



Zultys Fax Server Capabilities

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The MX systems support traditional fax machines to send and receive faxes over a standard analog FXS interface. This method of sending and receiving faxes has several drawbacks such as faxes getting lost, users having to sort through several faxes to retrieve their particular fax or having to employ someone to distribute them, having a paper only copy, security and privacy issues, lost productivity, and so on.

Along with supporting standard fax machines, the MX systems include an integrated fax server which allows for advanced fax origination and termination. Incoming faxes are terminated on the MX system and converted to a graphical file which can be delivered to users and groups by e-mail or retrieved using MIXE. Using MXIE and the Zultys Fax driver, faxes can be sent directly from applications, eliminating the need for paper faxes. Using standard applications, faxes can still be printed as required.

This document explains how you can benefit from this feature, how it works, and how to configure the MX system to deliver paperless faxes.

Updated to cover MX Version 11, Windows 8.1 and Windows 10 documentation.

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Zultys Fax Server Capabilities (0000000193)

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2 Benefits

The function of fax origination and termination is sometimes referred to as “paperless fax” as a fax machine is not required to send and receive faxes. Some of the benefits include:

- Increased productivity because users do not have to search for specific fax from a fax machine
- Faxes are delivered electronically to individual users without an employee delivering paper by hand
- Incoming faxes are securely and privately delivered to recipients
- Faxes can be sent directly from applications
- Faxes can be easily stored or archived
- Faxes can be delivered to e-mail accounts
- Faxes can be forwarded to other users by MXIE or e-mail
- End users can store faxes electronically without consuming drawer space
- Use of standard applications to view and print faxes

3 Capabilities

License Type	MX30	MX-SE	MX250	Two System Cluster	Four System Cluster
FXO cards (Analog)	1	1	3	3	3
FXS cards (Analog)	1	1	3	3	3
QBS cards (BRA)	1	0	3	3	3
DTE cards (T1/E1)	1	1	2	4	8
TI Circuits	1	1	2	2	2
PRI Circuits	1	1	2	4	8
Fax Origination and Termination	4	8	16	32	32

3.1 Supported versions of Windows

- Windows 7
- Windows 8.0 & 8.1
- Windows 10
- Server 2008 R2
- Server 2012

4 Method

The MX fax server is an integrated application that requires no additional hardware or software upgrades. This is a licensed feature and requires the **Fax origination and termination** software license. An overview of how the MX fax server is used to terminate and originate faxes is shown in figure 1. The MX fax server is supported on traditional telephony interfaces (FXO, BRA, and PCM) and with SIP trunks, providing the carrier supports faxing over SIP.

The method for connecting a traditional fax machine is not shown as it only requires that the fax machine be connected to an FXS port of the MX system or Media Gateway and does not need any additional configuration. Faxes sent and received on the traditional fax machine do not use the advanced features of the MX fax server. For a MX30 and MXvirtual, an external SIP gateway with FXS interfaces such as the Media Gateway is required as the MX30 and MXvirtual do not support FXS interfaces.

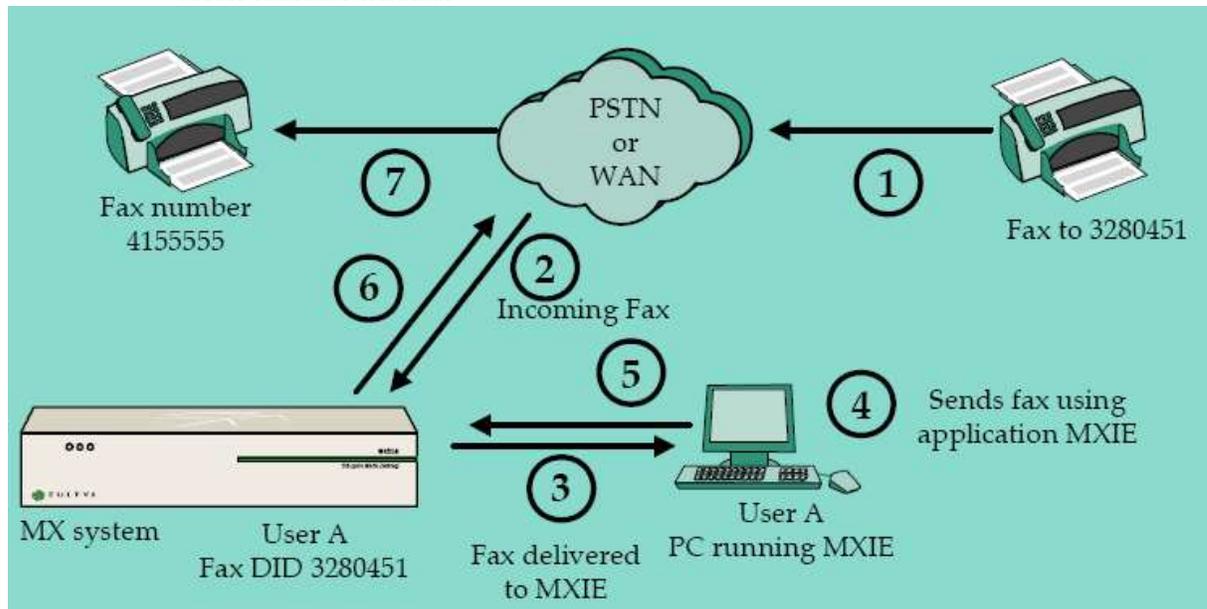


Figure 1 Overview of the MX Fax Server Sending and Receiving Faxes

The client interface, MXIE, runs under Windows, Mac OS X, and Linux. When MXIE is running under Windows, the application can be used to directly print a document to a Windows printer driver that is the Zultys fax driver. To fax from a MAC, use Action | Send a Fax Operation, on Linux systems is currently limited.

4.1 Incoming Fax

- An incoming fax is being sent to 3280451, which is a configured fax DID number for user A (marked 1 on figure 1).
- The fax is terminated on the MX system and the MX fax server converts the fax to a TIFF or PDF file (marked 2 on figure 1).
- The fax server delivers the fax to user A and MXIE is alerted of the newly delivered fax for User A (marked 3 on figure 1). User A can view, edit, delete, store, or print the fax from the MXIE application.

4.2 Outgoing Fax

- User A using an application and MXIE initiates a fax to 4155555 (marked 4 on figure 1). {The application can print to the fax driver if under Windows, or in Mac use Actions | Send a Fax.}

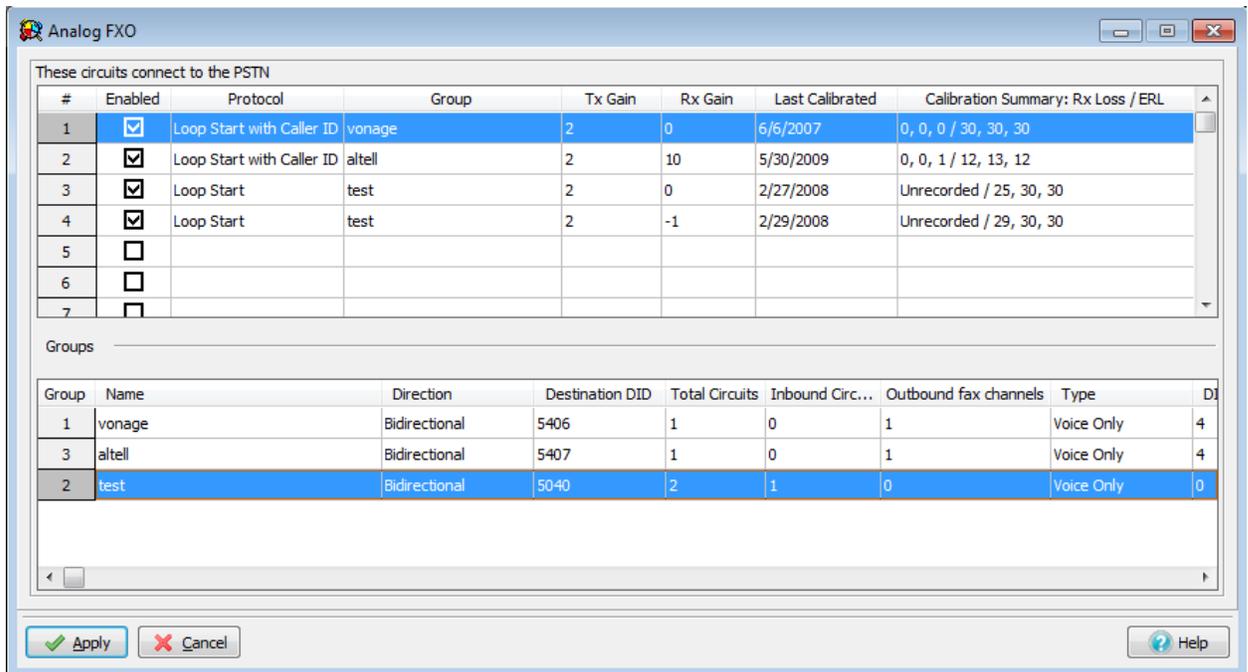
- The MX system receives the fax and is added to the outgoing fax queue (marked 5 on figure 1).
Outgoing faxes are sent in TIFF format only.
- When resources are available, the MX system will send the fax (marked 6 on figure 1).
- The fax will be delivered to the fax machine (marked 7 on figure 1).
- The MXIE application is notified whether the attempt to send the fax was successful or not.

5 Configuration

5.1 Trunk Configuration

5.1.1 FXO Interface

To enable the FXO interface to use the MX fax server to originate and terminate faxes, access the **Provision | Analog (FXO)** from the main menu of the MX Administration software (shown in figure 2).



These circuits connect to the PSTN							
#	Enabled	Protocol	Group	Tx Gain	Rx Gain	Last Calibrated	Calibration Summary: Rx Loss / ERL
1	<input checked="" type="checkbox"/>	Loop Start with Caller ID	vonage	2	0	6/6/2007	0, 0, 0 / 30, 30, 30
2	<input checked="" type="checkbox"/>	Loop Start with Caller ID	altell	2	10	5/30/2009	0, 0, 1 / 12, 13, 12
3	<input checked="" type="checkbox"/>	Loop Start	test	2	0	2/27/2008	Unrecorded / 25, 30, 30
4	<input checked="" type="checkbox"/>	Loop Start	test	2	-1	2/29/2008	Unrecorded / 29, 30, 30
5	<input type="checkbox"/>						
6	<input type="checkbox"/>						
7	<input type="checkbox"/>						

Groups								
Group	Name	Direction	Destination DID	Total Circuits	Inbound Circ...	Outbound fax channels	Type	DI
1	vonage	Bidirectional	5406	1	0	1	Voice Only	4
3	altell	Bidirectional	5407	1	0	1	Voice Only	4
2	test	Bidirectional	5040	2	1	0	Voice Only	0

Figure 2 Provision FXO Circuits to Use the MX Fax Server

Direction. This parameter configures the transmission direction, relative to the MX system.

Destination DID. This field is not used for Fax Only circuits

Inbound circuits. This parameter specifies the number of circuits assigned to the group that are reserved for inbound calls.

Outbound fax channels. This parameter specifies the maximum number of channels that can be send simultaneous fax calls. Outgoing fax requests are placed in a queue if the group is transmitting the maximum number of faxes.

Type. This parameter specifies the traffic that the circuits will transmit. If **Fax Only** is selected the group can only be used for call groups.

5.1.2 BRA Interface

To enable the BRA interface to use the MX fax server to originate and terminate faxes, access the **Provision | BRI Interfaces** from the main menu of the MX Administration software (shown in figure 3).

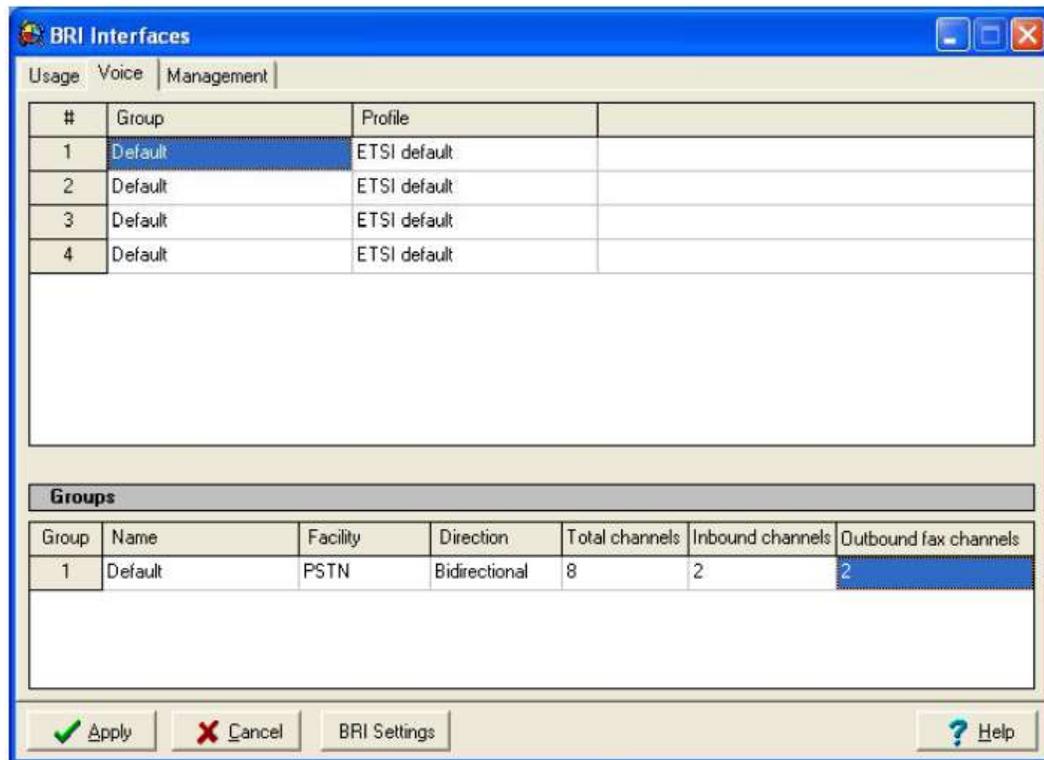


Figure 3 Provision BRA Circuits to use the MX Fax Server

Inbound channels. This parameter specifies the number of channels assigned to the group that are reserved for inbound calls.

