

FreeFlow®

Web Services

Excel Pricing



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Content

Introduction	1
Working with Excel File	1
Settings in the <i>FreeFlow Web Services</i> System.....	2
Pricing Models	2
Assigning Excel Pricing to a Print Buyer	3
Excel Pricing File Format	5
Excel Pricing with the <i>Book Assembly</i> Module.....	10
Appendix	12
Example of Excel Programming and Useful Excel Functions ...	12

Introduction

Excel Pricing has been developed for Print Providers who prefer a pricing solution other than that provided by *FreeFlow Web Services*. The reasons Print Providers may prefer an extraneous pricing system are two-fold:

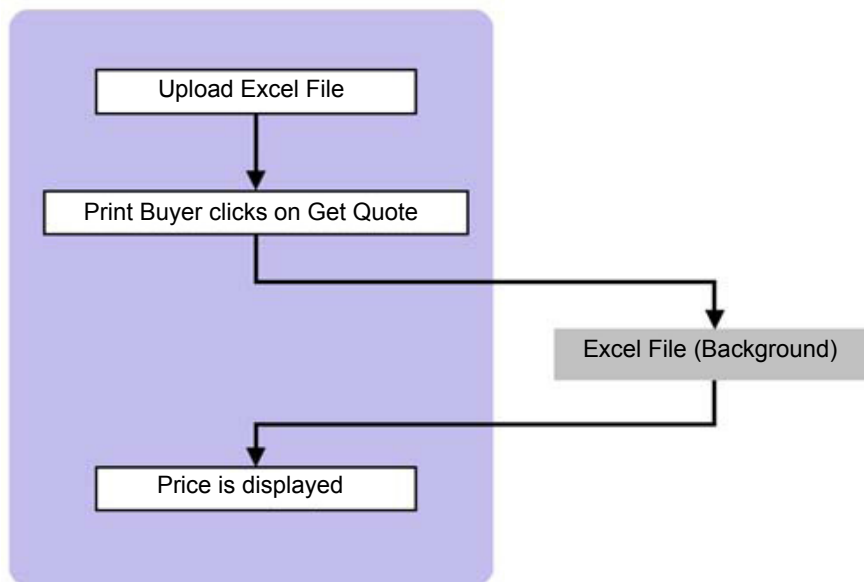
- These Print Providers have their own unique way of calculating the price and are not able to find a satisfactory way in which to define pricing within the *Web Services* system
- The Print Providers already have their own tool by which they can define a price list and calculate prices

Excel Pricing enables the Print Provider to upload an Excel file that contains all pricing parameters and then assign the file to an intended customer.

- Note:**
1. By working with an Excel file, all calculation methods are possible (i.e. any formula or any information that will generate the specific price can be employed).
 2. To activate *Excel pricing*, the *Data Export* module must be purchased.

Working with Excel File

To work with *Excel Pricing*, the Print Provider must first create an Excel file (see page 5 for more complete details) and then upload the file to the Print Buyer account. When the Print Buyer clicks on **Get Quote**, all relevant information related to the Job and the customer, is exported from the *Web Services* system (in the background of the Excel file) into the Excel file. The Excel file receives the new information and, according to the formulas that the Print Provider provided, updates and calculates the price. The price and the output device information are automatically imported back to the *Web Services* system, where it is displayed to the Print Buyer.



When working with *Excel pricing*, the Print Provider can price a multitude of additional parameters. A few examples are: B&W and Color Pages, Click Charges, Job Tickets and Paper Types.

Settings in the *FreeFlow Web Services System*

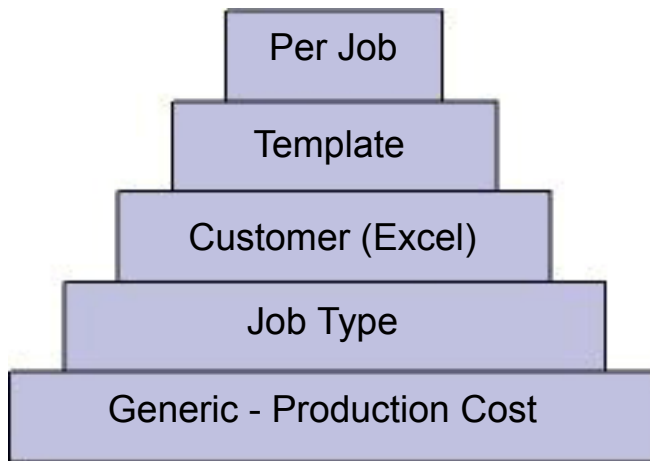
The *Settings* section describes the interaction between the *Web Services* and the Excel pricing file for a specific customer.

