USING "WINDOWS FAX"

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USING "WINDOWS FAX"

• Real fax machine → virtual fax

Use “Microsoft Windows Fax and Scan” inside “Windows..” and a fax modem instead of a real fax machine
FAX MACHINE VIRTUALIZATION
If you have a computer, you already have most of the parts of a fax machine so Microsoft "Windows Fax" and third-party "fax apps" provide you with a few missing firmware and software-based modules and you then have a virtual fax machine that works like a real one:
USING "WINDOWS FAX"
To learn more about the inner workings of fax machines, please go to
http://vsagar.com/2011/12/11/how-fax-machine-works-tutorials-on-fundamentals-of-facsimile-fax/ which is where we borrowed the diagram of a fax machine.
USING "WINDOWS FAX"

• "Windows Fax" is available in:

Windows 2000 Professional
Windows XP Home Edition
Windows XP Professional
Windows Vista Business
Windows Vista Ultimate
Windows Vista Enterprise
Windows 7 (all versions)
Windows 8 (all versions)
Windows 8.1 (all versions)
USING "WINDOWS FAX"

• "Windows Fax" is not available in:
  Windows Vista Starter
  Windows Vista Home Basic
  Windows Vista Home Premium

• In other words, "Windows Vista" is "Windows Fax"-challenged!
Using "Windows Fax"

- If your "Windows.." computer does not have "Windows Fax", you can use the "fax apps" that are bundled on the software CDs that are shipped with dial-up modems.

→ see Appendix 1 "Using Fax Apps"
USING "WINDOWS FAX"

• For detailed screenshots and troubleshooting advice for "Windows Fax and Scan", see http://aztcs.org/meeting_notes/winhardsig/windowsfax/windowsfax.pdf
• In this document, we also tell you how you can send faxes to a phone number that require "long distance" dialing by using a calling card with a phone line that only allows local calls.
USING "WINDOWS FAX"

• Dial-up Modem Interface Options:
  o Modem that is integral on the motherboard (most laptops)
  o PCI card (older desktop computers)
  o PCIe card (newer desktop computers)
  o PC card/PCMCIA card (older laptops)
  o ExpressCard (newer laptops)
  o USB (both laptops and desktops)
USING "WINDOWS FAX"

• Dial-up Modem Architecture Options:
  o Controller-based modems
  o Controllerless or Winmodems
  o Softmodems

(See http://www.usr.com/education/modem2.asp)
USING "WINDOWS FAX"

Controller-based

Controlless/Winmodem™

Softmodems

MCU=Microcontroller Unit
DPU=Data Pump Unit
DAA=Data Access Arrangement

(http://www.usr.com/education/modem1.asp and ..modem2.asp)
USING "WINDOWS FAX"

• The "US Robotics" model 5637 USB Dial-up Modem is about $45

USING "WINDOWS FAX"
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- "Trendnet" model TFM-561U USB Dial-up Modem is about $48

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• For older desktop computers, "Trendnet" model TFM-PCIV92U PCI Modem is about $12. See http://www.trendnet.com/products/proddetail.asp?prod=130_TFM-561U&cat=51

At this price, it has to be a "Softmodem"
USING "WINDOWS FAX"
USING "WINDOWS FAX"

• For newer desktop computers, "US Robotics" model 5638 PCIe Dial-up Modem is about $45. See http://www.usr.com/products/modem/modem-product.asp?sku=USR5638
USING "WINDOWS FAX"
CONFIGURING "WINDOWS FAX"

- Two ways to start "Windows Fax":
  - In "Windows 7" double-click on "Fax" in "Devices and Printers" to start "Windows Fax and Scan"
  - Or from within any document or Web page, click on "File", "Print", and then select the
CONFIGURING "WINDOWS FAX" (continued)
• In "Windows XP" or "Windows Vista", you have to turn on "Windows Fax" in "Add or remove programs" or "Programs and Features" in the "Control Panel": 
• In "Windows 7" and "Windows 8", "Fax" automatically appears in the "Printers and Faxes" section in "Devices and Printers" when you install a dial-up modem so "Windows 7" users can usually skip steps 1 through 6 of the following procedure:
• Step 1: Open the "Control Panel" of "Windows XP" or "Windows Vista":

