# INVU: PRODUCT TECHNICAL OVERVIEW

## INTRODUCTION

The Invu product lines allow users to run Invu document and information management solutions either across the internet or across an intranet. This is possible because of the technology Invu uses. Please see Appendix B for further details.

**S600 – stand alone or networked document and information management**
**S650 – networked document and information management with workflow**
**i600 – search, retrieve and view documents**

The minimum specification of the machines can be seen in Appendix C.

As well as these products Invu have many other client based applications that can be used in conjunction with the main products to enhance the usability and acceptability for both to the user and the business;

**Invu Office Addin** – this works with Microsoft Office 2000 and above. It allows the users to send items (documents, emails, spreadsheets etc) either to a person's 'intray' or to index them into Invu.

**Netscan** – this is part of Invu's document processing engine, a service that can be set up to move files from a Windows directory into Invu. In being moved the documents can be placed in an individual's 'intray', indexed into Invu, or be indexed into Invu and placed in a workflow.

**Link Manager** – this is part of Invu's document processing engine. As a service it enables users to import documents into Invu using a csv file or xml file to provide indexing information for the system and also imports any document to which those files refer.

**Invu Research Service** – this allows access to search and retrieve information from Invu through the Microsoft research pane. It also gives users the opportunity to refer to documents in Invu through a link. This link can be mailed to other Invu users where upon they can view the document. This is only available for customers using Microsoft Office 2003 and above. This has to be installed on an IIS server and uses the same configuration as the iSeries products.

**CodeFree Integration** – a product that empowers you to integrate other Windows based products with Invu (without writing any code). It can either be trained quickly against another application or run automated searches (based on dragging and dropping) allowing users to be in their native program running searches against the Invu document management system.

**Advanced CodeFree Integration** – this builds on the technology of CodeFree Integration and provides the ability to 'scrape' data from other Windows based or Terminally Emulated applications. The data once 'scraped' is then applied as indexing information to a document or record.

**Invu API** – the Application Programming Interface offers developers the opportunity to access the Invu functionality to integrate into their own programs. It also allows developers to integrate their products into Invu.

All the Invu product lines are built to a very high standard offering excellent value for money and are incredibly easy to use.

## WHAT DOES INVU REALLY DO?

### Scanning

Invu will scan many different types of image format but the most common format is TIFF although it supports PDF, JPG and many more. (Please see Appendix A for further details).

The scanning is done by connecting locally to a scanner through a TWAIN interface or by connecting to a file location that automatically brings images into the system from an external multi function device.

The scanning interface can also be configured to read areas of text within the page which can automatically be applied to indexes within Invu. Not only that, but Invu provides the ability to read barcodes. The information from the barcodes can then be used to separate pages or as indexing information.

### Viewing

Invu supports the viewing of single or multi-page documents. Indeed you can view these documents individually or show them all together within the Invu viewer making it very easy to read through multiple documents. Manipulation of the image is possible by zooming in and out, inverting, etc - other functions can be seen in Appendix A. From the viewer you can print and view annotations.

### Creating

Invu provides the ability to create documents of any file type as long as the application is installed on the machine. When a document is created, simply decide where it needs to be filed within Invu and all users of the system (security permitting) will be able to retrieve it immediately. Once the document is in Invu, you will also be able to search on its content and even have the option of highlighting the words that you have searched on.
You can also create documents through Microsoft Office applications with the Invu Office Addin (Microsoft Office 2000 and above). This way you do not even need to go into Invu you can simply complete your document in the application you are used to, and then send it to your intray or even index it straight into Invu.
If you have documents that are already completed you can ‘right click’ and ‘send to’ Invu or simply drag and drop them in to your own electronic intray.

### Indexing

Invu will generate a unique number for all your documents, the format of which is defined by the system administrator when the system is setup. If your business requires, you can set the system up to mimic a filing cabinet with Drawers, Folders and a Files. However Invu allows you to do much more than that. Invu enables you to create a business model within the system. This model then makes it even easier for people to file documents and information and indeed can completely automate the indexing of document and information.
With Invu you can define how many pieces of information you would like to use as your index. This is done through the following mechanism.

### *Information Types*

Quite simply information types are an easy way for a business and the people working there to categorise information. Good examples of Information Types would be:

| Information Type |
|---|
| Letter |
| Invoice |
| Order |

As you can see, these are very broad concepts however they do make it very easy to group your information enabling people to get the information type they require quickly - as in most cases people do know what they are looking for! The important thing is that they are defined when you are setting the system up.