The following issues are covered in this section:

- The position of *Excel* pricing within the *FreeFlow Web Services* pricing models
- How to assign an Excel pricing file to a Print Buyer
- How to download an Excel file that is assigned to a customer

Pricing Models

Xerox *FreeFlow Web Services* supports a 5-level pricing model. This mechanism comes into action whenever a customer clicks on the **Get Quote** button located in the **Shopping Cart** window. In order to calculate and display the price, the system employs one of the following five methods:



The *Web Services* pricing model is hierarchical. The system first checks for the presence of per-Job (manual) pricing. If *Manual* pricing exists, this is the price that is displayed for the Print Buyer. If *Manual* pricing does not exist, the system searches for *Template* pricing. If *Template* pricing does not exist, the system searches for *Excel* pricing and then for *Job Type* pricing. If none exist, the system calculates the price according to production costs.

The *Excel* pricing model is at the customer level, which means that for each customer, there is an option to set the same pricing mechanism or a different one.

Assigning Excel Pricing to a Print Buyer

Assigning an *Excel* pricing file to a customer is completed out on the Print Provider side. To assign an *Excel* pricing file to a customer, carry out the following steps:

- 1 Log in as a Print Provider and then click on **Customers** (choose the relevant customer)/**Preferences**; the **Preferences** window appears.
- 2 In the **Pricing** sub panel, select the **Excel** option from the **Customer Pricing Model** dropdown menu; the **Excel File** link becomes enabled.

Pricing: Customer Pricing Model: **Excel** **Excel File:** Sample Excel Pricing.xls

Hide Price From Customer

Disable Shipping Date

Allow Ordering Unpriced Jobs

Hide Shipping Price From Customer

Customer Tax Rate: 5 %

Customer Tax Name: customer

Payment Method: PO (Purchase Order)

Oblige PO Number

CC (Credit Card)

EDD (Electronic Direct Debit)

Discount: 0 %

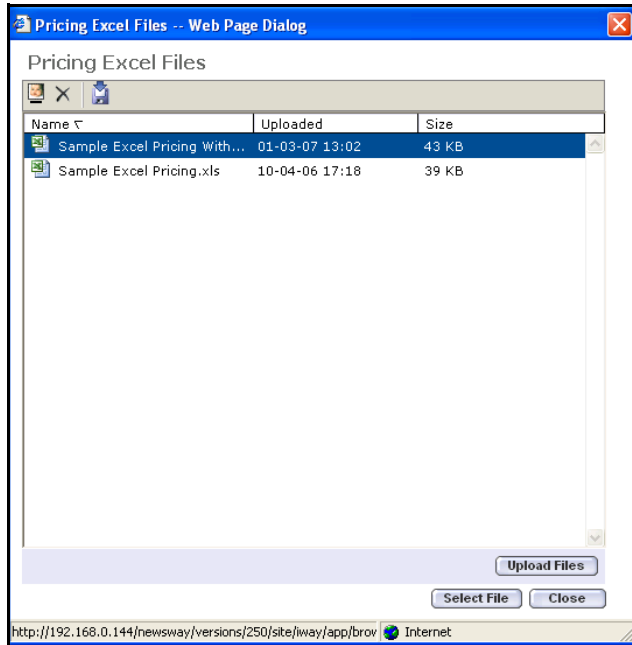
- 3 Select the Excel file to be assigned to the specific customer.

Importing/Exporting the Excel Pricing File

The system enables uploading Excel files for pricing. The number of files that can be uploaded is unlimited, but only one Excel file can be assigned to a customer.

To upload an Excel file, carry out the following steps:

- Click on the **Excel File** link; the **Excel File** dialog box appears and displays a list of all of the Excel files that exist within *Web Services* system.






Note: The *Sample Excel Pringing.xls* and the *Sample Excel Pricing with Set.xls* are the samples files provided by the system and demonstrate the general format that *Excel Pricing* sheets should follow. It is important not to delete these files since they will act as a basis for the *Excel Pricing* sheets. For further information about the *Excel Pricing* file format, refer to *Excel Pricing File Format* section.