CONFIGURING "WINDOWS FAX" (continued)
Step 2: Double-click on "Add or Remove Programs" in "Windows XP" or "Programs and Features" in "Windows Vista":

CONFIGURING "WINDOWS FAX" (continued)
Step 3: Double-click on "Add /Remove Windows Components":
**Windows Components**

You can add or remove components of Windows XP.

To add or remove a component, click the checkbox. A shaded box means that only part of the component will be installed. To see what's included in a component, click Details.

**Components:**

- **Accessories and Utilities** 18.0 MB
- Fax Services 3.8 MB
- Indexing Service 0.0 MB
- Internet Explorer 0.0 MB
- Management and Monitoring Tools 2.0 MB

**Description:** Includes Windows Accessories and Utilities for your computer.

**Total disk space required:** 0.0 MB

**Space available on disk:** 218853.6 MB
Step 4a: If you are running "Windows XP", put in a checkmark for "Fax Services":


Windows Components Wizard

Windows Components
You can add or remove components of Windows XP.

To add or remove a component, click the checkbox. A shaded box means that only part of the component will be installed. To see what's included in a component, click Details.

Components:

- Accessories and Utilities: 18.0 MB
- Fax Services: 3.8 MB
- Indexing Service: 0.0 MB
- Internet Explorer: 0.0 MB
- Management and Monitoring Tools: 2.0 MB

Description: Allows fax to be sent and received

Total disk space required: 1.7 MB
Space available on disk: 218853.6 MB
CONFIGURING "WINDOWS FAX"
(configuring)

• Step 4b: If you are running "Windows Vista", put a checkmark for "Windows Fax and Scan":

Turn Windows features on or off

To turn a feature on, select its check box. To turn a feature off, clear its check box. A filled box means that only part of the feature is turned on.

- Tablet PC Optional Components
- Telnet Client
- Telnet Server
- TFTP Client
- Windows DFS Replication Service
- Windows Fax and Scan
- Windows Meeting Space
- Windows PowerShell
- Windows PowerShell Integrated Scripting Environment
- Windows Process Activation Service
• Step 5: Click on the "OK" button.
• Step 6: Follow any additional wizards that pop up:
Configuring Components
Setup is making the configuration changes you requested.

Please wait while Setup configures the components. This may take some time.

Insert Disk
Please insert the Compact Disc labeled 'Windows XP Home Edition CD-ROM' into your CD-ROM drive (D:) and then click OK.

You can also click OK, if you want files to be copied from an alternate location, such as a floppy disk or a network server.
Completing the Windows Components Wizard

You have successfully completed the Windows Components Wizard.

To close this wizard, click Finish.
In "Windows XP", "Windows Vista", "Windows 7", and "Windows 8", the virtual Windows-provided "Fax" shows up where printers are displayed:
Add Printer

Fax
0
Ready
USING "Windows Fax"

• Since "Windows Fax" acts like a "faux printer", in "Windows XP", "Windows Vista", "Windows 7", and "Windows 8", you can also start "Fax" by clicking on "File", "Print", and then selecting the "Fax" printer from any document or Web browser page.
USING "WINDOWS FAX"

• In "Windows Vista" and "Windows 7", "Windows Fax and Scan" shows up prominently in the "Start" menu:
"HP FAX TEST SERVICE"

To test your virtual "Windows Fax", send a fax to 1-888-473-2963 which is the free "HP Fax Test Service". After a few minutes, they will send you a fax to your fax phone number several minutes after they receive your fax.

See

1. Send a one page black and white text fax to **1-888-hpfaxme** (1-888-473-2963).

2. When your fax is received by the HP Test Fax Service, we will generate a return fax to you within five minutes confirming that we received your fax. This verifies that you can both send and receive a fax with your fax machine.