### *Templates*

Templates do relate to “Information Types”. In fact “Information Types” can have lots of different templates associated with them. Taking our examples from above it could be created as shown in the next table:

| Information Type | Related Templates |
|---|---|
| Letter | Acceptance Letter<br>Acknowledgement Letter<br>Adjustment Letter<br>Application Letter<br>Complaint Letter<br>Inquiry Letter<br>Reference Letter<br>Refusal Letter<br>Resignation Letter |
| Invoice | Purchase Invoice<br>Sales Invoice |
| Order | Purchase Order |

This means that you can quickly divide up your “Information Types” by the associated “Template”.

### *Attributes*

Quite simply these are the actual pieces of data that make up a “Template”. Each piece of data can be of any type that you want to define and be from a list held within Invu or indeed within another database. You can have as many or as few attributes as you want:

| Template | Attributes |
|---|---|
| Refusal Letter | Customer Reference Number |
| Purchase Invoice | Invoice Number<br>Purchase Order Number<br>Customer Reference Number |
| Purchase Order | Purchase Order Number<br>Customer Reference |

Hence the filing system would be defined as such:

| Information Type | Template | Attribute |
|---|---|---|
| Letter | Refusal Letter | Customer Reference Number |
| Invoice | Purchase Invoice | Invoice Number<br>Purchase Order Number<br>Customer Reference Number |
| Order | Purchase Order | Purchase Order Number<br>Customer Reference |

All of these indexes are completely customisable by you when the system is set up.

In addition to the above, there are many other pieces of information that Invu will index automatically - some of them will come from the document itself such as Microsoft Office documents that will have all their properties brought in. Others are pieces of information that Invu already knows e.g. which scanner the document came from.

Finally Invu will index all the content of documents held within the system to facilitate full content searching and in context display.

The combined effect is that a comprehensive index is kept of all information within the system.

## Search and Retrieval

Invu provides state of the art search and retrieval interfaces. Allowing the user to search based on all the aforementioned indexing information or on the content of the document or on a combination of both.

When the results are returned they are displayed automatically categorised allowing the user to quickly understand the information in front of them. In addition to this the grouping and categorisation can be configured by the user to suit their own needs by the use of filters.

When Invu returns a set of search results, it will, of course, present the most recent version of the document although you will always be able to go back and see previous

versions.

Once you have retrieved your documents you can attach them to one another, email or fax them to other people. You can also add notes to the document which are, of course, fully searchable. When using the S650 product any document within the system can be manually started on a workflow once you have retrieved it.

Invu will also allow you to save your searches and see a history of them. Hence you will always be able to go back and do a search again.

## Version Control

Invu provides options for version control hence when you edit any document in Invu (security permitting) you can create a new version or create drafts which later can be set as a new version.
Whilst you are doing this other people who search on the same document will be notified that it is being worked on but will be able to see the previous version. Version numbers will be generated by Invu and, when the document is checked back in, you can add notes for future reference.
All of this is recorded within the audit log function within Invu.

## Internet Explorer

Invu offers you the ability to either capture web pages or just the link to the web site through Microsoft Internet Explorer 5.0 and above. These links and pages can then be indexed into Invu from the users' intray.

## Communications

Invu uses IMAP4 to communicate to server based mail systems. Microsoft Exchange, Lotus Notes and Groupwise are all IMAP4 compliant. It therefore allows Invu to replicate your folder structure within your Invu Workspace so that you can operate with emails as if you were in your native application and index them into the Invu system.

Of course it is not a problem to work in your native application if you wish to, as you are able to index information into Invu through the Invu Office Addin. (Please see above).

In addition to this Invu will also use this technology to automatically index emails into the system, placing them under document management control from the time they are sent or received. This is accomplished by using the simple business modeling (previously mentioned) for your customers or clients, combined with this email service.

## Customisation and Configuration

Invu will allow you to customise many aspects of the system. Indeed it comes with three different types of interface for different types of users.

The simple interface is designed for quick access to the main areas of the system.

The standard interface allows users to access all the functionality of the system (privilege permitting) from a small toolbar.

The advanced interface allows users to access all the functionality of the system

(privilege permitting) from an “Outlook” style interface.

Invu allows an internal business model to be set up. This configures the system security enabling users to be added to different groups and produces a hierarchal filing system for those that wish to use it.
On top of this you are able to configure external business models. These can be customers, clients, cases and can be set to reflect whatever the need of the business is. Likewise they control indexing, security and the hierarchal structure.

The internal and external models are easy to define using graphical representation for ease of use.

Security governs access to the documents through the membership of groups with privileges stipulating which features and actions a user can perform within the system.