The **Pricing Excel Files** dialog box allows the uploading and downloading of Excel files, as well as enabling a particular *Excel Pricing* file to a customer.

Operation Buttons

- **Upload Files** - Allows upload of an Excel file
- **Select File** - Assigns an Excel file to a customer
- **Close** - Closes the **Pricing Excel Files** dialog box

Pricing Excel File Toolbar

- Change icon  Allows changing the chosen Excel file name.
- Delete File  Allows deleting the chosen Excel file
- Download File  Allows downloading the chosen Excel file from the list to a target folder.

Excel Pricing File Format

FreeFlow Web Services provides two Excel sample files:

- Sample Excel Pricing.xls
- Sample Excel Pricing with Set.xls

Note: The *Sample Excel Pricing with Set.xls* file is relevant if you have the *Book Assembly* module.

Excel file for pricing has a special format which can not be modified. In this section, a full description of the file format is provided to help Print Providers create their own pricing mechanisms using the *Excel Pricing* model.

Note: The main concept of the Excel file format will be given according to the sample file; *Sample Excel Pricing.xls*.

The *Sample Excel Pricing.xls* file contains 2 sheets:

- Info
- Calculation

These sheets cannot be modified, removed, or deleted, and must be present when creating the Excel file.

The Calculation sheet contains 4 columns:

- Column A - Fields names that are exported from *Web Services*.
- Column B - Values of the field names exported from *Web Services*.
- Column C - Fields names that are imported into *Web Services*.
- Column D - Values of the field names that are imported into *Web Services*.

Sample Excel Pricing				
	A	B	C	D
	Fields Exported From iWay	Data Exported from iWay	Fields Imported to iWay	Data Imported to iWay
1	These are the Fields that you receive from iWay	This is the Data that you receive from iWay	These are the Fields that you send to iWay	This is the data that you send to iWay
2	Do not change these fields	Do not change these fields	Do not change these fields	Add the formulas that you want to use
3	Do not change these fields	Do not change these fields	Do not change these fields	Add the formulas that you want to use
4	JobID	5019	Cost	120
5	JobName	GM Mailer	Price	180
6	JobStatusID	2	AdjustedPrice	180
7	JobStatusName	ready to order	CustomerPrice	144
8	RefCode	0	DiscountRate	20%
9	CustomerRefCode	0	Discount	36
10	JobTypeID	Post Card	UrgencyRate	0%
11	JobTypeName	Post Card	UrgencyPrice	0
12	JobSubTypeID	custom	TaxRate	10%
13	JobSubtypeName	Custom	Tax	14.40
14	Copies	100	TotalNoTax	144
15	FlatCount	2	Total	158.40
16	FlatWidth	8.5	PressSheetSize	A3
17	FlatHeight	5.5	OutputDeviceID	Test_Device
18	FlatSize	5.5x8.5		
19	FlatOrientation	landscape		
20	FlatSides	TwoSidedHeadToHead		
21	PageCount	2		
22	PageWidth	8.5		
23	PageHeight	5.5		

You cannot make any modifications in Columns A, B or C. You need to generate values for Column D according to calculations inserted in each cell.

Column A

Column A contains field names related to job properties, shipping and print buyer information, which are exported from *FreeFlow Web Services*. The following table provides a detailed explanation for these fields:

