy has been developed because of Alchemy's wide scale use and ease of integration. If you are reading this and already have a document management system, Document Genetics can advise on the most appropriate method of integration with Formate.

This paper has been written by Document Genetics (UK distributor of Formate). http://www.document-genetics.com

Brief Description of Formate and Alchemy

Formate

The timely delivery of documents to any business is critical, be it an invoice so you are paid on time or an urgent purchase order to buy vital stock.

Formate Output Management is all about improving the way you generate and deliver documents from your business or ERP system. Formate gives a company the ability to replace the majority of its traditional paper based systems by providing distributed information electronically where and when it is needed and in the form required. Documents may be printed, faxed, emailed, transformed into Adobe PDF or MS Word format or passed to a document management system for long term storage.
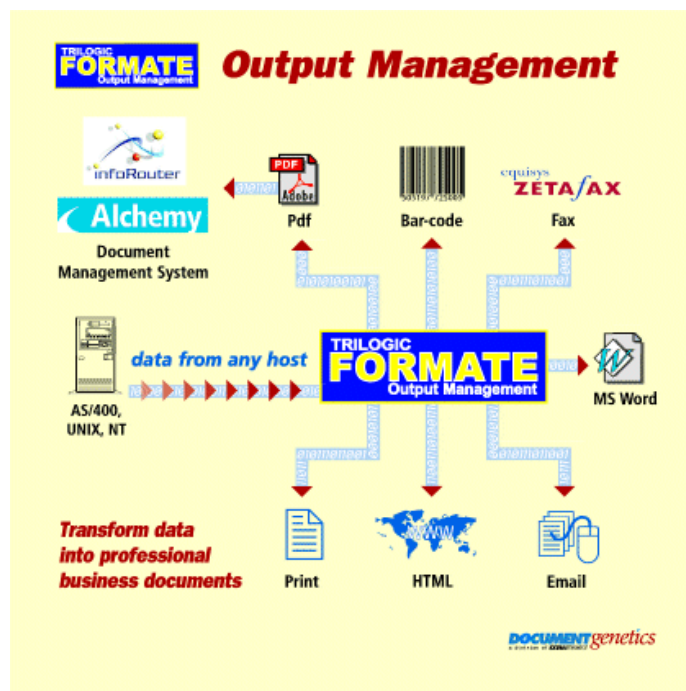
Formate is a product of Trilogic Ltd. http://www.trilogic.co.uk

Alchemy

Alchemy allows a company to integrate and organise many different document or data types into a single searchable repository or database. The Alchemy database can include images, paper documents, forms, CAD drawings, reports, faxes, emails or virtually any type of data.

Documents can be searched, viewed (printed, emailed or faxed if required) via the Alchemy search client or via a standard web browser using Alchemy WebServer.

With over 10,000 users worldwide and sold in 42 countries, Alchemy has built a reputation on reliability and ease of use.

Alchemy is a product of Information Management Research. http://www.imrgold.com

Details of Formate to Alchemy integration

Formate v2.8.19 and above supports the Alchemy module which provides two useful facilities:

1. Allows Formate to publish documents or files directly into any number of Alchemy databases
2. Formate can monitor Alchemy databases for the arrival of new documents and automatically send an alert email to a subscriber

Formate to Alchemy Interface

This is controlled through the Formate Configuration program, and is specific to individual Form Types (i.e. some Form Types may use it while others do not). It allows you to specify which files are to be submitted to Alchemy for inclusion in its database. These can be files produced by Formate (e.g. PDF files), or files created by some other application outside of Formate. For each file, you can specify the properties that should be associated with it, e.g. sales order number, customer number and so on, and these can then be used within Alchemy when searching for the file later. You can also carry out other tasks such as rebuilding the Alchemy database.

Messaging

The Formate Server can be configured to monitor one or more Alchemy databases, and automatically send emails and/or pop-up messages to a list of users whenever new documents arrive in the database. This avoids the need for users to keep manually checking to see if new documents have arrived which may need their attention. The messages can be restricted, for example so that they are only raised for documents arriving in certain Alchemy folders or for certain types of document. This type of facility could be used in many applications; a good example would be to monitor incoming mail. As soon as new mail is scanned into a user folder, they will receive a message advising them new post has arrived which needs reviewing.

