

# White Paper

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## Accessing Special Features on Digital Copiers using Formate Software

**Abstract:**

This paper is intended to give a brief overview of the output management software Formate, and highlight how it can be used to drive digital copiers and printers, seamlessly, from business systems software.

- Introduction – “The Problem”
- Brief description of Formate
- Overview of Post Processing
- Simple Example

## Introduction – “The Problem”

The latest generation of digital copiers offer a greater range of facilities than the previous analogue devices. Digital copiers not only have the ability to copy a paper document but, depending on their functionality, can fax, scan to file or act as a network printer.

When used as printers, they provide an attractive proposition, being economical to run and often have print speeds in excess of 50 pages per minute. Additionally, the extensive range of functions available, simplify the production of paper documents. Many have multiple paper input trays, a choice of output stackers, stapling facilities and private print options (requiring users to enter a pin code on the front panel of the machine in order to retrieve their print jobs).

Normally, these options are selected via the standard MS windows print driver. This works well when printing a report from a PC application such as MS Word and manually selecting the appropriate options, such as specific input paper tray. But what if you need to release a large print job from a business system application, running in a UNIX or AS400 environment and want to automatically select a specific option, for example, stapling individual invoices? Or perhaps you want the print options to vary according to the report content (automatically printing to different output trays dependent on customer I.D. or total order value).

This paper is intended to give a brief overview of Formate and highlight how it can be used to drive digital copiers, automatically, from business systems software.

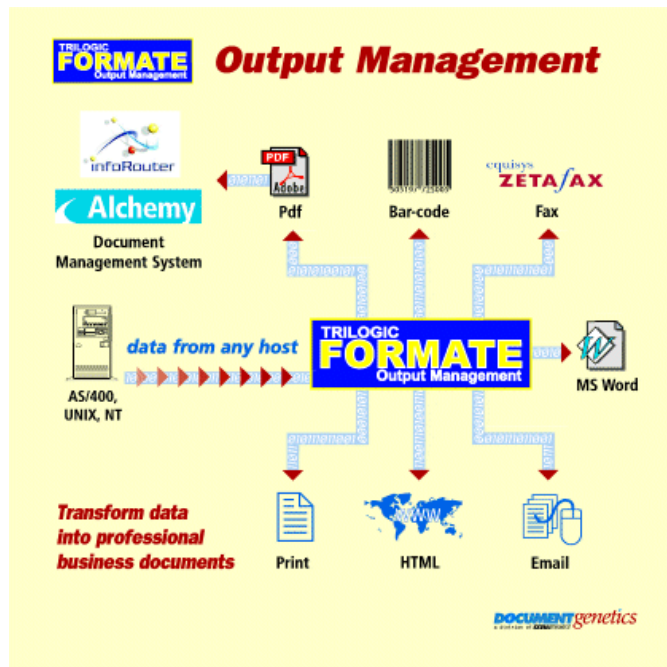
This paper has been written by Document Genetics (UK distributor of Formate).  
<http://www.document-genetics.com>

## Brief Description of Formate

### 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. Standard business system data can be rapidly formatted, adding a form overlay, barcodes, special fonts, signatures, logos etc, then released to 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>

## Formate – Post-Processing

### PrinterCode() function

Under most circumstances Formate can provide sufficient control of a printer using the normal built-in print facilities such as paper bin selection. You can extend this to deal with many non-standard print facilities by using the **PrinterCode()** function, which allows you to insert printer-specific codes at various points in the document. For example we may send a specific PCL code to instruct the printer to direct the finished print job to paper stacker tray 2.

### Post-Processing

There may, however, be some circumstances under which even the **PrinterCode()** function isn't sufficient for your requirement. For example, if you need to insert a printer control code at the very start or the very end of the data which goes to the printer, you can't use **PrinterCode()** because it will send the codes at the start or the end of the page, which will always be after the printer initialization codes are sent and before the printer termination codes (if any) are sent.

Also, the **PrinterCode()** facility uses a special feature known as pass-through, which allows codes and other data to be fed to the printer as part of the print job. This facility is supported by almost all print drivers, but there are a few exceptions, and in those cases the **PrinterCode()** function will raise an error.

To cope with these unusual circumstances, Formate provides a post-processing facility. This allows you to intercept the data stream which is going to the printer, and either insert new data into it at specific points, or to search the print stream for specific data and replace it with alternative data (or just remove the specified data). This should allow you to cope with almost any scenario, controlling the printer's facilities as required.

## Example – Auto Selection of Private Print Facility

The purpose of this white paper is to give an overview of where and when Formate's post processing functions may be applicable, rather than providing a full technical description of how it works.

It is far simpler to provide an actual example of how these facilities have been put into practice.

A company with a UNIX-based business system had a need to print many thousands of letters, daily, to a high speed digital copier. Because many of these documents were of a confidential nature, they wished to use the "Private Print Facility" on the digital copier. There were two main problems:

1. They didn't have control of the source code for their business system software which was generating the letters, and to have modifications made to that software would therefore be extremely expensive (if it was even possible).
2. The reseller of the copier (and indeed its manufacturer) didn't readily have access to the printer control codes or the detailed UNIX knowledge to advise on how this "Private Print Facility" could be implemented into their application.