Fields Name	Explanation
JobID	Unique job# that the system generates
JobName	Job name as it appears in the <i>Shopping cart</i>
JobStatusID	Job status ID as it appears on the <i>Database</i>
JobStatusName	Job status
CustomerRefCode	Reference code that the customer entered
JobTypeID	Job type ID
JobTypeName	Job type name as defined in the job type library
JobSubTypeID	Job sub type ID
JobSubtypeName	Job sub type name as defined in the job type library
Copies	Number of copies of the job (if it is a VI job the number of copies is for one record)
FlatCount	Number of original pages of this job (for one copy) without folding
FlatWidth	Job original page width (without folding)
FlatHeight	Job original page height (without folding)
FlatSize	Job page size (without folding)
FlatOrientation	Job page orientation
FlatSides	Job sides
PageCount	Number of folded counts of this job (for one copy)
PageWidth	The job width after folding
PageHeight	The job Height after folding
PaperCategory	The paper category (on which the job will be printed) as was defined in the stock library
PaperTexture	The paper texture (on which the job will be printed) as was defined in the stock library
PaperBrand	The paper brand (on which the job will be printed) as was defined in the stock library
PaperColor	The paper color (on which the job will be printed) as was defined in the stock library
PaperWeight	The paper weight (on which the job will be printed) as was defined in the stock library
OutputDeviceID	Printer ID that was assigned automatically by the system
OutputDeviceName	Printer name that was assigned automatically by the system
PrintQualityID	Print quality ID as defined in the printer
PrintQualityName	Print quality name as defined in the printer (cost effective, high quality)
ColorGroup	The job color details: process or B/W
BlackColorCount	If B/W according to the job properties
ProcessColorCount	Number of processes according to the job properties
SpotColorCount	Number of spot colors according to the job properties
RequiredDate	The delivery date
UrgencyID	Urgency ID according to the definition in the system
UrgencyRate	Urgency Rate according to the definition in the system
JobTaxRate	Tax rate for this job
PdfFlatCount	Number of pages of this job (for one copy) without folding. after converting to PDF
PdfFlatWidth	Job original page width (without folding) after converting to PDF
PdfFlatHeight	Job original page height (without folding) after converting to PDF

Fields Name	Explanation
PdfBlackColorCount	If B/W after conversion to PDF
PdfProcessColorCount	Number of process colors after conversion to PDF
PdfSpotColorCount	Number of spot colors after conversion to PDF
PdfBlackAndWhitePageCount	Number of pages of the job that are B/W
PdfColorPageCount	Number of pages of the job that are process
VardataCount	Number of records (VI) for this job
HasIForm	Is it an iForm job
CustomerID	Customer ID (generated by the system when a customer is created)
CostCenterID	Cost Center ID
CustomerName	Print Buyer name
CustomerDiscountRate	Print Buyer discount rate (as set in preferences)
CustomerTaxRate	Print Buyer tax rate (as set in preferences)
StaplingType	Stapling type (as defined for this job)
StaplingPosition	Stapling position (as defined for this job)
StapleCount	Staple count (as defined for this job)
CombBindingType	Comb binding type (as defined for this job)
CombBindingPosition	Comb binding position (as defined for this job)
CombThickness	Comb binding thickness (as defined for this job in Inches)
VardataCount	How many recodes are in a VI job
LaminatingTexture	Laminating texture
LaminatingSides	Laminating sides (one side or two sided)
DrillingPosition	Drilling position (as defined for this job)
DrillingRadius	Drilling radius (as defined for this job in Inches)
DrillingHoleCount	Drilling hole counts (as defined for this job)
CollatingType	Collating (if defined for this job)
PerfectBindingType	Perfect binding type (as defined for this job)
PerfectBindingPosition	Perfect binding position (as defined for this job)
NumberingType	Numbering type (as defined for this job)
NumberingPosition	Numbering position (as defined for this job)
NumberingSides	Numbering sided
HasCustomFinishing	Does this job has custom finishing
CustomFinishingName	Custom finishing name
CustomFinishingDescription	Custom finishing description
FoldCount	Number of folding in the job (for 1 copy)
ShipToFirstName	First name as appears in the shipping address
ShipToLastName	Last name as appears in the shipping address
ShipToFullName	First name and Last name as appears in the shipping address
ShipToCompany	Company name as appears in the shipping address
ShipToDepartment	Department name as appears in the shipping address
ShipToStreet	Street name as appears in the shipping address
ShipToCity	City name as appears in the shipping address
ShipToState	State name as appears in the shipping address
ShipToZipCode	Zip code as appears in the shipping address
ShipToCountry	Country name as appears in the shipping address
ShipToPhone	Phone number as appears in the shipping address
ShipToMobile	Mobile number as appears in the shipping address
ShipToEmail	E-mail address as appears in the shipping address
ShipToAddressNotes	Address notes as appears in the shipping address
PricingLevel	Customer level is the relevant on Excel

Column B

When a customer clicks on the **Get Quote** button in the *Shopping Cart*, the values related to the Job are exported to Column B. There are 3 windows in the *Web Services* system, which update the values in Column B:

- **Get Quote** - Data concerning the Job properties and customer details will be updated
- **Choose Shipping Address - Shipping Address** information
- **Choose Your Shipping Options** - Shipping date and urgency

Important Notes:

- Values of measurement - All sizes that are exported to the Excel file are in inches, even if the default language is not English US. It is necessary to convert these values to mm using a simple Excel formula. For example, Cell B16 is in inches. Convert it to mm by using the formula $B16*25.4$.
- Fields Format -Excel provides an option for setting the cell format whereby the view is changed but not the value. In the Excel that arrived with the system, all cells are set to **General**. Cell format can be changed by right-clicking on the cell and selecting the format cell option from the menu. For example, Cell B37, which is the required date value with a number, can be changed to a date format (with any date format).