The comprehensive auditing of system and user actions results in a complete record provenance.

As previously discussed in ‘Indexing’, information is managed through ‘Information Types’, ‘Templates’ and ‘Attributes’. Combined with the structures defined in the business models it makes for an ultimately configurable system designed to meet the document and information management needs of the 21st Century.

## Security

The security in Invu can be set up so that users and groups of users can view, edit, delete, alter the security profile, view indexing information, edit indexing information, view the event history or have full control of a document or an item of information within the system, depending on their security profiles.

The access to the documents is controlled through a secure access service which is a server side process. This secure access layer prevents Invu users and network users from getting to or even knowing where the document is stored. The documents themselves are also secured using an encryption process that allows Invu to check whether they have been tampered with outside of the system.

## Workflow

Invu Workflow Designer is a graphical workflow design tool that allows trained users to implement logical business processes. These processes can be either system related or document related. It will permit users to interact with the process giving them the ability to action or authorise tasks. The processes can be designed to run in parallel or in series and can transfer payloads of data other than just documents.

Users will be notified through their Invu Workspace interface and through their email system. The Invu workflow solution provides for greater management control of a businesses processes and procedures.

These processes can be designed away from the Invu installation and later mapped to the relevant system.

## Appendix A

Integral scanning module handles small and large documents dependent (British English) on the scanner capabilities - A5, A4, A3, A1, A0 and B size are all supported. The formats that can be used are as follows:

**Raster Color and Grayscale**

- AFP - AFP Format
- ANI - Windows Animated Cursor
- BMP - Windows and OS/2 Bitmap Formats
- CIN - Cineon Format
- CLP - Microsoft Windows Clipboard Format
- CMP - LEAD Compressed
- CMW - LEAD Wavelet Compressed
- CRW - Canon RAW Format
- CUR - Windows Cursors
- CUT - Dr. Halo Format
- DCR - Kodak Professional Digital Camera Format
- DCS - Kodak Professional Digital Camera System Format
- DCX - DCX Format
- ECW - Enhanced Compressed Wavelet Format
- EMF - Windows Metafile Formats
- EPS - Encapsulated PostScript Format
- EXIF - Exif Formats
- FIT - FITS Format
- FLC - Flic Animation Format
- GIF - Compuserve GIF Format
- ICO - Windows Icons
- IFF - Interchange File Formats
- JBG - JBIG Format
- JPG - JPEG Compressed
- JP2 - JPEG 2000 Compressed
- KDC - Kodak Digital Camera Format
- LEAD MRC - LEAD Mixed Raster Content
- LEAD PDF MRC - LEAD PDF with Mixed Raster Content
- MRC - Mixed Raster Content
- PBM - Portable Bitmap Utilities Format
- PCD - Kodak Format
- PCX - PCX Format
- PDF - Portable Document Format
- PDF – Portable Document Format (readable)
- PNG - Portable Network Graphics Format
- PSD - PhotoShop 3.0 Format
- PSP - Paint Shop Pro Format

- PTK - PTOCA Format
- RAS - SUN Raster Format
- SCT - Scitex Continuous Tone Format
- SFF - Structured Fax File Format
- SGI - Silicon Graphics Image Format
- TGA - Truevision TARGA Format
- TIFF - Tagged Image File Format
- TIFX - Xerox Internet Fax File Format
- WBMP - Wireless Bitmap Format
- WMF - Windows Metafile Formats
- WPG - WordPerfect Format
- XPM - XPicMap
- XWD - X WindowDump

**Raster Bitonal (1-Bit)**

- ABC - ABC Format
- ABIC - ABIC Format
- AWD - Microsoft FAX Format
- CAL - CALS Raster Format
- CMP - LEAD 1-Bit Format
- FAX - Raw Fax Format
- FAX - LaserView LaserData Format
- ICA - Image Object Content Architecture (IOCA/MODCA)
- IMG - GEM Image Format
- ITG - Intergraph Format
- JB2 - JBIG2 Format
- MAC - MacPaint Format
- MSP - Microsoft Paint
- SMP - Xionics Format
- TXT - ASCII Text Format
- TIFF - Tagged Image File Format / CCITT
- WFX - WinFax Format
- XBM - XBitMap Format

The viewer also supports the viewing of Microsoft Office documents where Office is installed on the PC.

The viewer also supports the viewing of Adobe Reader documents where the application is installed on the PC.