Why use Alchemy to store Formate documents

Formate has the ability to dynamically name PDF files and save them to a specific directory. For example, Formate can process a spool queue containing hundreds of invoices and save each one to a specific location, using the invoice number as the naming convention. Using this method, we have a simple way of storing files electronically and retrieving them at a later date via the invoice number. As the files are in PDF format we can simply view them or perhaps reprint a copy invoice. Many companies start with this simple arrangement to allow users to familiarize themselves with the retrieval of an electronic document rather than paper. This type of system does have limitations, some of which are:

- Security is limited to the folders on the PC server

- No ability to search across ranges of documents

- No ability to search on other index fields (e.g. date, company name, account no etc)

- No ability to perform complex Boolean searches (e.g. company name **AND** date)

- No ability to perform full text searches across many documents (e.g. find all documents containing the Part Number 'BYZ-87372L')

- Searching is slow, if reliant on the Windows Explorer search

- This type of system is not legally admissible, ideally need to store copy to a WORM media (**W**rite **O**nce **R**ead **M**any), e.g. CD or Magneto Optical Disk

- No ability to tie together other types of documents to your PDF invoice (.e.g. a scanned delivery note, or customer letter)

- No simple way to add notes or annotate your PDF documents

- Easy to delete documents by mistake

To address many of the reasons above, document management products like Alchemy exist. By combining products like Alchemy and Formate, you have a flexible and powerful composition engine at the front end (Formate) linked to a simple and robust document repository (Alchemy) for long term storage of documents.

Integrating an existing Formate Form Type into an Alchemy database

This document is not intended as a detailed technical paper covering every aspect of the interface between Formate and Alchemy; rather we will look at the principle of passing a document from Formate to Alchemy and best practice.

Real Time Submission VS Batch Submission

There are many ways to pass documents or files from Formate to an Alchemy database, and the exact design of this process will differ depending on the specific application.

Documents or files can be passed to the Alchemy database either real time or as a batch process. Generally we would recommend running a batch process for the following reasons:

- The speed of existing Formate processes are not affected

- The performance of the existing Alchemy database is not affected

- The processing of files to Alchemy can easily be recovered in the event of a problem

- Full audit trail can be created

- The batch process can be run as many or as few times as needed, possibly out of normal working hours

- The modifications to the existing Formate Form Type are minimal

- Formate needs an Alchemy Build license to submit documents to an Alchemy database, running as a batch process allows Formate to share a license when not in use

Modify an Existing Formate Form Type to Submit Files to Alchemy

To modify an existing Formate Form Type to submit files to an Alchemy database there are two main steps to follow. These are:
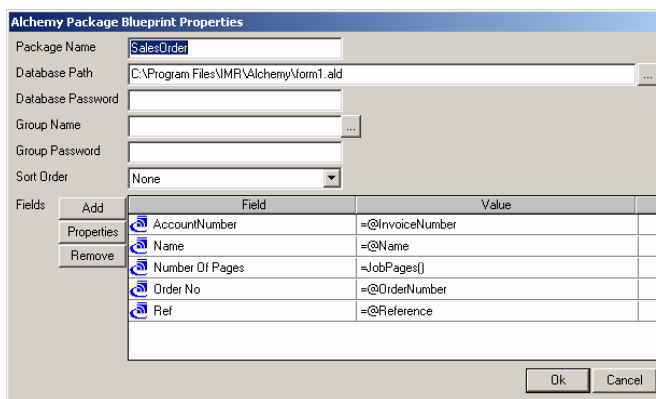
1. Create an appropriate Alchemy Package Blueprint

2. Use Alchemy file submission to create packages (from the blueprints) to add files to them

Create an Alchemy Package Blueprint

The Alchemy Tab allows you to define the Alchemy package blueprints you want to use when submitting files to an Alchemy database.
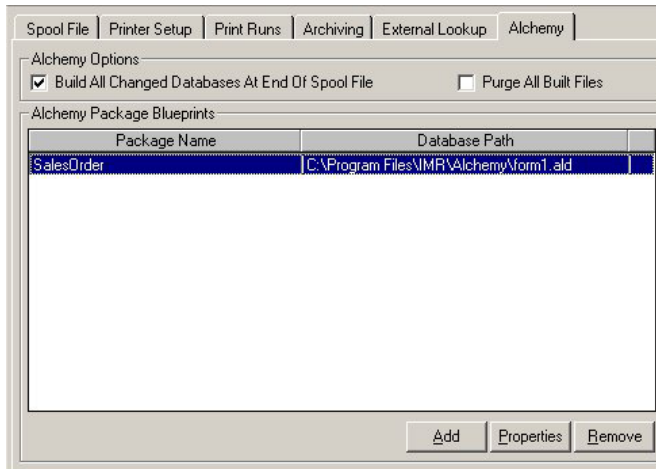
An Alchemy Package Blueprint defines various information that Formate needs to know in order to submit document files to Alchemy, for example the path of the Alchemy database file, the group name and/or password if the database is secured, and what additional information you want to submit along with the document (e.g. a sales order number or customer number that might later be useful in retrieving the document). As the name implies, you may find it simplest to regard the design of a package through this tab as creating a blueprint, which the scripting functions then use to create an actual package based on that design, in the same way that a builder might build a house based on a plan or blueprint. A blueprint can be used over and over again so that you can create as many packages as necessary from each one, for example you might create one per sales order if the spool file contains multiple sales orders.