Outbound fax channels. This parameter specifies the maximum number of channels that can send simultaneous fax calls. Outgoing fax requests are placed in a queue if the group is transmitting the maximum number of faxes.

5.1.3 PCM Interface

To enable the PCM interface to use the MX fax server to originate faxes, access the **Provision | PCM** from the main menu of the MX Administration software (shown in figure 4).

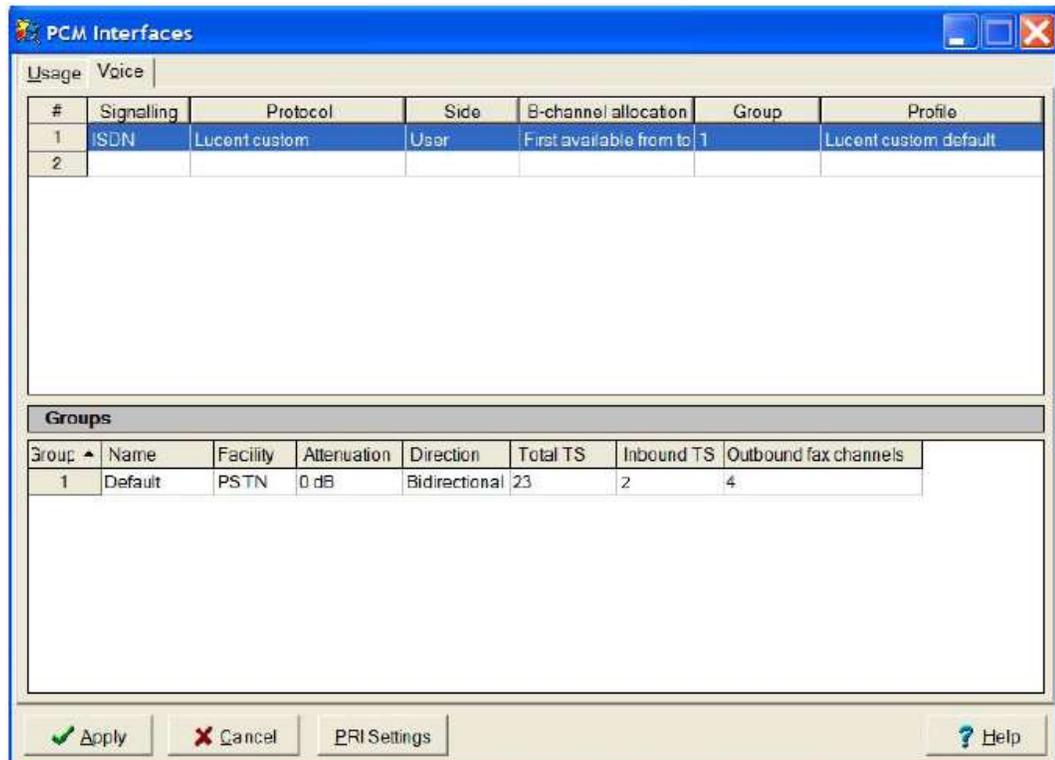


Figure 4 Provision PCM Circuits to use the Fax Server

Inbound TS. This parameter specifies the number of timeslots assigned to the group that are reserved for inbound calls. Zultys recommends for normal deployments to set this value to 0 (zero).

Outbound fax channels. This parameter specifies the maximum number of timeslots that can send simultaneous fax calls. Outgoing fax requests are placed in a queue if the group is transmitting the maximum number of faxes.

5.1.4 SIP Interface

When the MX system sends and receives faxes using a SIP interface, the MX system will expect the fax to use the G.711 codec. The Zultys MX does not support T.38 for fax transmissions. The SIP service provider will also need to support sending and receiving of faxes using the G.711 codec. Use of G.729 for faxes is not supported. The system administrator may select which codec are used in negotiation with the ITSP provided under *Provision / SIP Server and ITSPs* in the *Codec Profile* column. The Codec Profiles may be viewed or modified under *Provision / Codecs*, in the MX Administration software.

5.1.5 User Fax DID

For a user to receive a fax from the MX fax server, the user must have a configured fax DID. To add a fax DID to a user, access the **Configure | Users** from the main menu of the MX Administration software (shown in figure 5). Double click on an existing user or press the **Ins** key from your keyboard to add a new use then add a DID number in the **Fax DID** field. If this field is grayed out, enable Fax DIDs from *Configure / Dial Plan / Outside Tab*.

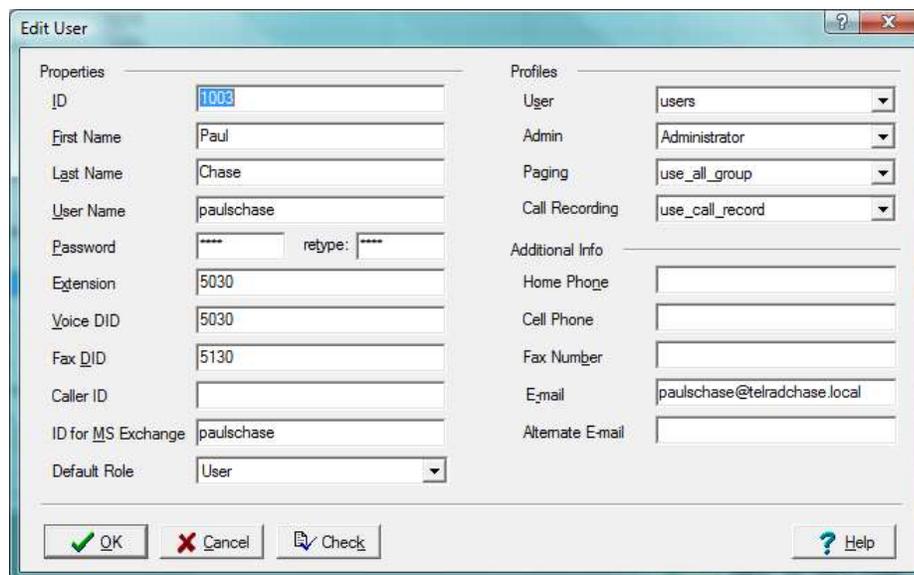


Figure 5 User Fax DID

5.1.6 Group Fax DID

For a member of a group to receive a fax from the MX fax server, the group must have a configured fax DID or a fax group (if using FXO for inbound faxes). To add a fax DID or fax group to a call group, access the **Configure | Operator and Call Groups** from the main menu of the MX Administration software (shown in figure 6). Click on an existing group or press the **Ins** key from your keyboard to add a new group and add a DID number in the **Fax DID** field or select a **Fax Group**.

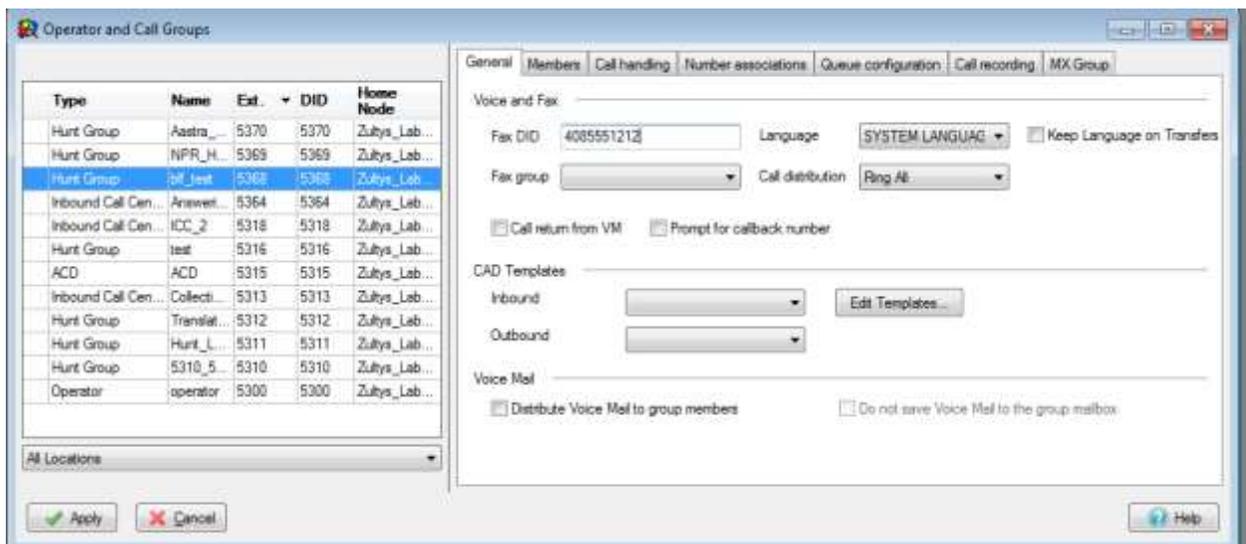


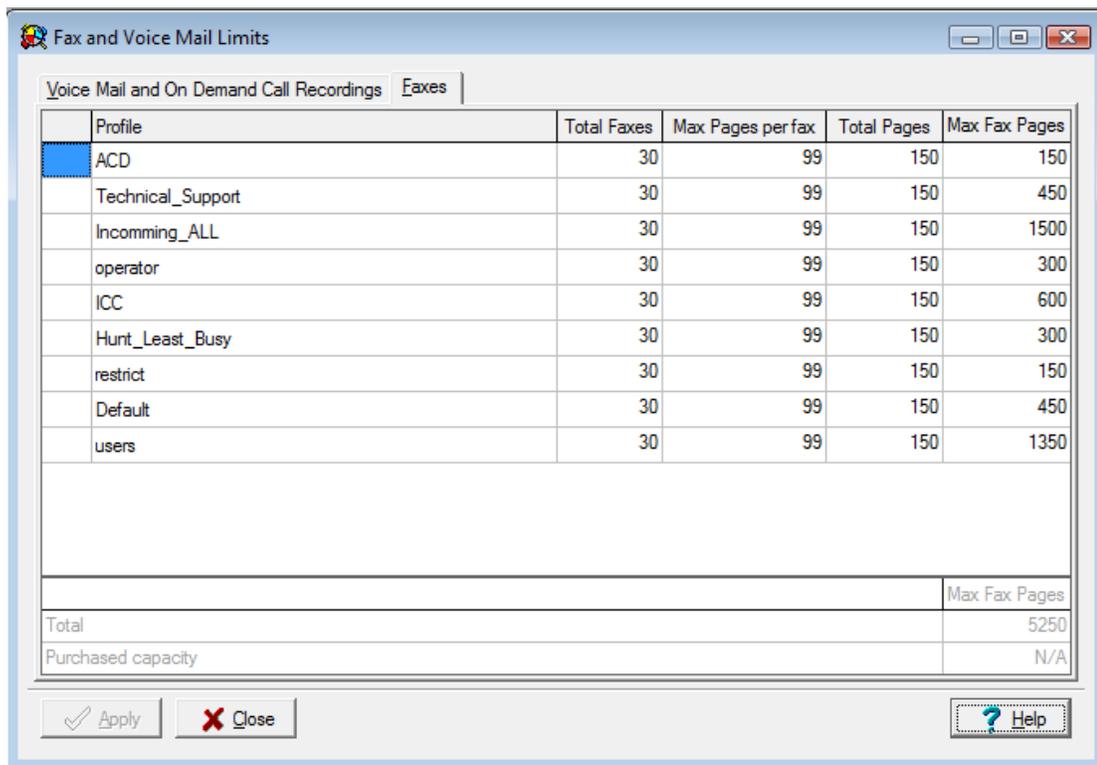
Figure 6 Group Fax DID

5.2 Setting quotas

To limit the number of faxes or memory used for storing faxes on the MX, the MX Administrator may elect to set “Quotas” or limit the number of faxes a user or call group can save. If more storage space is required then what is provided by the MX itself, MX Archive Server may be used to store virtually unlimited number of faxes. Once the internal limit has been reached, no additional faxes will be accepted for that user profile, or call group.

The Faxes panel allocates faxing resources to MX users. The Faxes comprises four elements: profile, users, profile capacities, and total voice mail capacity. To access this panel, select the Faxes tab on the Fax and Voice Mail Limits window. Fax Server describes the MX fax server system. When the limit is reach no more

Faxes are accepted. A syslog event is generated, and a toast/popup is sent to the user if running MXIE. The outside fax machine will receive a “busy” signal.



Profile	Total Faxes	Max Pages per fax	Total Pages	Max Fax Pages
ACD	30	99	150	150
Technical_Support	30	99	150	450
Incomming_ALL	30	99	150	1500
operator	30	99	150	300
ICC	30	99	150	600
Hunt_Least_Busy	30	99	150	300
restrict	30	99	150	150
Default	30	99	150	450
users	30	99	150	1350
				Max Fax Pages
Total				5250
Purchased capacity				N/A

Profile column contents cannot be edited from this window. One mailbox is allocated to each user that is authorized to receive the fax and to each group (operator, ACD, and hunt). Fax boxes are defined in terms of User profiles, as configured in the Profiles | User panel and assigned in the User List. Each user within a profile is assigned a mail box. Groups are defined in the Operators and ACD Configuration window. Each group is assigned one mail box regardless of the number of users assigned to the group.