Column C

Column C contains field names of the pricing and output device information, which will be imported into *Web Services*. The following table provides an explanation of the fields:

Field Names	Explanation
Cost	Cost for the Print Provider
Price	Customer price without tax and discount
AdjustedPrice	Customer price + the negative discount
CustomerPrice	Customer price + the positive discount
DiscountRate	Discount rate
Discount	Discount price
UrgencyRate	Urgency rate
UrgencyPrice	Urgency price
TaxRate	Tax rate
Tax	Tax price
TotalNoTax	The total price without the tax
Total	The total price + discount + urgency + taxes
PressSheetSize	The Run Size that will be used for printing this Job (not obligatory)
OutputDeviceID	The printer that the Job will be print on (not obligatory)

Column D

The values for Column D should be inserted by the Print Provider. These are the values imported back to *FreeFlow Web Services* system once a customer clicks on the **Get Quote** button.

Important Notes:

- N/A value - A Print Buyer, using the *Excel Pricing* model, may receive a pricing error (N/A) in place of the price, after clicking on **Get Quote**. This is an indication that there is an error in the *Column D Calculation*. To overcome this, download the Excel file used for this customer and review the formula for values in Column D that may be responsible for this error.

Note: Ensure that the Excel file used by the Print Buyer for the price calculation is closed prior to the customer ordering. If the file is open and a Print Buyer requests a quote, instead of the price, a Microsoft Excel message will appear on the server.

- Fields Format - In Excel, there are options for setting the cell format, which will change the view and not the value. In the Excel that came with the system, all cells were set to **General**. An option exists for changing the Excel default cell format by right-clicking on the cell and choosing the format cell option from the menu. For example, Cell D6 is the price that the customer will see in the *Shopping Cart*. You can set this cell format to be **Currency** according to your decision (this change will not effect the currency value that was set in *Web Services*).
- Field Value - Column D, Cells D4-D15 can accept only numbers. If the cells contain text, an error will be generated when a Print Buyer clicks on the **Get Quote** button.

You can make other changes in the other columns (except A-D) of the Calculation sheet and you can add new sheets to the file. Linking between two Excel files may cause an error, so any information that exists in a different file can be copied to a new sheet in the file that will be used for the Print Buyer.

Excel Pricing with the *Book Assembly* Module

The Excel file format, which can generate a quote for Jobs ordered with the *Book Assembly* module and for **Simple Jobs**, is similar to the Excel file format that was described in the previous section.

In this section, we will cover the fields and sheets that were added to the file: *Sample Excel Pricing with Set.xls*.

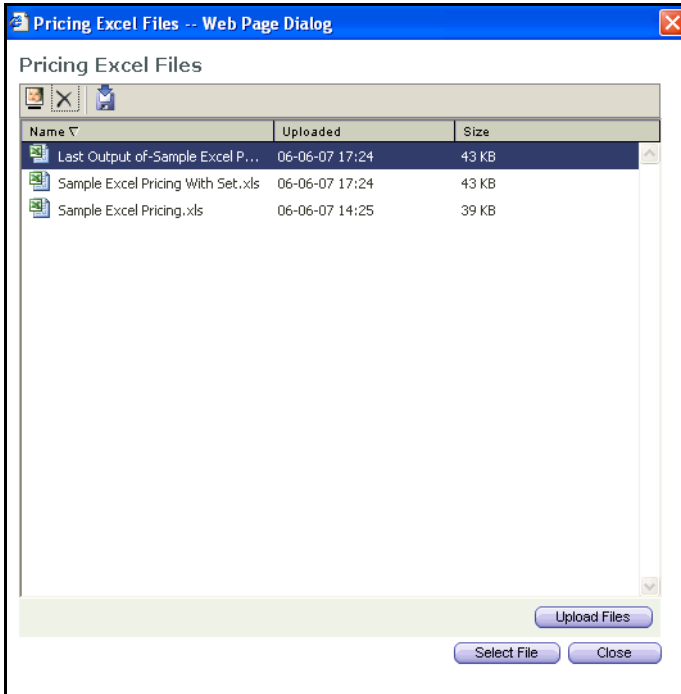
- Additional Fields - In the Calculation sheet, there are 2 new fields which are exported from *FreeFlow Web Services*
- Binding - This field contains the binding style that was chosen for the *Book Assembly* Job.
- Material - The *Material* that was chosen for this *Book Assembly* Job. If there is no material for a Job, the value of this field will be set to 0
- Additional Sheet - Component sheet was added to the *Sample Excel Pricing with Set.xls* file. Columns A-F described the *Book Assembly* components and are exported from *FreeFlow Web Services*
- Column A: Component - describes the component type: Color Pages, B/W, Cover, Tag or any other type that the Print Provider will define
- Column B: Component Type -The type of the component that was defined in Column A
- Column C: Page Count - Number of pages for the current component
- Column D: Paper Type - Paper Type for the current component
- Column E: Finishing - Finishing for the current component
- Column F: PDF Colors - Number of PDF color pages that were originally uploaded for the current component
- The numbers of rows that are added depends on the number of components that were defined for a *Book Assembly* Job.