Within the Alchemy package blueprint properties we can then define what index fields in the Alchemy database we want to use and map the appropriate Formate fields to them. In the example shown above, we have chosen five Alchemy index fields, 'AccountNumber','Name', Number Of Pages', 'Order No' and 'Ref' which already exist in the Alchemy database. These are fields that we will then search on to find a specific document at a future date. The Formate fields which will populate Alchemy index fields are shown under the value column (e.g. the '@Name' field will populate the Alchemy index field 'Name').

Use Alchemy File Submission to create Packages to add files to them.

The Alchemy file submission facility allows you to submit document files for storage in an Alchemy database, optionally adding some information to each one to make it easier to retrieve later. For example, you might add a customer number and sales order number to a document, which would mean that you could later search the Alchemy database for documents belonging to a particular customer or related to a particular sales order. Although the documents you submit will typically be ones created from within Formate, they don't have to be because you can use Formate to submit any file.

There are a number of steps to go through to actually submit files to an Alchemy database:

1. Firstly use the **AlcCreatePackge()** scripting function to create a new package from the blueprint created previously.
2. Once you have created a package from its blueprint, use the **AlcAddFile()** scripting function to specify each document file you want to add to it. You can add as many files as you like to a package.
3. Finally the package is submitted to the Alchemy dataset using the **AlcSubmit()** scripting function or selecting the option in the Alchemy Tab to automatically submit the files at the end of the spool file.
4. At this point the new files are in the Alchemy database, but the database is not built. When an Alchemy database is built, it's at this point Alchemy takes a copy of all the files and puts them in to its repository and creates all the indexes it will use for searching on them later. Building the Alchemy database can be achieved in a number of ways; selecting an option in the **AlcSubmit()** scripting function, choosing the option **Build All Changed Databases At End Of Spool File** on the Alchemy Tab or finally running a scheduled build on the Alchemy database independently of Formate.

Searching an Alchemy Database

Once Formate has successfully passed the files to an Alchemy database, users can use a variety of Alchemy Search interfaces to find a specific document.

Searching for a document within Alchemy can be performed in three ways, these being:

1. Full text search

2. Search folder structures

3. Search via index fields

Full Text Search

Using the full text search within Alchemy it is possible to search for text within the document itself. This is particularly useful if you're searching for a document without knowing where it is stored, or without knowing what indexes were stored against it.

For example, searching on the word "piston" brings back all the invoices in our Alchemy database which contain the word "piston" any where within the text. In this case nine documents. The word "piston" is highlighted in the document itself. See screenshot below.

Full text searching is available within PDF documents, text files, TIF images which have been through an OCR process and documents produced by the following applications, MS Word, Excel or PowerPoint . In most cases, Formate would store PDF documents in Alchemy, as they are very small and fully text searchable.

Folder Search

If a folder structure is present within the Alchemy database it is possible to search for all documents within a specific folder. For example, you may store all documents relating to a specific customer in one folder, by searching on the customer name folder you could then find all the documents relevant to that specific customer. This type of searching works well where you don't have too many documents within each folder. See screenshot below.
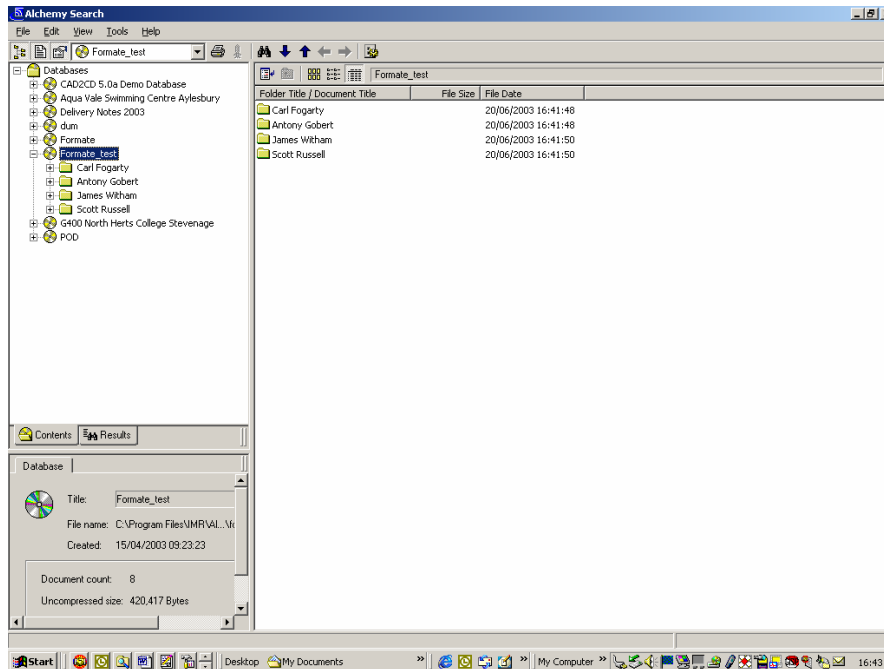