These parameters list the total voice mail capacity, followed by the theoretical voice mail capacity required if all user mailboxes are filled to capacity. In reality, most users rarely use their maximum voice mailbox allotment, which allows you to safely configure a theoretical requirement that is larger than the purchased capacity. This window displays the theoretical requirement in red if it is more than three times larger than the purchased capacity.

The Users column, located in the Voice Mail panel, lists the number of users assigned to each user profile or to each ACD, operator, and hunt group. This number is used to calculate faxing capacity for each profile. These columns determine the capacity of each fax mail box and the cumulative storage requirement of all voice mailboxes.

Total Faxes: This column configures the number of faxes that members of each profile entity can save their voice mail boxes.

Max Pages per fax: This column configures the maximum length of any fax that an entity can store in its mailbox.

Total Pages: This column defines the maximum number of faxes that can be stored in each mail box.

Maximum Fax Pages: The program calculates the number of pages that can be stored in each User Profile voice mailboxes as follows:

Max Fax Pages Equals Users * Fax Pages per User, where Fax Pages per User is the smaller of Total Pages or Total Faxes * Max Pages per fax. This column has no effect for ACD, Hunt, and Operator groups.

The parameter located at the bottom of the panel, lists the configured Fax Pages storage capacity required by the system.

5.2.1 Storage Space

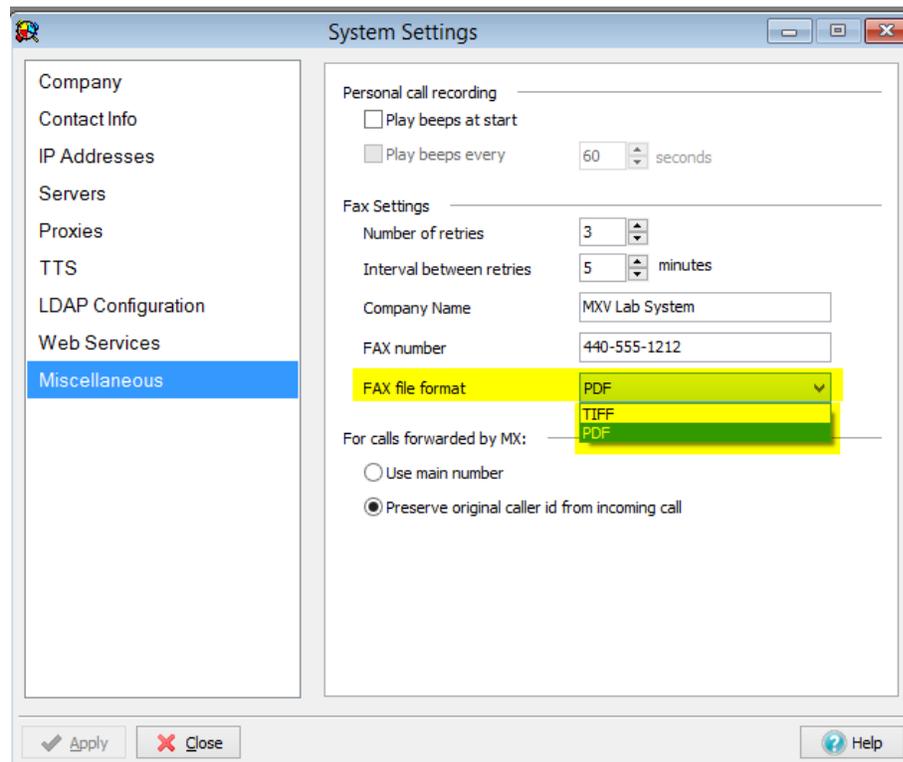
Faxes that are received by the system are stored in this same area as voicemail and call recordings (total of 400 hours). A fax page occupies about 10 seconds to 30 seconds of equivalent voice mail space, depending on the complexity and resolution of the fax page. The administrator of the MX can impose a limit on the maximum number of pages that user in a particular profile or call group may store in their in fax boxes.

For the MX250 storage limit is 8 Gig, 5000 faxes, 20000 pages. If the purging the sent fax file is enabled when it reaches any of these limits it purges 10% starting from the oldest.

5.2.2 Receive Fax Format

Faxes can be received in either TIFF or PDF format. The selection of this format is done on a system wide basis. TIFF format is the default setting.

Provision>System Settings>Miscellaneous>Fax file format



Notes about PDF format:

- If the format is changed from TIFF to PDF, already stored faxes are not converted, they remain in TIFF format.
- Even if the 'Fax file format' is set to PDF, Sent Faxes are always stored and accessed as TIFF.
- Faxes stored in the PDF format cannot be forwarded outside of the MX network.
- Fax receipts are stored as TIFF format only.

6 Faxing with MXIE using Windows

6.1 Faxing from Windows using Print Driver

The Zultys print driver is only available for Windows systems

6.1.1 Installing in Windows 32 or 64 bit versions

The Zultys Fax Driver will be used to install a printer on your Windows PC. The Zultys Fax Driver will install a printer named **Zultys Fax** to your PC. This printer will be available from your applications to be used to send the document to MXIE as a properly formatted fax file. Before installing the Zultys Fax Driver, you must download the software from the MX system through the MX browser interface.

- Close MXIE completely prior to install the FAX driver in Windows.
- Open a browser on your PC (such as FireFox or Internet Explorer) and enter the IP address of your MX system. This accesses the browser page of the MX system (unless that access has been disabled by the system administrator).
- Select the correct fax driver as shown in figure 7. The browser downloads the Zultys Fax Driver software then install on your computer. Press the **Next** buttons until application is installed. At the end of the installation press the **OK** button to complete the installation of the Zultys Fax Driver. If MXIE is deployed in a Windows Terminal Server environment, download the *Zultys Fax Driver for Terminal Server* application.

All drivers on the MX are 32bit drivers, should a 64bit driver be required, please contact Zultys Technical Support.



Figure 7 Zultys Fax Driver Download Option on the MX Browser Interface

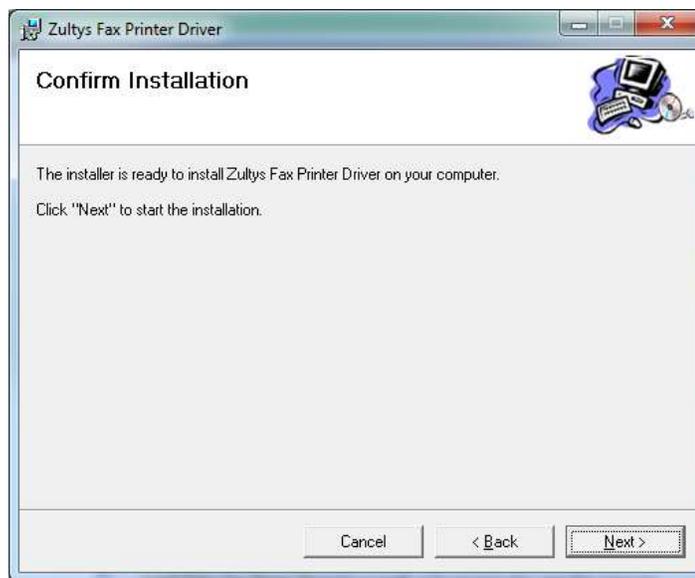
After selecting the appropriate driver, in this example we will use the Windows 64bit driver, run the install wizard. The “Windows Vista and Windows 7” driver should be used for Windows Vista, Windows 7, and Windows XP service pack 3.



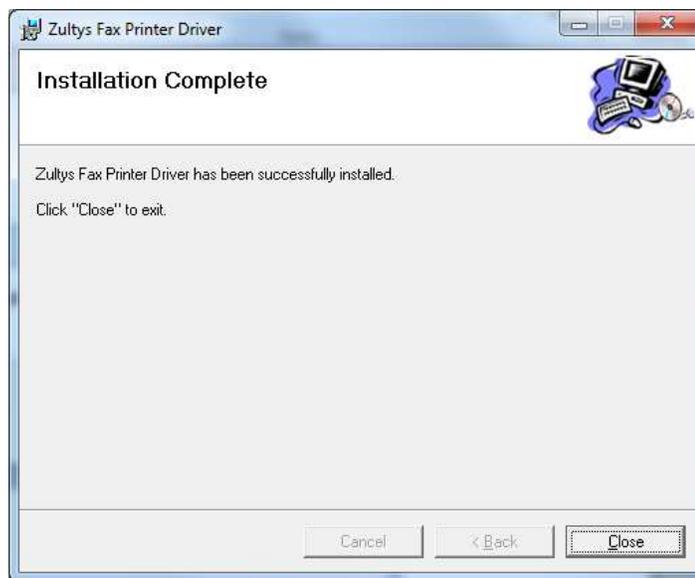
Click Next



Choose a location, the default location is suggested, click Next

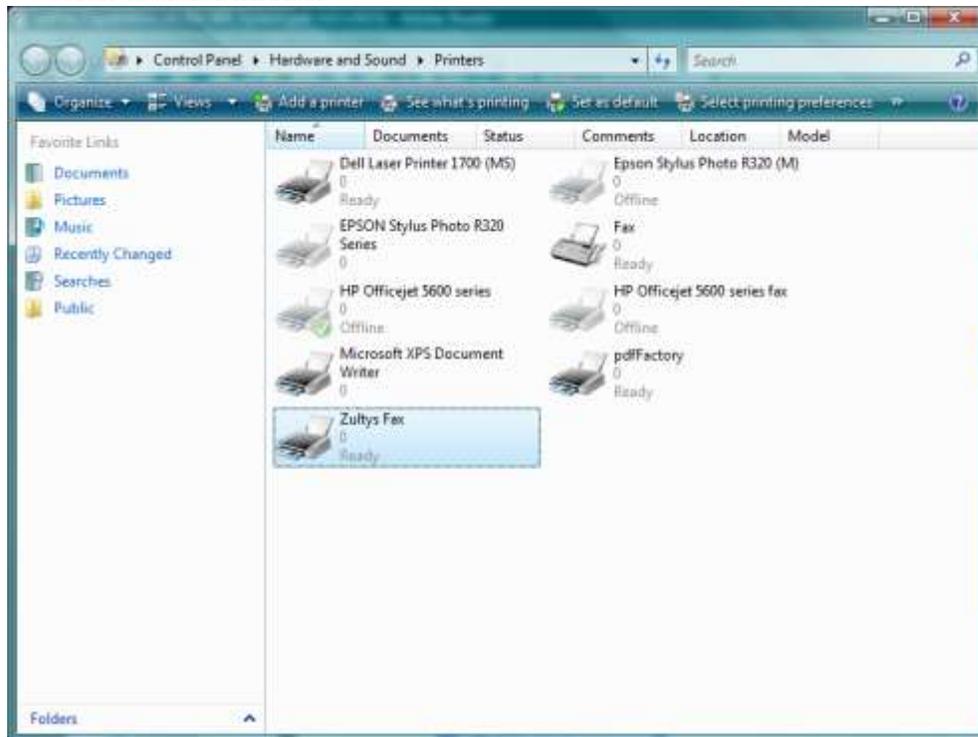


Click Next to confirm installation



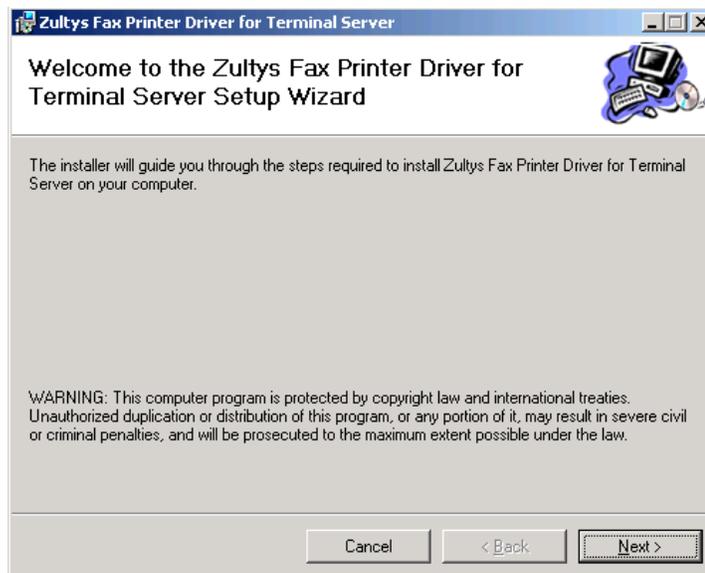
After installation a confirmation screen is presented.

- After installation of the fax driver, you must re-open MXIE.
- To send a fax MXIE must be running.
- After the installation is completed, the **Zultys Fax** printer will be added to your system printer as shown in below.