Formate solved both of these problems easily. No modifications were necessary to the UNIX application as Formate was happy to work with its standard output. This was achieved by setting up a "Remote Output Queue" for the UNIX application, aimed at the Formate server PC and the **Formate Virtual Printer\***. Letters from the UNIX application were then simply printed to the Formate Virtual Printer, which grabbed the data and processed it. Some formatting work was also carried out by Formate, which included moving key data, adding OCR fonts, barcodes and logos, form re-design, and writing a file with an audit log of who printed what and when.

The post-processing facility was then used to call up the "Private Print Facility" by inserting the relevant PDL commands into the print data stream. Formate was able to vary the content of the commands depending on which user generated the letter, thereby sending the letter to the appropriate person's private area. This is best illustrated by looking at the print data stream being sent to the printer. We'll first look at the data stream without the "Private Print Facility" enabled, then look at what Formate has inserted to use this facility.

### \* Formate Virtual Printer

The Formate Virtual Printer is the simplest way to get print data into Formate from a host system. The Formate Virtual Printer is installed on the Formate server PC and appears like any other shared Windows printer, but uses a Formate port to capture the print data and direct it into the Formate Server. The host system is "fooled" into believing it's printing to a real printer and it therefore needs no modification to work in this way, but in fact the Virtual Printer is passing the data directly to Formate for processing.

The first sample shows that the PRINTMODE is set to “NORMAL”, i.e. the “Private Print Facility” is not being used.

### Standard Print Stream

```

@PJL JOB NAME="Microsoft Word - Document1"
@PJL COMMENT DSSC JOB NAME="Microsoft Word - Document1"
@PJL COMMENT DSSC PRINT VERSIONNUMBER=TOSHIBA e-STUDIO550-810 GL-PCL6 1.0.1.2
@PJL SET RESOLUTION=600
@PJL COMMENT DSSC PRINT PRINTMODE=NORMAL
@PJL COMMENT DSSC PRINT COLLATE=1
@PJL COMMENT DSSC PRINT ALTERNATION=0
@PJL COMMENT DSSC PRINT DUPLEX=0
@PJL SET OUTBIN=OPTIONALOUTBIN2
@PJL COMMENT DSSC PRINT SC=4
@PJL COMMENT DSSC PRINT TIME=1060360043
@PJL COMMENT DSSC PRINT USERLOGIN=Charlie Watt
@PJL COMMENT DSSC PRINT STAPLING=0
@PJL COMMENT DSSC PRINT HOLEPUNCH=0
@PJL COMMENT DSSC PRINT ACCESSCODE=
@PJL COMMENT DSSC PRINT TOTALPAGES=1
@PJL COMMENT DSSC PRINT NUMCOPIES=1
@PJL COMMENT DSSC PRINT SUBMISSIONID=bbc565fc-e2f4-4732-b0b3-6d52f44935b0
@PJL COMMENT DSSC PRINT SUBMISSIONLOC=127.0.0.1
@PJL ENTER LANGUAGE=PCLXL HP-PCL XL;1;Comment Copyright (c) 1993-1999 Software 2000 Limited
AUTOTYPE=
Test data
@PJL EJOB NAME="Microsoft Word - Document1"

```

Printmode set to normal

In the second sample, the “Private Print Facility” has been enabled by changing the print code to “PRIVATE” and adding a PRIVPRINT value set to “12345”.

### Print stream with “Private Print Facility” enabled

```

@PJL JOB NAME="FormatCfgr"
@PJL COMMENT DSSC JOB NAME="FormatCfgr"
@PJL COMMENT DSSC PRINT VERSIONNUMBER=TOSHIBA e-STUDIO 550-810 GL-PCL6 1.0.1.2
@PJL SET RESOLUTION=600
@PJL COMMENT DSSC PRINT PRINTMODE=PRIVATE
@PJL COMMENT DSSC PRINT PRIVPRINT=12345
@PJL COMMENT DSSC PRINT COLLATE=1
@PJL COMMENT DSSC PRINT ALTERNATION=0
@PJL COMMENT DSSC PRINT DUPLEX=0
@PJL SET OUTBIN=OPTIONALOUTBIN2
@PJL COMMENT DSSC PRINT SC=4
@PJL COMMENT DSSC PRINT TIME=1060360272
@PJL COMMENT DSSC PRINT USERLOGIN=Charlie Watt
@PJL COMMENT DSSC PRINT STAPLING=0
@PJL COMMENT DSSC PRINT HOLEPUNCH=0
@PJL COMMENT DSSC PRINT ACCESSCODE=
@PJL COMMENT DSSC PRINT TOTALPAGES=1
@PJL COMMENT DSSC PRINT NUMCOPIES=1
@PJL COMMENT DSSC PRINT SUBMISSIONID=b0b29846-f27e-406c-bb0f-fb842c8b7ba4
@PJL COMMENT DSSC PRINT SUBMISSIONLOC=127.0.0.1
@PJL ENTER LANGUAGE=PCLXL HP-PCL XL;1;Comment Copyright (c) 1993-1999 Software 2000 Limited
AUTOTYPE=
Test data
@PJL EJOB NAME="FormatCfgr"

```

Printmode set to private  
and  
Private Print PIN code set to “12345”

As the private print facility has been set, the print job will remain on the hard drive of the copier until the user selects the job on the menu of the copier and enters the correct pin code “12345”.

Although this specific example is centred on calling up the “Private Print Facility”, the same method could be used to select features such as hole-punching, stapling, mailboxes or virtually any other facility on the copier being used.