If you do not receive a return fax within 5-7 minutes, there may be a problem with the setup of your fax machine. Consult the user manual that came with the product for proper setup and configuration.

**NOTE:** The most common cause of failure is that the fax number set in the Fax Header on the machine does not match the number of the phone line connected to the fax. Also, ensure that the fax header contains the full 10-digit telephone number of the fax machine, including the area code.

For more information or assistance, click **Contact HP** at the top of this page.
"HP FAX TEST SERVICE" (continued)

• After you send them a fax, the fax that the "HP Fax Test Service" sends to you will look like this:
FaxBack System Test

Thank you for choosing hp.

Other useful hp web sites

www.hp.com/register
Use this web address to register your HP product.

www.hp.com/support
Use this web address to obtain additional support for your product.

www.hpshopping.com
Use this web address to order supplies and accessories for your HP product.

Help us help you

We're interested in your feedback on this fax verification process. Send your comments to

fax.feedback@hp.com
SENDING FAXES WITH "WINDOWS FAX"

- Three ways to send a fax:
  - File --> Print --> Select the "Fax" printer from inside a document, photo, or Web page.
  - Double-click on the "Fax" icon inside "Devices and Printers" (in "Windows 7" or "Windows 8").
  - Start "Fax" from the "Start Menu" in all versions of "Windows.." prior to "Windows 8".
Two ways to receive a fax

- Manually click on "Receive a Fax Now" inside the "Fax" applet window.
- Automatically receive a fax after a certain number of rings, if you set it up in "Tools"--->"Fax settings" in the "Fax" applet window.
FAX CONFIRMATION REPORTS

To make yourself a "Fax Confirmation" report for a "Sent" fax:

- Start "Windows Fax"
- Click on the "Sent" Click on "Tools" in the "Menu bar"
- Click on "Fax Status Monitor"
- Use "Print Screen" or shift + "Print Screen" or "Snipping Tool" to save the relevant "events" to an empty .DOC or .RFT document in "Word", "Wordpad", or "Wordperfect"
**Review fax status**

Ready to send or receive a fax

<table>
<thead>
<tr>
<th>Event</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>The fax was sent successfully.</td>
<td>12:44:12 PM</td>
</tr>
<tr>
<td>The fax call is finished.</td>
<td>12:44:12 PM</td>
</tr>
<tr>
<td>Sending page 1 of 1</td>
<td>12:43:55 PM</td>
</tr>
<tr>
<td>Dialing: 333-3333</td>
<td>12:43:30 PM</td>
</tr>
<tr>
<td>The fax was canceled</td>
<td>12:40:13 PM</td>
</tr>
<tr>
<td>Canceling the fax...</td>
<td>12:40:11 PM</td>
</tr>
<tr>
<td>Dialing: 333</td>
<td>12:40:06 PM</td>
</tr>
<tr>
<td>The fax call was not answered.</td>
<td>12:40:05 PM</td>
</tr>
<tr>
<td>Dialing: 333</td>
<td>12:38:52 PM</td>
</tr>
</tbody>
</table>
SENDING FAXES WITH A CALLING CARD

If you get rid of the long distance service on a "land line" analog phone line (the "Plain Old Telephone Service" kind with dial tone riding on 48 volts "battery current"), you can use a "calling card" to make send faxes with your computer and its fax modem. This can give you great cost savings and the inconvenience of dialing a few extra numbers whenever you make voice, fax, or data phone calls.
To make this happen, you have to have a regular telephone attached to the same phone line that your computer's fax modem is connected to.

Step 1: Configure your computer's fax modem to "dial without waiting for a dial tone".
SENDING FAXES WITH A CALLING CARD (continued)

Step 2: Use the regular telephone and your calling card to dial the target fax machine.

Step 3: After the target fax machine answers, click on "Send" in your fax software or applet and your fax modem will dial the tones that it needs to.