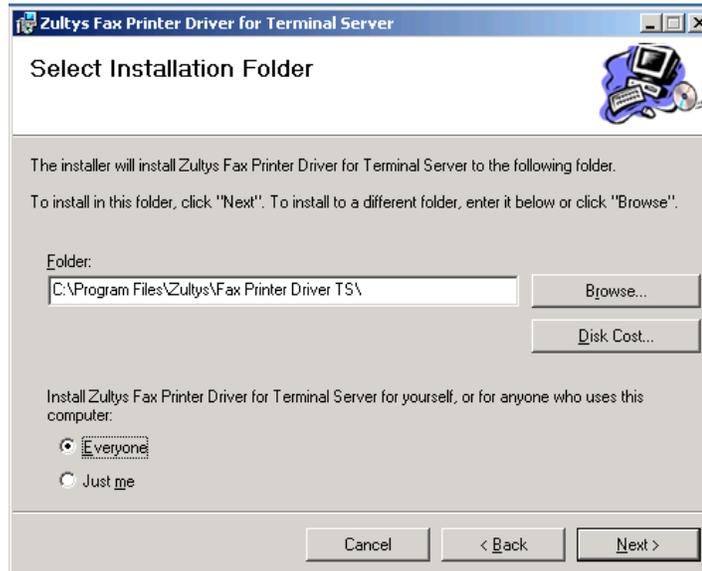


6.1.2 Installing in a Windows Terminal Server environment

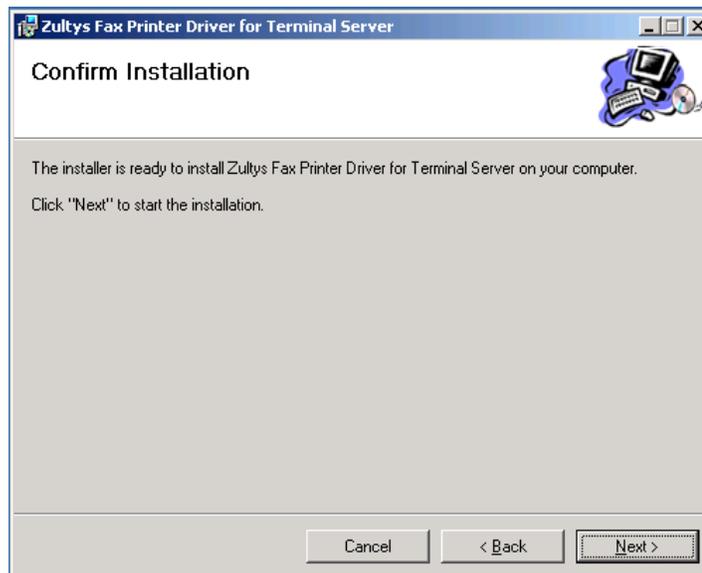
For Windows Terminal Server deployments, you should install the appropriate Terminal Server driver from the console itself as the administrator, not a remote desktop connection.



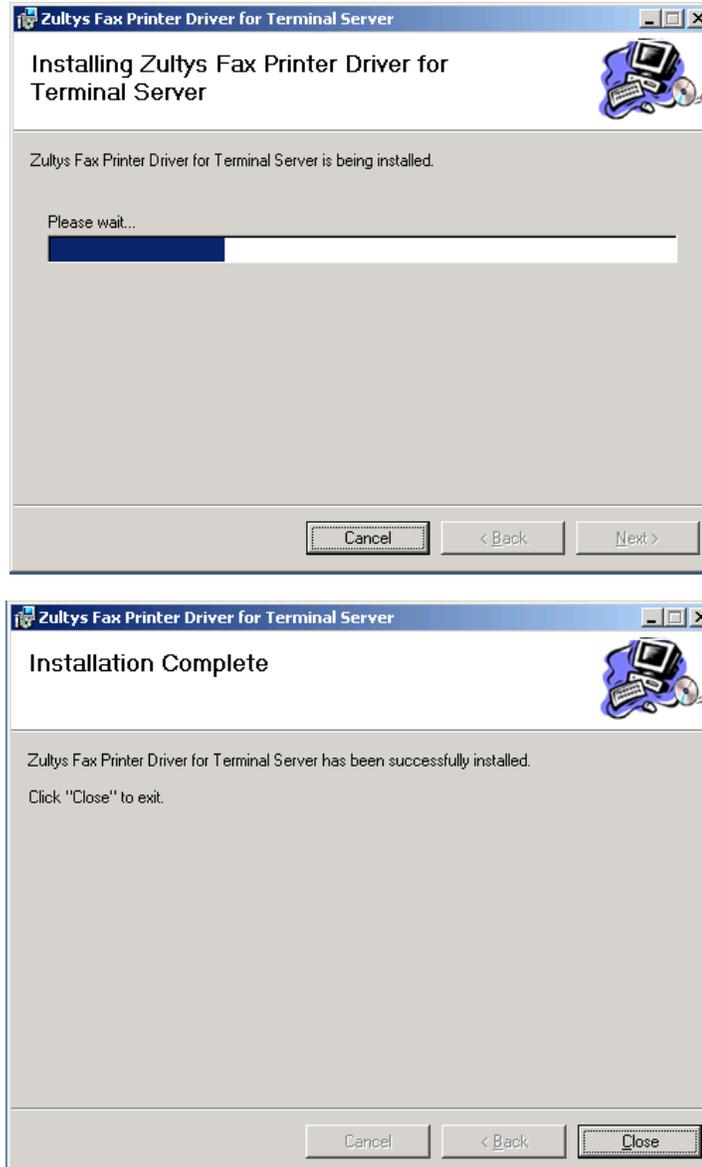
Click Next to confirm you wish to install the driver



Choose a location, the defaults are recommended, click Next



Click Next



After installation, a confirmation page is displayed, click Close

6.1.3 Sending a Fax using the Zultys Fax Driver and MXIE

Ensure you have configured a MX interface to use the MX fax server to originate and terminate faxes.

Figure 8 Zultys Fax Printer Added to the Windows Printer List

- The **Zultys Fax** will be available to all applications that support printing.
- To fax a document, select the **Zultys Fax** as shown in figure 9 using Microsoft Word to fax a word document.

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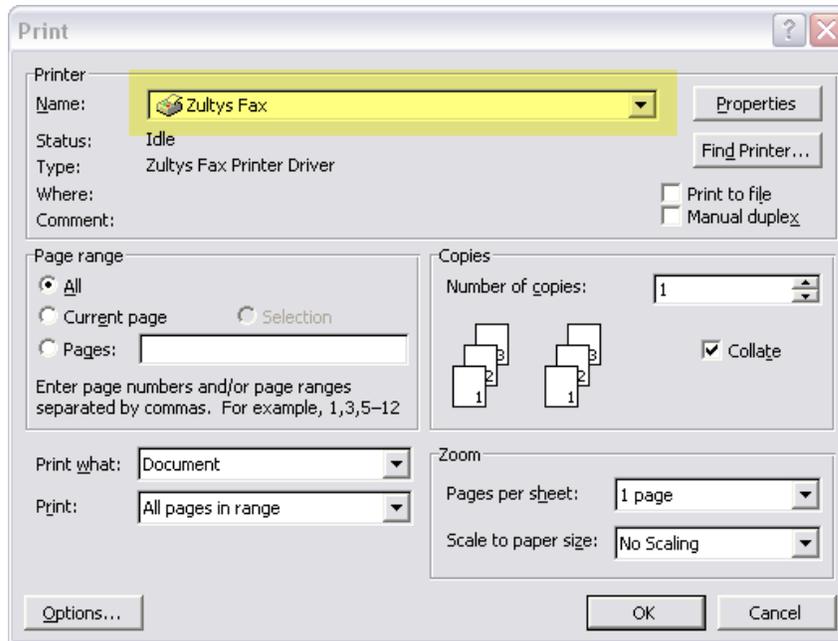


Figure 9 Sending a Fax of a word Document using Microsoft Word

- 6. After the document has been processed MXIE will notify you of additional steps required to send the fax as shown in figure 10.



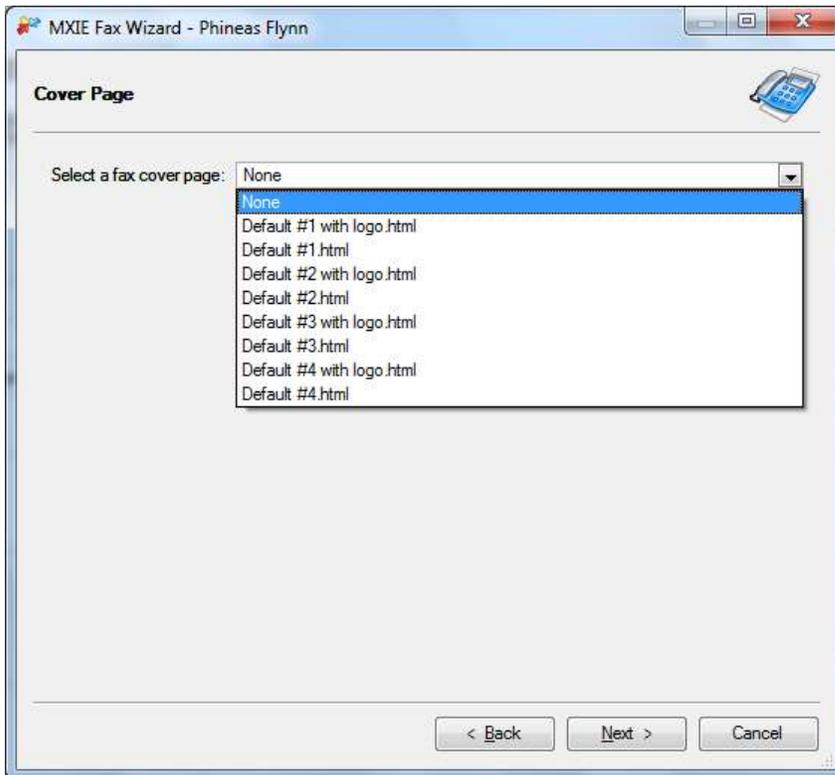
Figure 10 MXIE Fax Wizard Notification

- 7. The fax recipient, schedule, format, and confirmation steps to send the fax are shown in figure 11 through figure 14. These steps are performed in sequence and are required to send the fax. After the fax wizard has been completed, the fax is added to the fax queue and the status is displayed in the **View | Messages | Fax | Outgoing Fax** box as shown in figure 15.



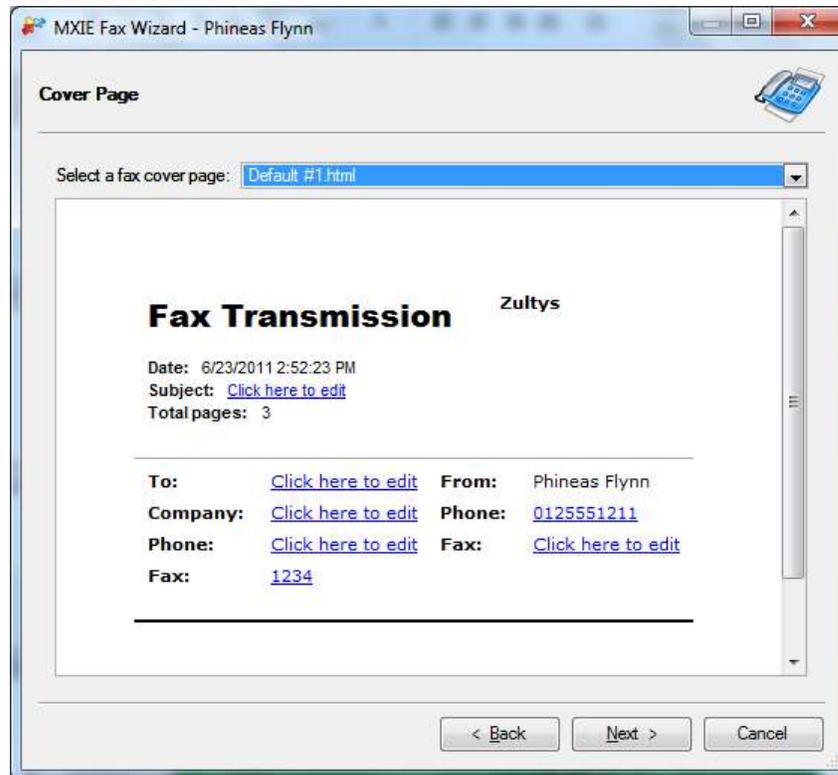
The screenshot shows the 'MXIE Fax Wizard - Roger Craig' window. It has a title bar with a minimize, maximize, and close button. The main area is titled 'Recipients' and contains four text input fields: 'To', 'Fax Number', 'Business Phone', and 'Company'. To the right of the 'To' field is an 'Address Book' button. To the right of the 'Company' field is a 'Multiple Recipients' button. At the bottom of the window are three buttons: '< Back', 'Next >', and 'Cancel'. A small telephone icon is in the top right corner of the main area.

Enter in Fax number, or select from your address book.

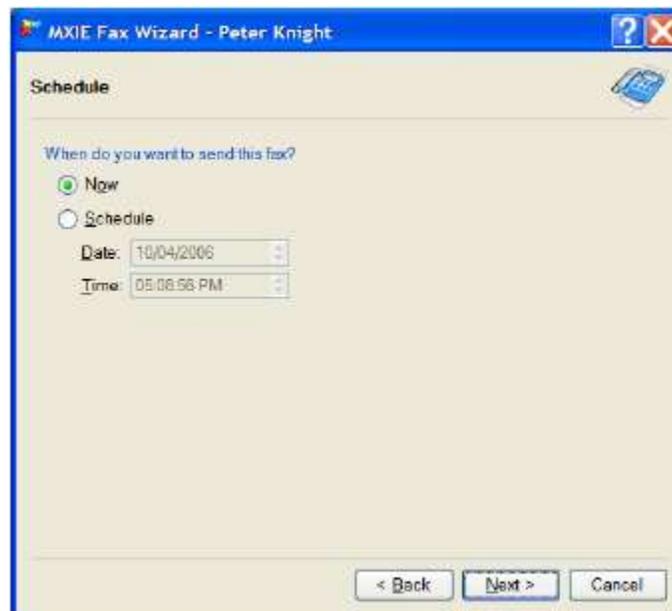


The screenshot shows the 'MXIE Fax Wizard - Phineas Flynn' window. It has a title bar with a minimize, maximize, and close button. The main area is titled 'Cover Page' and contains a dropdown menu labeled 'Select a fax cover page:'. The dropdown menu is open, showing a list of options: 'None', 'Default #1 with logo.html', 'Default #1.html', 'Default #2 with logo.html', 'Default #2.html', 'Default #3 with logo.html', 'Default #3.html', 'Default #4 with logo.html', and 'Default #4.html'. The 'None' option is currently selected. At the bottom of the window are three buttons: '< Back', 'Next >', and 'Cancel'. A small telephone icon is in the top right corner of the main area.