- TWAIN (compliant to 1.9 standard) facilitates client based scanning
- Network based scanning through Invu Document Processing Engine (DPE)
- Batch scanning supported

- Duplex scanning supported*
- Multiple page documents supported
- Document rotation
- Document invert
- Document deskew
- Document despeckle
- Document autotrim
- Remove borders
- Remove hole punches
- Erase area function
- Area grab function
- Re-arrange pages function
- Add pages function
- Annotations function (tiff file format only)
- Note tool (tiff file format only)
- Redaction tool (tiff file format only)
- Highlight tool (tiff file format only)
- Text tool (tiff file format only)
- Stamp tool
- Pointer tool
- Shape drawing tools
- Conversion of multiple single page images to one image with multiple pages
- Conversion of single image multiple pages to multiple single page images
- Print
- Copy to clipboard
- View or hide annotations

* Dependent on scanner capabilities

## Appendix B

Invu uses the following technologies:

- Microsoft .NET framework 2.0
- Microsoft WSE 3.0
- Microsoft Windows Workflow Foundation
- Microsoft SQL Server 2000 or above
- Microsoft Internet Information Services 5.1 or above
- dtSearch
- Lead Technologies

## Appendix C

**Series 6 client machine - minimum specification**

| | |
|---|---|
| Operating System | Microsoft Windows 2000 (latest SP), Microsoft Windows XP SP2 |
| Processor | P3 or equivalent |
| RAM | 512Mb |
| Hard Drive**** | 100 Mb (installed) |
| Minimum Monitor Resolution | 1024 x 768 |

**Series 6 client machine - minimum specification for running a full stand alone single user system**

| | |
|---|---|
| Operating System | Microsoft Windows XP SP2 |
| Processor | P4 or equivalent |
| RAM***** | 1Gb |
| Hard Drive**** | 200 Mb (installed) + 600k per document + file size of the document* |
| Minimum Monitor Resolution | 1024 x 768 |

**Series 6 Server - minimum specification running the database, services and the file store****

| | |
|---|---|
| Operating System | Microsoft Server 2000, Microsoft Server 2003, Microsoft Small Business Server*** |
| Processor | P4 or equivalent |
| RAM***** | 2Gb |
| Hard Drive**** | 200 Mb (installed) + 600k per document + file size of the document* |
| Minimum Monitor Resolution | N/A |

**Series 6 Server - minimum specification running the Invu database only**

| | |
|---|---|
| Operating System | Microsoft Server 2000, Microsoft Server 2003, Microsoft Small Business Server*** |
| Processor | P4 or equivalent |
| RAM***** | 1Gb |
| Hard Drive**** | 200 Mb (installed) + 600k per document. |
| Minimum Monitor Resolution | N/A |

**Series 6 Server - minimum specification running web services**

| | |
|---|---|
| Operating System | Microsoft Server 2000, Microsoft Server 2003, Microsoft Small Business Server*** |
| Processor | P4 or equivalent |
| RAM***** | 1Gb |
| Hard Drive**** | 110 Mb (installed) |
| Minimum Monitor Resolution | N/A |

**Series 6 Server - minimum specification running secure store**

| | |
|---|---|
| Operating System | Microsoft Server 2000, Microsoft Server 2003, Microsoft Small Business Server*** |
| Processor | P4 or equivalent |
| RAM***** | 1Gb |
| Hard Drive**** | 200 Mb (installed) + data files + 10% |
| Minimum Monitor Resolution | N/A |

**Series 6 Server - minimum specification running workflow (S650) the database Invu web services and the file store**

| | |
|---|---|
| Operating System | Microsoft Server 2003 |
| Processor | P4 or equivalent |
| RAM | 3Gb |
| Hard Drive | 400 Mb (installed) + 600k per document + file size of the document*. |
| Minimum Monitor Resolution | N/A |

**Series 6 S650 server (workflow) - minimum specification**

| | |
|---|---|
| Operating System | Microsoft Server 2003 |
| Processor | P4 or equivalent |
| RAM | 1Gb |
| Hard Drive | 200 Mb (installed) |
| Minimum Monitor Resolution | N/A |

* This is an estimated amount and should be used as a guideline. Calculations should be completed for each individual installation to meet the user needs for storage. Audit information will contribute significantly to the database size.

** This is an estimated specification for a 20 user system. The more data and users that are added need to be taken into consideration when specifying the system.

*** The use of the system on a domain controller is highly discouraged however if it is deployed in this scenario the web services and the database must reside on the domain controller.

**** The hard drive values shown are the estimated footprint of the system. Not including Microsoft .Net framework 2.0, WSE 3.0 and Microsoft SQL Server. Please make sure your hard drive has sufficient space to run all applications efficiently as per Microsoft guidelines.

***** Invu services will use approximately 150 Mb of RAM.