To import the updated Excel file with *Book Assembly*, carry out the following steps:

- 1 Log in as a Print Provider and click on **Customers** (choose the relevant customer)/**Preferences**; the **Preferences** window appears.
- 2 In the **Pricing** sub panel, select **Excel** from the **Customer Pricing Model** dropdown box; the **Excel File** link is enabled.

Pricing:	Customer Pricing Model: <input type="text" value="Excel"/>	Excel File: <input type="text" value="Sample Excel Pricing.xls"/>
<input type="checkbox"/> Hide Price From Customer		Payment Method: <input checked="" type="checkbox"/> PO (Purchase Order)
<input type="checkbox"/> Disable Shipping Date		<input type="checkbox"/> Oblige PO Number
<input checked="" type="checkbox"/> Allow Ordering Unpriced Jobs		<input checked="" type="checkbox"/> CC (Credit Card)
<input type="checkbox"/> Hide Shipping Price From Customer		<input type="checkbox"/> EDD (Electronic Direct Debit)
Customer Tax Rate: <input type="text" value="5"/> %		Discount: <input type="text" value="0"/> %
Customer Tax Name: <input type="text" value="customer"/>		

- 3 Click on the **Excel File** link; the **Excel File** dialog box appears.



The **Excel File** dialog box displays the *Last Output of-Sample Excel Pricing With Set.xls* file. *Last Output of-Sample Excel Pricing With Set.xls* contains all the data that was imported and exported by *FreeFlow Web Services* during the last use. This means that in this file, you can find all the information about the Job being ordered by the user when the user clicked on **Get Quote**.

Appendix

Example of Excel Programming and Useful Excel Functions

If function

The Excel *If* function examines whether a certain condition is true or false. If the condition is true, the function will do one thing, if the condition is false, the function will do something else.

Note: Microsoft Excel limits up to 7 linked *if's*.

Syntax: =IF (A3 > B3,"A is larger","B is larger")

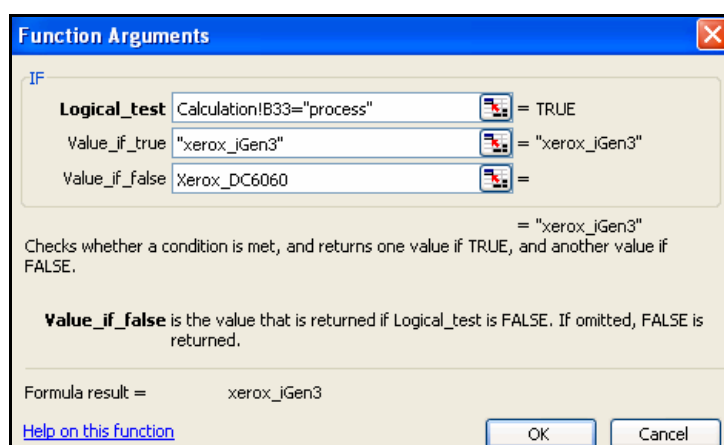
Example:

Using the *If* function, we will select which printer this Job will be printed on.