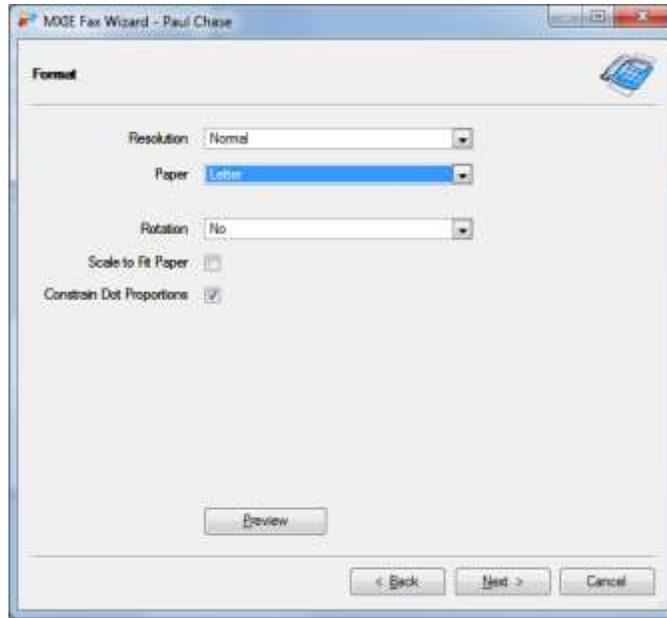
Optionally you may select a cover sheet that is currently installed on the MX.



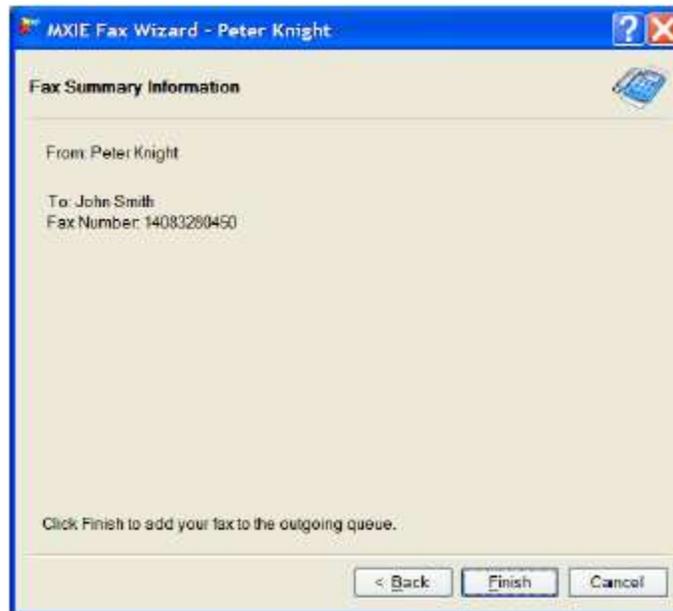
Edit the cover sheet fields by clicking the “Click here to edit” to modify the field.



Set the time you wish the fax to be sent.



Set the fax format, resolution, rotation and other settings.



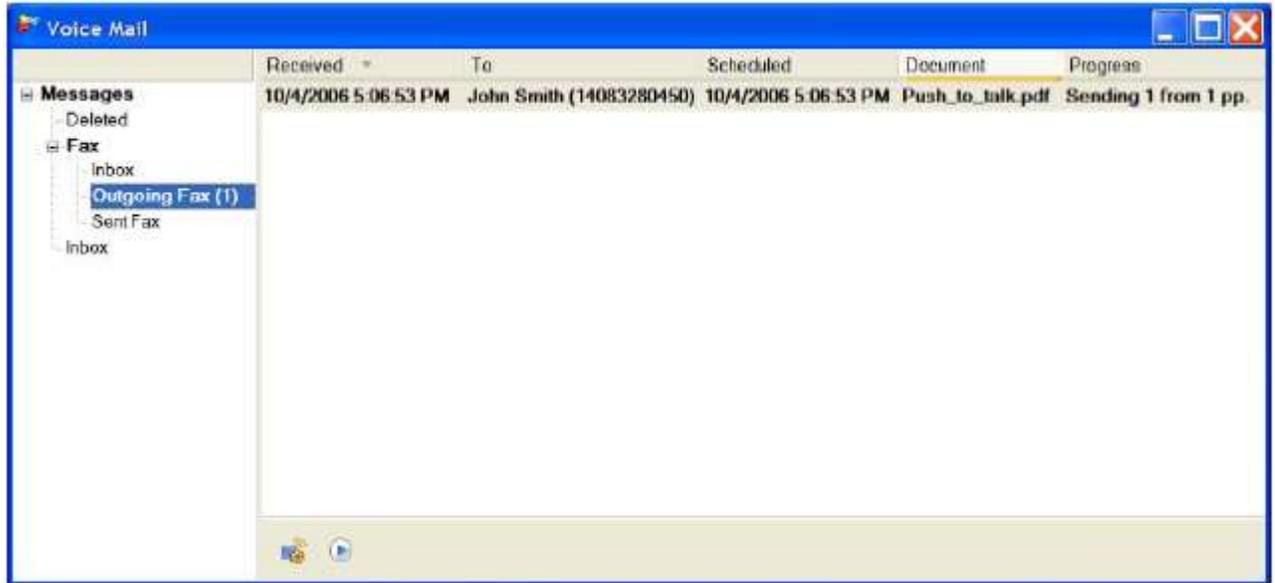


Figure 15 Outgoing Fax in Queue

7 Faxing from a MAC

7.1 Option 1: Print to Fax/Fax with MXIE

7.1.1 Print to fax/Fax with MXIE

In any application select the option to print (Command + P) and then select the “PDF” Option



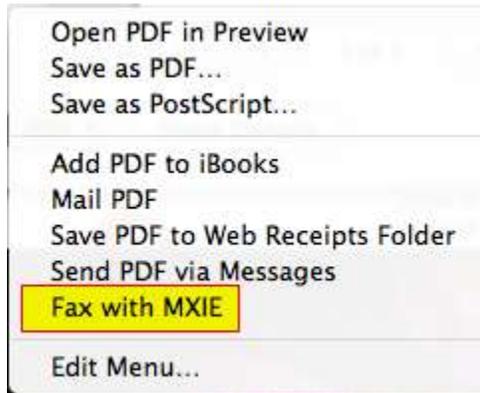
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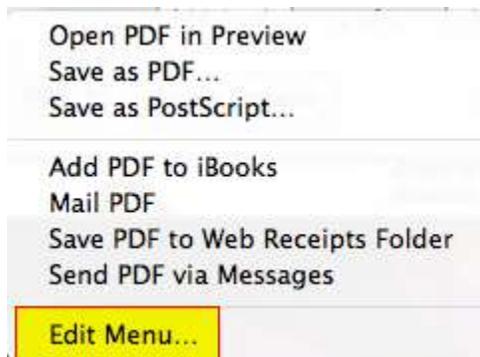
Select the Fax with MXIE option



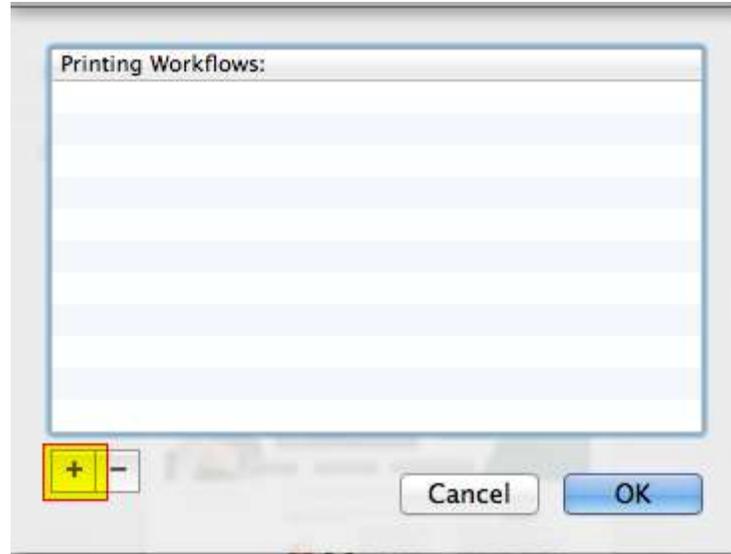
See section 4 (Fax Wizard) for more details on the MXIE Fax wizard.

7.1.2 Adding a workflow

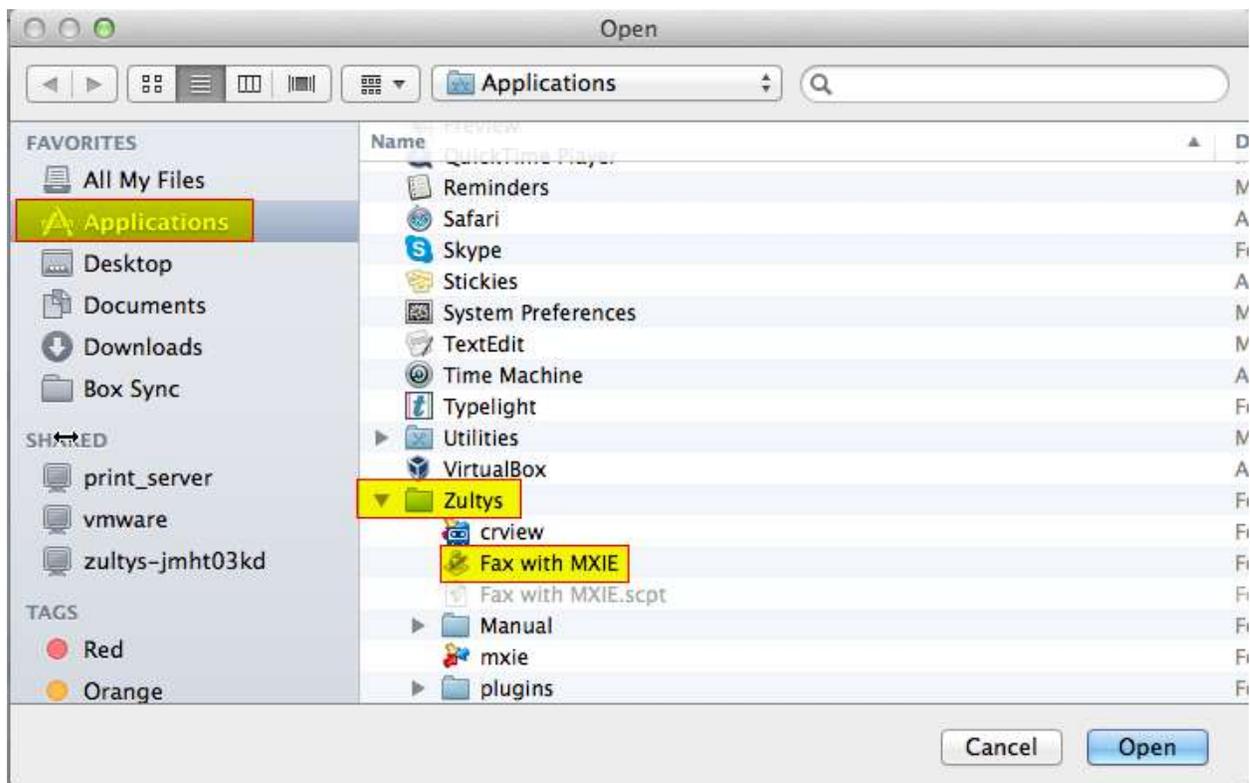
If “Fax with MXIE” does not appear in the menu, edit the menu



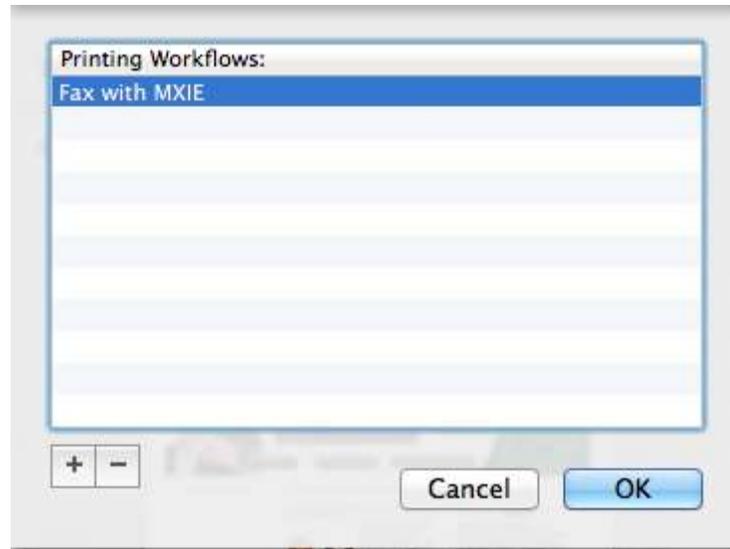
From the “workflow” menu click the “add” button to create a new workflow



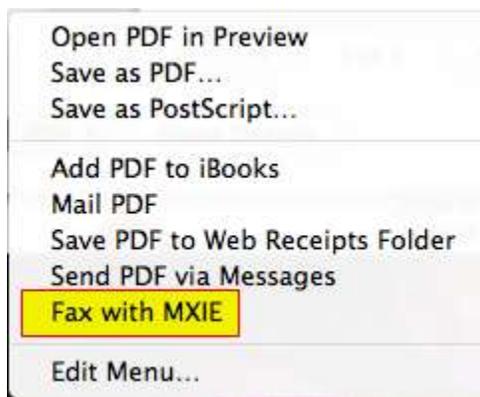
Navigate to your Applications | Zultys folder and select “Fax with MXIE”



Click “open” to add this pre-defined workflow to the menu.