Index Field Search

Earlier in this paper we covered how Formate can populate index fields within an Alchemy database, and the most common way of finding documents is by using those index fields. They are simply extra descriptive information about the document which gives another way of finding it later. In the screenshot below, we are searching on the 'Ref' index field for the value 'pty-67328'.
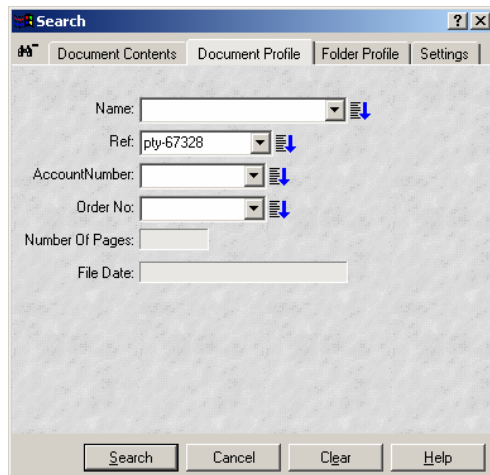
This search would then retrieve documents with this reference only. In the example below, this retrieves only one document, however searching for a specific order number may bring back many different types of documents from many other Alchemy databases (e.g. customer order, correspondence, pick list, statement, invoice and delivery note). Index fields are a good way of associating many disparate documents throughout a business.
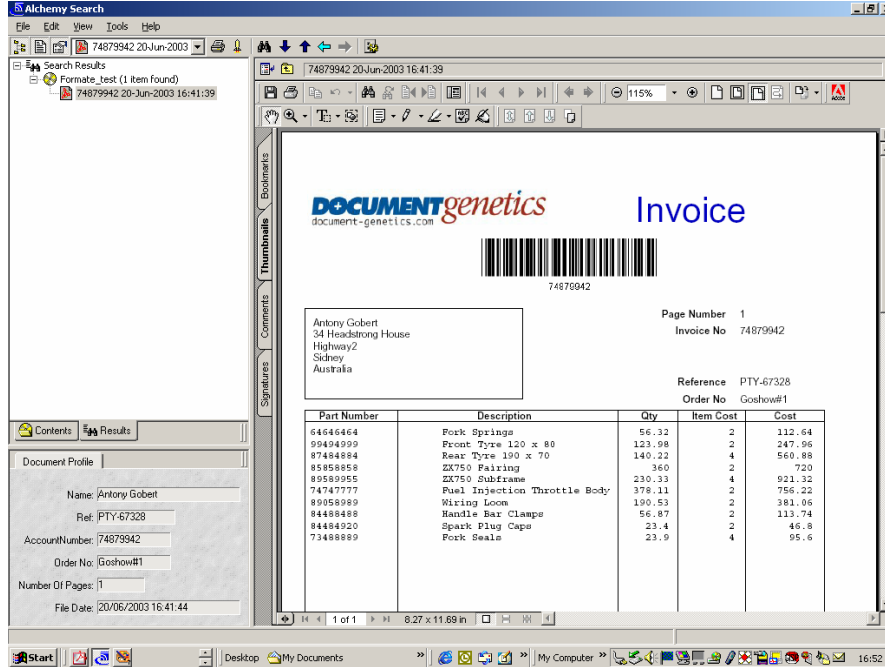
Alchemy Bureau Service

While Alchemy is a comprehensive document management product with many modules and possible configurations, not all companies will have the need to use Alchemy to its full potential and on this basis can not justify the capital investment just to store copy documents electronically.

With this in mind, one option is to use a bureau service to create Alchemy databases offsite. On a regular basis, perhaps every month, the Formate user would export a batch of PDF documents and the relevant indexing data. Formate has an export facility designed for this scenario, which will automatically write the index file to a specific location. A company specializing in providing an Alchemy bureau service can then process the file and deliver back a CD (or DVD) with all of the Formate documents in a self contained Alchemy database. Databases can span many CDs and would typically hold 30,000 documents per CD. The CD also contains a free Alchemy search engine, with all the search facilities discussed previously in this paper.

This solution provides many of the benefits of an in-house document management system, in terms of speed to search and retrieve documents (and legal admissibility) but with no capital outlay.

The Alchemy bureau would make a charge based on the volume of documents processed and the regularity of the service.