If the job is B/W, the printer will be Xerox_DC6060; if this is a Process Job, the printer will be Xerox_iGen3.

=IF(Calculation!B33="process", " Xerox_iGen3"," Xerox_DC6060")

Microsoft Excel provides a friendly wizard for all Excel functions. For example:



The function will not be helpful if the logical test is equal to more than 7 options. There are useful functions that operate on databases. A number of examples are listed below:

Vlookup Function

The Vlookup function searches for a value in the first column of a table array and returns a value in the same row from another column in the table array.

Syntax: VLOOKUP (lookup_value, table_array, col_index_num, range_lookup)

- **lookup_value** - the value to search for in the first column of the table_array
- **table_array** - two or more columns of data that are sorted in ascending order
- **col_index** - the column number in table_array from which the matching value must be returned. The first column is 1
- **Range lookup** - determines if you are looking for an exact match based on lookup_value. Enter FALSE to find an exact match. Enter TRUE to find an approximate match, which means that if an exact match is not found, then the VLOOKUP function will look for the next largest value that is less than value.

Example:

Using the VLOOKUP function, we will define a discount according to number of copies. We set a table of discounts according number of copies. The first column displays the minimum number of copies required to receive the discount displayed in the second column. The function and database appear in the image below:

	H	I	J	K	L	M
1						
2	Example of VLOOKUP function					
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

Number of Copies	Discount
0	0.00%
1000	1.00%
2000	2.00%
5000	3.00%
10000	4.00%
15000	5.00%
20000	6.00%
25000	7.00%
30000	8.00%
35000	9.00%
40000	10.00%
45000	11.00%
50000	12.00%

Number of ordered copies
1500

Discount for ordered copies
1.00%

The lookup_value must be in the first (left) column on the table_array which sometimes can have limits and the user will have to change their own database for this limitation. To solve this limitation, use the functions MATCH and INDEX.

MATCH and INDEX Functions

MATCH

The Match function searches for a value in an array and returns the relative position of that item.

Syntax: MATCH (lookup_value, lookup_array, match_type)

lookup_value - the value to search for in the lookup_array.

lookup_array - a range of cells that contains the lookup_value that you are searching for.

match_type = FALSE or 0: exact match.

match_type = TRUE or 1: if the exact value was not found the function will look for the closest value but small than the lookup_value).

INDEX

The Index function returns a value or the reference to a value from within a table or range.

Syntax: INDEX (array, row_num, column_num)

array - a range of cells or table.

row_num - the row number in the array to use to return the value.

column_num - the column number in the array to use to return the value.

Example:

With the combination of Match and Index functions, we will define a discount according to the Print Buyer name.

Note: In this case, there is an option to export the customers list and their preferences, which includes a discount rate, from *Web Services*. The exported scv file can be copied to the Excel file as a new sheet.

	A	B	C	D	E
D35			=INDEX(Customers!Q1:Q18,MATCH(D34,Customers!C1:C14,0))		
31		Example of MATCH+INDEX functions			
32					
33		Discount according to Customer name			
34		Customer: Test Account			
35		Discount: 10.00%			
36					
37					
38					

In this example, we start with the Index function which determines from which column the value will return. The row number was determined by Match function.

DGET Function

One of the powerful functions which operates on databases is the DGET function.

DGET function retrieves from a database a single record that matches a given criteria.

Syntax: DGET (database, field, criteria)

database - the range of cells that you want to apply the criteria against.

Field - the column to retrieve.

Criteria - table that contains the criteria + column names.

	A	B	C	D	E
2		Example of DGET function			
3					
4					
5		Job Type calculation			
6					
7		Criteria			
8		Job Type	Job Subtype		
9		Brochure	Brochure_One Side Single Fold		
10					
11		Cost per job type			
12		\$0.10			
13					
14					
15					
16					

In this example, the database is a table of *Job Type*, *Job Subtype* and a *Price per Copy*. The Criteria is to look inside the database for a Job type **Brochure** and subtype **One Side Single Fold**.

VBA

With Excel, there is an option to write a code with VBA. Using this option, you can create any function that you would like, especially for complex pricing calculations. It is important to remember that if you are using this functionality in one of the Excel files, there is a need to change the *Macro security* on Microsoft Excel that is installed on the server.

To change the *Macro security*, go to Microsoft Excel/Tools/Options/Security/Macro Security and set the *Security Level* to **Medium**.