Click OK



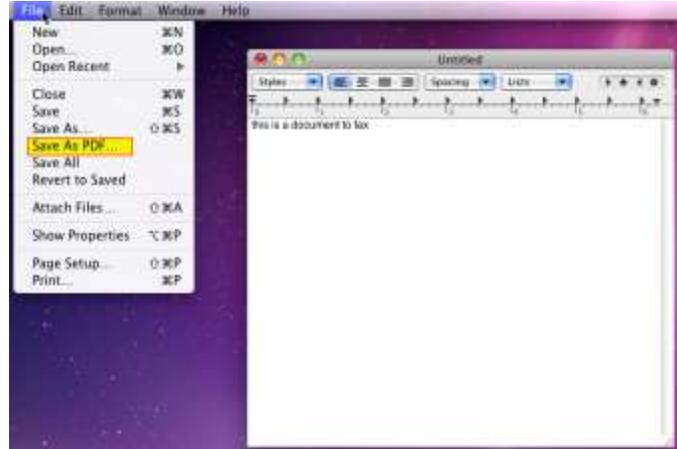
Now the menu will include “Fax with MXIE” select this option, and refer to section 4 for further details on the MXIE Fax Wizard.

7.2 Option 2: Save as a PDF

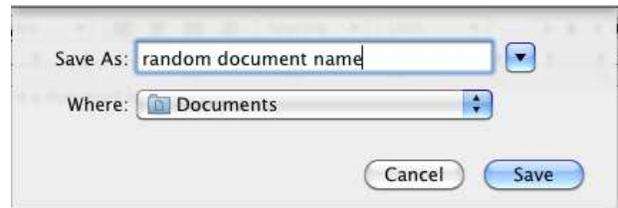
7.2.1 Save Document as a PDF File

To fax a document created in any application on a Mac, first converted it to a PDF file. On Mac computers most applications have a built-in PDF converter or a PDF printer option.

Select *File* and click on *Save As PDF* option.



Zultys recommends saving the PDF file to your *Documents* directory so that it is easily to find.



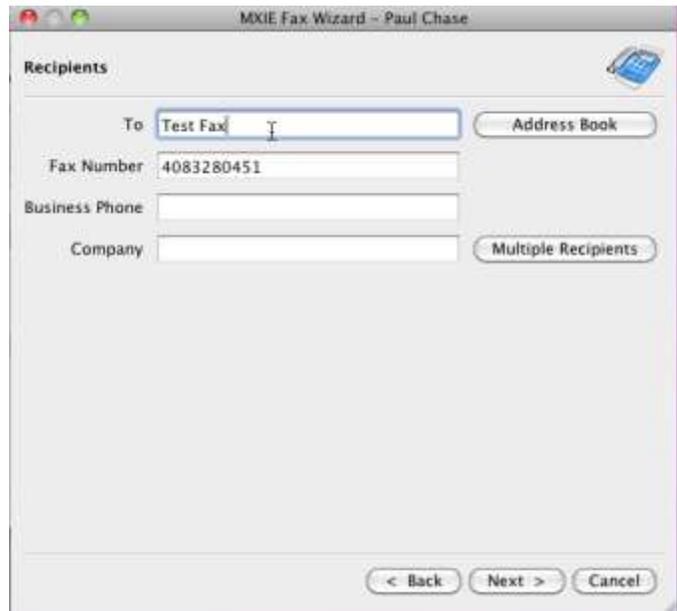
7.3 Fax Wizard

7.3.1 Enter Fax number

Type the fax number.

The rest of the fields in this window are optional.

Click *Next*.



7.3.2 Choose the Fax Cover Page

Select a pre-configured fax cover page from the drop-down list and click *Next*.



7.3.3 Review Cover Page

Review the fax cover page.

To update required fields, click on the blue underlined text and type the appropriate information.

Click *Next*.

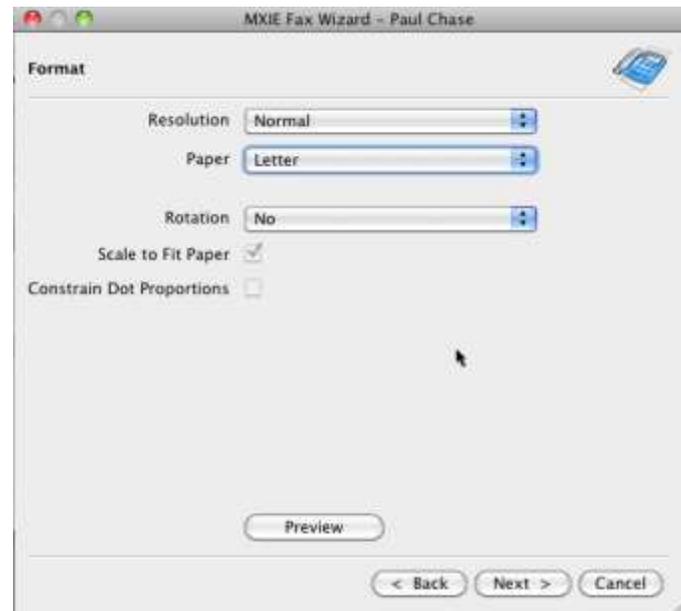


7.3.4 Select Format

Select the format for the fax including resolution quality, paper size and rotation.

You can click *Preview* to see what the page will look like.

Click *Next*.



7.3.5 Schedule or Send Immediately

Select whether to send the fax now or schedule it for later time.

Click *Next*.



7.3.6 Summary

Review the summary and click *Finish*.



8 Receiving a Fax to a User DID number

A fax is delivered to a user's configured DID number as described in section 4.1.5 on page 7. When a user receives a new fax, MXIE will alert the user as shown in figure 16. To view the fax, click the fax notification as shown in figure 16, or click the **View | Messages** menu from the main menu of the MXIE application. Faxes are located in the Fax inbox as shown in figure 17. To view the fax, double click the fax and it will be opened using the default fax viewer application.

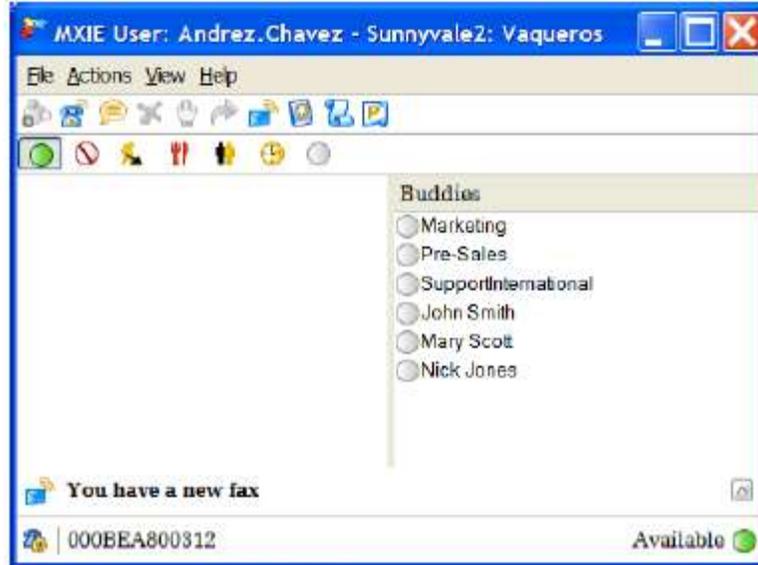


Figure 16MXIE Fax Notification

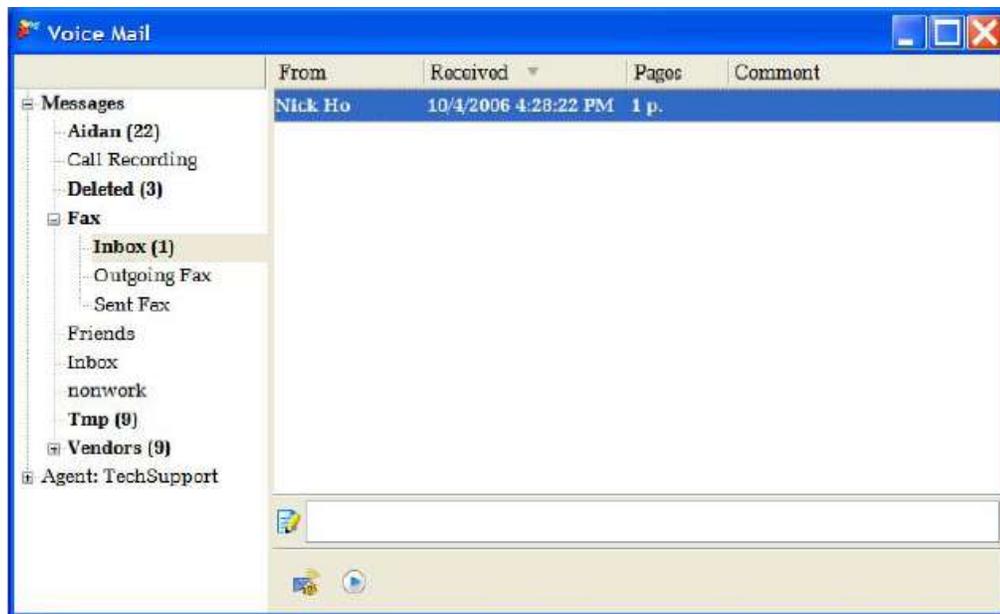


Figure 17MXIE View Fax Messages

9 Requesting a FAX receipt

Users may display a Fax Receipt confirming the result of a Fax sent or received via the Zultys Fax Server. The Fax Receipt includes details of Date, Time, Type, Identification / Number, Pages Sent and Result. From the MXIE voice mail and

fax screen, Right Click on the fax of interest in the Sent Fax folder and select 'Show Fax Receipt'. The Fax Receipt will be opened via the standard TIFF file viewer and may be saved to a file or printed via the TIFF viewer application.

Fax receipts are only available in TIFF format!

Zultys Fax Printer

5141
1/15/2010 11:35:45 AM

<u>Date</u>	<u>Time</u>	<u>Type</u>	<u>Identification</u>	<u>Pages</u>	<u>Result</u>
1/15/2010	11:35:21 AM	Sent	5041	2	Success

10 Fax Server

10.1 Supported Formats

The MX250 supports Zultys supports faxing with T.30 protocol only, which use frequency modulated signal without error correction. Zultys uses Group 3 Fax, which compatible with most Fax machines in use today. Group 3 can be supported over ISDN by an application making a voice call to a remote FAX machine and is therefore limited to modem-type speeds. The MX transmits and receives faxes at normal resolution – 98 lines per inch, or at fine resolution – 196 lines per inch. MXIE supports the transmission of faxes from MX users by converting documents to TIFF-F format. Users can receive faxes in either TIFF-F or .PDF format into their MXIE mail box.

Users may change the default resolution from the fax driver properties.

10.2 Licensing Fax Origination and Termination

This license allows the MX to send and receive faxes. The MX supports a default of standard resolution (98 lines per inch). To send a fax, a user must have MXIE installed on his or her computer and it must be active. The user prints the document to the MXIE print client just as if the user was printing to a regular printer.

A user can send or receive a fax only if MXIE is installed and running on the user's computer. A received fax appears as a message in the MXIE voice mail

box. Faxes can be received by individuals and groups (operator groups, ACD groups, or hunt groups) as TIF files and are viewed with any standard desktop application; Zultys does not distribute TIF viewing applications. If the user does not have MXIE active, the fax is stored and becomes available when the user runs MXIE.

When MXIE runs under Windows there is full support for sending a fax from an application. The user prints the document to the MXIE print client just as if the user was printing to a regular printer. When MXIE runs under Mac OS X the user can send a PDF, TIFF, or JPG file as a fax. When MXIE runs under Linux the user can send a TIFF or JPG file as a fax.

To receive faxes by email, a user must create a notification rule in MXIE that forwards faxes to the specific email address. The fax is sent as either a TIF or .PDF file based on the system settings. The user does not need to have MXIE active when faxes are received or forwarded. Operator, ACD, and hunt groups cannot configure the MX to forward faxes by email.

The license is a concurrent license that limits the number of faxes that can be simultaneously sent and received. If a user attempts to send a fax while all licenses are in use, the fax is placed in a queue and sent when a license becomes available. When someone attempts to send a fax to the MX and all licenses are in use, the sender will receive busy tone or congested tone, or is immediately disconnected, depending on the sender's phone network.

Received faxes are stored on the MX in the space allocated for the user's or the group's voice mail and on demand call recording.

A user or group cannot receive faxes once this space is full. Faxes that are sent are stored separately from the received faxes up to a maximum combined total of 100 faxes on an MX30 and 5000 faxes on an MX250 for all users and groups.

The maximum number of licenses for fax origination and termination on an MX30 is 4 and on an MX250 is 16. The maximum number of simultaneous outgoing faxes is limited to half the number of licenses installed, rounded

down, except when there is only a single fax license, in which case it is one. The maximum number of simultaneous incoming faxes is limited to the number of licenses installed.

When transferring a fax from user fax box to user fax box or call group fax box to user fax box, this action will require 2 faxes licenses, it does not require a PSTN trunk.

10.3 Maximum number of faxes the MX can process

The maximum number of faxes the MX can process is a complex question, which cannot easily be answered as each fax is dependent on a number of variables that determine the speed that the fax is processed.

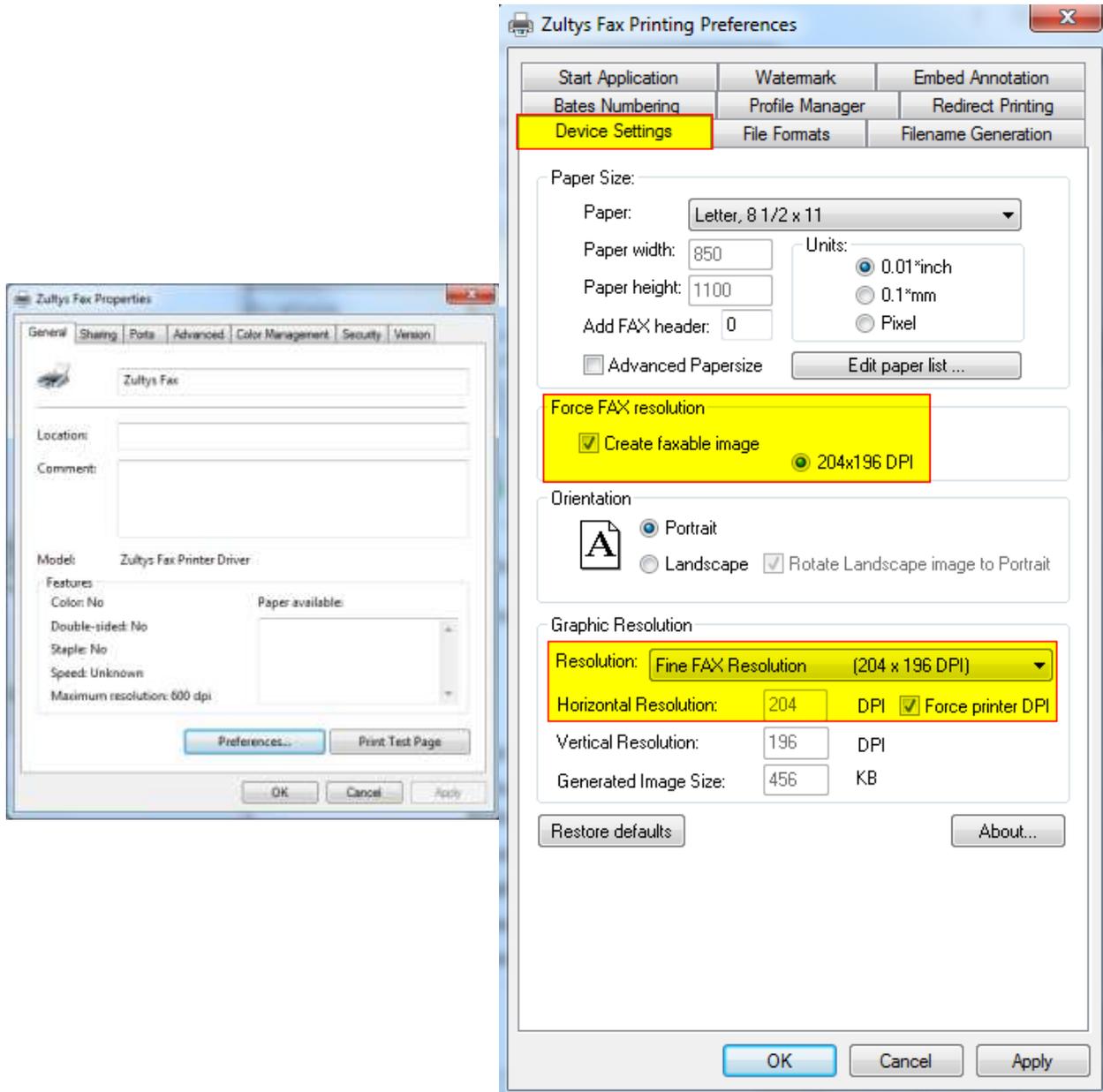
- Fax speed receiving speed
- Quality of the PSTN Trunk
- Resolution of fax being sent or received
- Fax content
 - Full page of text
 - Full page of graphic
- Compression
- Number of pages in the fax
- Licensing
- Number of simultaneous faxes
- Network speed

Taking all of the above factors into consideration, the MX is capable of sending back to back faxes simultaneously up to the limitations imposed by licensing and configuration. The number of fax this amounts to is the total number of fax the MX can process in a given timeframe.

11 Setting fax resolution

A user may optionally change the resolution the fax is set at via the fax server properties. From the Zultys Fax Printer properties screen, click on “*Preferences*” and click on the “*Device Settings Tab*”. Select the appropriate fax resolution settings from the *Graphic Resolution / Resolution:* dropdown box. After

selection the appropriate resolution, click the *Apply* button, then the *OK* to leave the configuration screen. The below example shows how to set for “Fine Resolution”



12 FAX Cover Pages

A FAX Cover page is an HTML document that is created on a local PC and uploaded to the MX, or in MX version 6.0 can be created/modified

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directly via the MXAdministrator UI. Since the actual FAX Cover page must contain a lot of information that is not available at the time that the template is created (e.g.: Senders name and Phone number, Recipients name and phone number, Date and time of the fax, . . .), the FAX Cover page must accept a number of variables that can be added by MXIE client when the FAX is sent.

13 Designing a FAX Cover Page

There are two types of variables that are available in Zultys FAX Cover Page Templates: Parameter placeholders and Loops.

13.1 Format Parameter Placeholders

Parameter Placeholders have the form [%parameter name%] where *parameter name* is a supported variable name.

Parameter Name	Substituted with....	Comment
Company.Name	The company name.	From "System Information" of the MX.
Company.Address	The mailing address.	From "Company Address" dialog off the "Fax Cover Pages" form. Line breaks in Company.Address are replaced with " ".
Company.Phone	The main phone number.	
Company.Fax	The main fax number.	
Company.URL	The web site.	
Logo	The name of the file with the company logo.	See Graphics in Read-only templates.
Name	The sender's name.	Login information of the MXIE user.
Phone	The sender's business phone.	
Fax	The sender's fax number.	
Recipient.Company	The recipient's company.	These variables are available only inside a <i>recipient</i> loop and refer to the current recipient.
Recipient.Name	The recipient's name.	See also Hiding the Recipient List below.
Recipient.Phone	The recipient's business phone.	
Recipient.Fax	The recipient's fax number.	
Subject	The subject of the fax.	Typed by the user in MXIE when sending the fax.

Message	A short text message.	Typed by the user in MXIE when sending the fax. Empty lines in the user text are replaced with "</p><p>".
Date	The date when the message was sent.	
Time	The time when the message was sent.	
Pages	The total number of pages, including the cover.	



Note: Parameter Names are case sensitive

13.2HTML Tags Supported

The following tags are supported by the HTML engine.

Structuring tags	Notes
<code><h1>...</h1></code>	A top-level heading.
<code><h2>...</h2></code>	A sublevel heading.
<code><h3>...</h3></code>	A sub-sublevel heading.
<code><h4>...</h4></code> <code><h5>...</h5></code>	Headings of lesser importance.
<code><p>...</p></code>	A left-aligned paragraph. Adjust the alignment with the align attribute. Possible values are left, right and center.
<code><center>...</center></code>	A centered paragraph.
<code><blockquote>...</blockquote></code>	An indented paragraph that is useful for quotes.
<code>...</code>	An unordered list. You can also pass a type argument to define the bullet style. The default is type=disc; other types are circle and square.

<code>...</code>	An ordered list. You can also pass a type argument to define the enumeration label style. The default is <code>type="1"</code> ; other types are "a" and "A".
<code>...</code>	A list item. This tag can be used only within the context of <code></code> or <code></code> .
<code><dl>...</dl></code>	A list of definitions, consisting of terms and descriptions.
<code><dt>...</dt></code>	A term in a list of definitions. This tag can be used only in the context of <code><dl>...</dl></code> .
<code><dd>...</dd></code>	A description in a list of definitions. This tag can be used only in the context of <code><dl>...</dl></code> .
<code><pre>...</pre></code>	For larger chunks of code. Whitespaces in the contents are preserved. For small bits of code use the inline-style code.
<code><div>...</div></code> and <code>...</code>	Block grouping elements. These are used to structure the document, and are often used to provide hints about the intended presentation of the document.
<code>...</code>	Emphasized. By default this is the same as <code><i>...</i></code> (italic).
<code>...</code>	Strong. By default this is the same as <code>...</code> (bold).
<code><i>...</i></code>	Italic font style.
<code>...</code>	Bold font style.
<code><u>...</u></code>	Underlined font style.
<code><s>...</s></code>	Strike out font style.
<code><big>...</big></code>	A larger font size.
<code><small>...</small></code>	A smaller font size.
<code><sub>...</sub></code>	Subscripted text
<code><sup>...</sup></code>	Superscripted text
<code><code>...</code></code>	Indicates code. By default this is the same as <code><tt>...</tt></code> (typewriter). For larger chunks of code use the block-tag <code><pre></code> .

<code><tt>...</tt></code>	Typewriter font style.
<code>...</code>	<p>Customizes the font size, family and text color. The tag understands the following attributes:</p> <ul style="list-style-type: none"> • color -- The text color, for example color="red" or color="#FF0000". • size -- The logical size of the font. Logical sizes 1 to 7 are supported. The value may either be absolute (for example, size=3) or relative (size=-2). In the latter case the sizes are simply added. • face -- The family of the font, for example face=times.
<code></code>	<p>An image.</p> <p>The align attribute determines where the image is placed. By default, an image is placed inline just like a normal character. Specify left or right to place the image at the respective side.</p>
<code><hr></code>	A horizontal line.
<code>
</code>	A line break.
<code><nobr>...</nobr></code>	No break. Prevents word wrap.

13.3Loops

Loops are necessary because FAX messages can be sent to more than one recipient, and all recipients should show up on the cover page. Loops begin with a line containing [%repeat:loop name%] and end with a line containing [%end:loop name%]

13.3.1 Sample Loop

```
<html>
From [%Name%] <br>
Subject: [%Subject%]<br>
Message: [%Message%]<br>
Date: [%Date%]<br>
Time: [%Time%]<br>
Pages: [%Pages%]<br>
Company: [%Company%]<br>
<br>
To:<br>
<br>
```

```
<!-- [%repeat:recipient%] -->  
<TR>  
  <TD>Name: [%recipient.name%]</TD><br>  
  <TD>phone = [%recipient.phone%]</TD><br>  
  <TD>Company = [%Recipient.Company%]</TD><br>  
  <TD>fax = [%Recipient.Fax%]</TD><br>  
</TR><br>  
<!-- [%end:recipient%] -->  
  
  <br>  
</html>
```

14 Graphics

It is often desirable to include the company logo on the cover page when you are sending a fax. You can either use a JPEG file or a PNG file as the logo on the FAX Cover Page, Logo Image file names cannot contain a space in the image name. To insert a graphic that references the “logo image” file uploaded to the MX enter the following line of code:

```
<br>
```

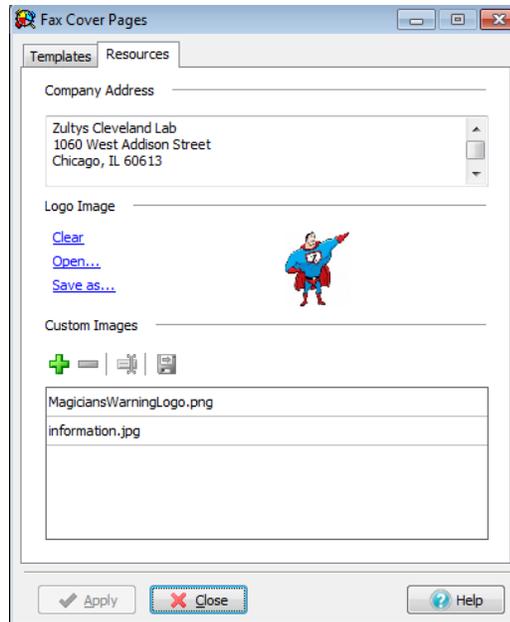
If you have uploaded additional graphics to your MX to be used as logos you will reference them using the file name, as it was uploaded to the MX. In the below example to reference the custom image “information.jpg” (Image names cannot contain a space in the file name, and case sensitivity applies) you would enter:

```
<br>
```

14.1 Logo Size

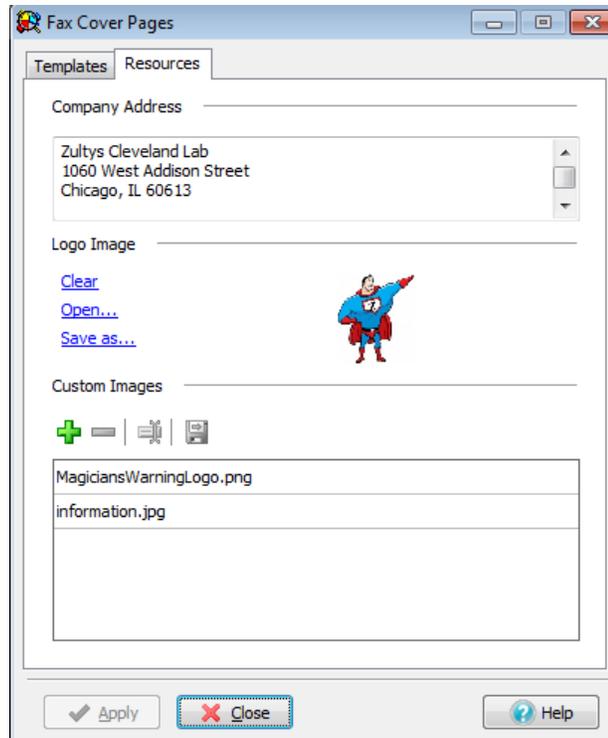
Logos must be saved as JPG or PNG format, and should be saved with the following proportions:

- JPG or PNG
- 72 DPI
- Suggested size max is 200x200



14.2 Uploading a Logo

- From the FAX Cover Page screen, click on the Resources tab.
- Click on the "Open.." link
- Browse to the location where you have saved your JPEG or PNG format logo and select it
- Click on Open

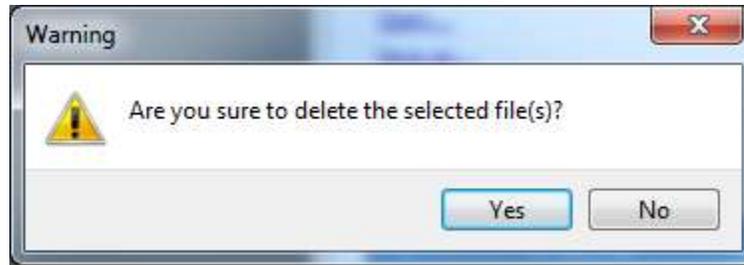


14.3 Uploading a Custom Image

- From the FAX Cover Page screen, click on the Resources tab.
- Click on the  icon
- Browse to the location where you have saved your JPEG or PNG format logo and select it
- Click on Open

14.4 Removing a Custom Image

- From the FAX Cover Page screen, click on the Resources tab.
- Highlight the image you wish to remove
- Click on the  icon
- Click Yes on the pop up warning

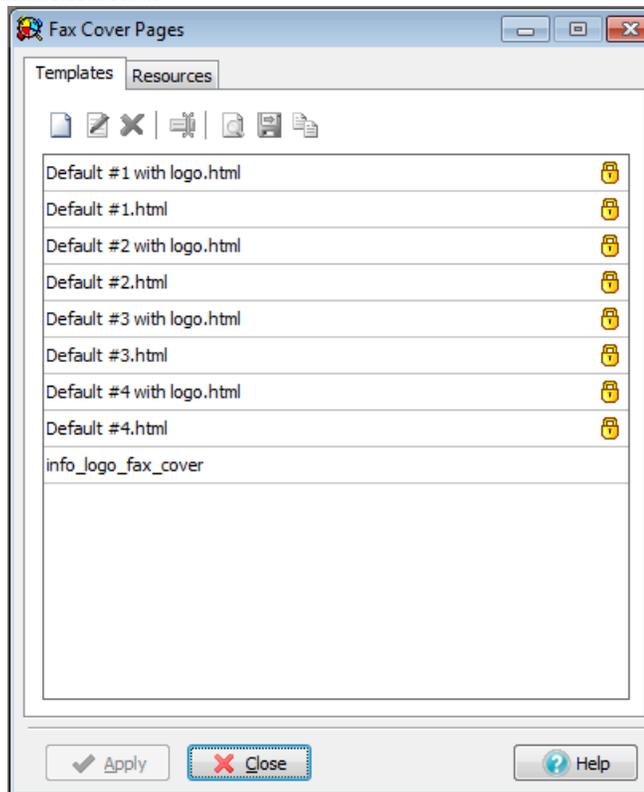


15 Uploading a FAX Cover page

Once you have saved your HTML based cover page on your local computer, you can upload it to the MX system. Fax cover pages can also be created/modified directly on the MX itself using the Admin UI.

15.1 Uploading the FAX Cover page

- From the Configure pull-down menu, select FAX Cover Page
- In the Templates tab, select the upload icon 
- Browse to the location where you have saved your cover page and select it
- Repeat this process until all cover pages are uploaded

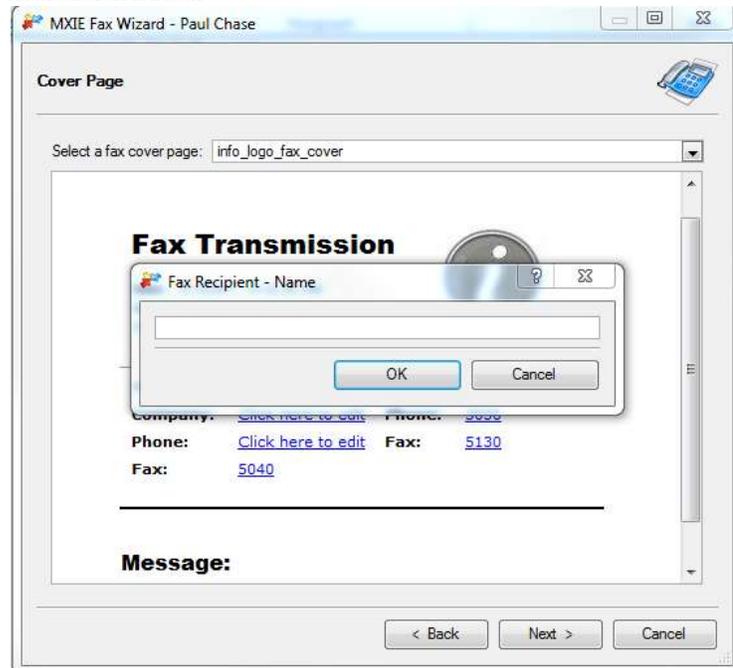


16 Using a FAX Cover Page when sending a FAX

- Launch MXIE and locate a FAX (either on the system or as a TIFF-F or PDF file.) and select Forward.

Note: PDF format faxes can only be forwarded within the MX network!

- Select the recipient address and when you want to send it (immediately)
- From the Cover Page screen select one of the uploaded cover pages
- You will be prompted to fill in Variables that were not automatically populated with a blue underscore. Clicking on any of these fields will allow fill in the cover page.
- Continue to send your FAX normally



17 Troubleshooting

17.1 MXIE fails to launch fax viewer

MXIE does not use the “tiff” extension, it uses “tif”, make sure both “tiff” and “tif” are associated with the appropriate graphic viewer.

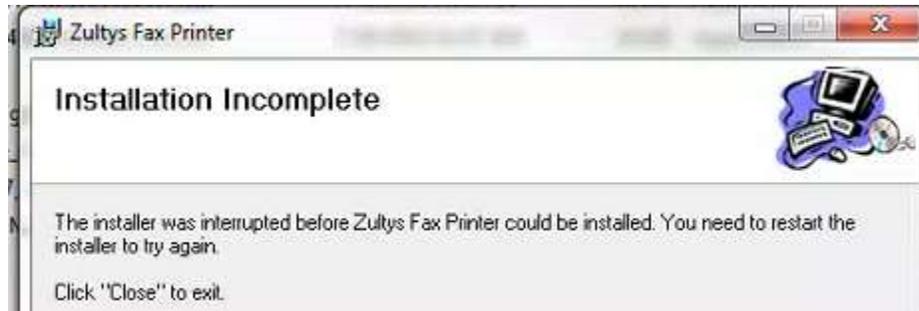
17.2 Fax Wizard fails to start

MXIE Fax wizard fails to start after installing the Fax Driver. The Fax Driver must be installed with MXIE closed/exited. If the Fax driver is installed with MXIE running, simply exit MXIE by going to File | Exit and restart MXIE.

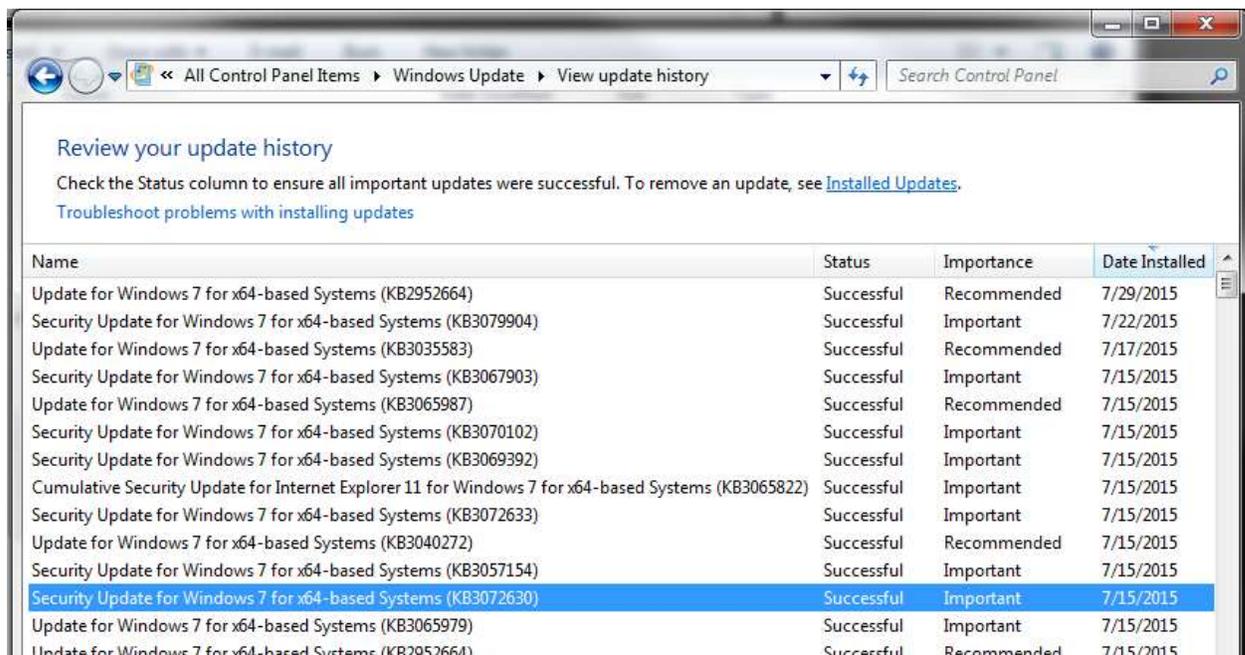
17.3 MX returns “busy” tone on incoming Fax DIDs

This is caused usually by the user or call group being over their quota, please increase the quota, or clean out the user’s fax mail box. A syslog message will be generated stating the user or call group is over quota, as well as MXIE toast will be given to the user.

17.4 The Installer was interrupted before Zultys Fax Printer could be installed (Windows 7, 8.0/8.1 and 10)



Verify KB3072630 was/is installed



Name	Status	Importance	Date Installed
Update for Windows 7 for x64-based Systems (KB2952664)	Successful	Recommended	7/29/2015
Security Update for Windows 7 for x64-based Systems (KB3079904)	Successful	Important	7/22/2015
Update for Windows 7 for x64-based Systems (KB3035583)	Successful	Recommended	7/17/2015
Security Update for Windows 7 for x64-based Systems (KB3067903)	Successful	Important	7/15/2015
Update for Windows 7 for x64-based Systems (KB3065987)	Successful	Recommended	7/15/2015
Security Update for Windows 7 for x64-based Systems (KB3070102)	Successful	Important	7/15/2015
Security Update for Windows 7 for x64-based Systems (KB3069392)	Successful	Important	7/15/2015
Cumulative Security Update for Internet Explorer 11 for Windows 7 for x64-based Systems (KB3065822)	Successful	Important	7/15/2015
Security Update for Windows 7 for x64-based Systems (KB3072633)	Successful	Important	7/15/2015
Update for Windows 7 for x64-based Systems (KB3040272)	Successful	Recommended	7/15/2015
Security Update for Windows 7 for x64-based Systems (KB3057154)	Successful	Important	7/15/2015
Security Update for Windows 7 for x64-based Systems (KB3072630)	Successful	Important	7/15/2015
Update for Windows 7 for x64-based Systems (KB3065979)	Successful	Important	7/15/2015
Update for Windows 7 for x64-based Systems (KB2952664)	Successful	Recommended	7/15/2015

- Launch "regedit"
- Locate and click the following subkey in the registry:
 HKEY_LOCAL_MACHINE\SOFTWARE\Policies\Microsoft\Windows\Installer
 - Note: If this subkey does not exist, create it.

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- In the 'Edit' menu, point to 'New', and then click 'DWORD Value'.
- For the DWORD name, type "RemappedElevatedProxiesPolicy", and then press 'Enter'.
- Right-click "RemappedElevatedProxiesPolicy", and then click 'Modify'.
- In the 'Value' data box, type 1, and then click 'OK'.
- Install Zultys Fax Driver
- After the application installs successfully, reset the 'RemappedElevatedProxiesPolicy' DWORD value to "0" to re-enable the security fix for KB 3072630.

<https://support.microsoft.com/en-us/kb/3072630>

17.5 Installing On Windows Terminal Server

The FAX drivers must be installed from the Administrator, on the console itself

17.6 General Information

- Max pages that can be sent at one time is 99
- The MX cannot send several documents in a single fax call.
- Zultys FAX Manager uses T.30 protocol
- MX does not support T.38

17.7 "Error in dAddPort. Error code: 50"

Under some circumstances Zultys Fax Printer driver does not install properly. The installation process returns the following message:

```
"Error in dAddPort. Error code: 50"
```

To resolve,

1. Open regedit in
 \HKLM\SYSTEM\CurrentControlSet\Control\Print\Monitors\Zultys Monitor
 C\PortList
2. Add empty String (REG_SZ) value with name ZultysPort:
3. Install Fax printer driver one more time.

17.8 Error: "dAddPrortMonitor Error code 5."

Under some circumstances Zultys Fax Printer driver does not install properly. The installation process returns the following message:

“dAddPrortMonitor Error code 5.”

On Windows 32 bit machines with Microsoft hot fix “MS11-087” installed. This is due to the hot fix. It can be removed or rin the additional hot fix provided by Microsoft at this link

<http://support.microsoft.com/kb/2639417>

Additional information or work around available from Zultys technical support

17.9 Install Fails with general error

Verify no other Black Ice drivers are installed on the machine. If additional black ice drivers are installed they will need to be removed.

18 About Zultys

Zultys, founded in 2001, is showing what's possible for Open Standards IP communications and telephony. Our Open Standards IP technology is the building block for our award-winning IP PBX systems. Zultys develops products that enable companies and organizations to deploy integrated communications systems.

Our unique approach to delivering enterprise class solutions based on the Session Initiation Protocol (SIP) is centered on our single-server design, which demands far less hardware, consumes less power resources, and generates significantly less ambient heat.

Our products are designed to maximize investment, interoperability and usability and are positioned for the Small to Medium Business (SMB) marketplace. Zultys' customers around the world are reaping the benefits of our Open Standards IP platform, as we streamline communications for their companies and organizations.

<http://www.zultys.com/>