Step 4: When you hear that your fax modem and the target fax machine are communicating with each other, hang up your telephone and let the two complete the outgoing fax transmission.
Notification Area Icons

Performance Information and Tools

Phone and Modem

Programs and Features
Phone and Modem

The list below displays the locations you have specified. Select the location from which you are dialing.

Locations:

<table>
<thead>
<tr>
<th>Location</th>
<th>Area Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>My Location</td>
<td>520</td>
</tr>
</tbody>
</table>
The following modems are installed:

<table>
<thead>
<tr>
<th>Modem</th>
<th>Attached To</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. Robotics V.92 USB Modem</td>
<td>COM3</td>
</tr>
</tbody>
</table>
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<td>COM3</td>
</tr>
</tbody>
</table>

![Add... Remove Properties buttons]

**Image Description:**
- The image shows a window titled "Phone and Modem" with options for Dialing Rules, Modems, and Advanced settings.
- The Modems tab is currently selected, displaying the installed modems.
- The table lists one modem: "U.S. Robotics V.92 USB Modem" attached to COM3.
- Below the table, there are buttons for Add, Remove, and Properties.
U.S. Robotics V.92 USB Modem Properties

General
Modem
Diagnostics
Advanced
Driver
Details
Events

U.S. Robotics V.92 USB Modem

Device type: Modems
Manufacturer: U.S. Robotics Corporation
Location: Port_0001.Hub_0006

Device status

This device is working properly.
Port: COM3

Speaker volume

Off  High

Maximum Port Speed

115200

Dial Control

Wait for dial tone before dialing
Dial Control

Wait for dial tone before dialing
SCREEN SHOTS OF FAXES BEING SENT FROM A "WINDOWS XP" COMPUTER:
In "Windows XP" "Windows Fax and Scan" shows up prominently in the "Start" menu:

"All Programs" → "Accessories" → "Communications" → "Fax"
Welcome to the Send Fax Wizard

This wizard helps you create and send a fax.

To fax a document, create or open it in a Windows-based application, and print to a fax printer.
Recipient Information
Enter the name and number of the person you want to send the fax to, or click Address Book to select a fax recipient.

To:
Location: United States [1]
Fax number: ( )

Use dialing rules: My Location

To send to multiple recipients, type each recipient's information above, and then click Add to add the recipient to the list below.

Recipient name | Fax number
---|---

Add | Remove | Edit | < Back | Next > | Cancel
Recipient Information

Enter the name and number of the person you want to send the fax to, or click Address Book to select a fax recipient.

**To:** John Smith

**Location:** United States (1)

**Fax number:** 1-888-473-2963

To send to multiple recipients, type each recipient’s information above, and then click Add to add the recipient to the list below.
### Review fax status

Sending page 1 of 1

Elapsed time: 0:38

Sending fax to `<333-3333>`

<table>
<thead>
<tr>
<th>Event</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sending page 1 of 1</td>
<td>12:43:55 PM</td>
</tr>
<tr>
<td>Dialing: 333-3333</td>
<td>12:43:30 PM</td>
</tr>
<tr>
<td>! The fax was canceled</td>
<td>12:40:13 PM</td>
</tr>
<tr>
<td>Canceling the fax...</td>
<td>12:40:11 PM</td>
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<tr>
<td>Dialing: 333</td>
<td>12:40:06 PM</td>
</tr>
<tr>
<td>! The fax call was not answered.</td>
<td>12:40:05 PM</td>
</tr>
<tr>
<td>Dialing: 333</td>
<td>12:38:52 PM</td>
</tr>
<tr>
<td>! The fax was canceled</td>
<td>12:17:33 PM</td>
</tr>
<tr>
<td>Canceling the fax...</td>
<td>12:17:31 PM</td>
</tr>
</tbody>
</table>

[Hide details] [Disconnect] [Cancel]
Review fax status

Ready to send or receive a fax

<table>
<thead>
<tr>
<th>Event</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>✔ The fax was sent successfully.</td>
<td>12:44:12 PM</td>
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<tr>
<td>Dialing: 333</td>
<td>12:38:52 PM</td>
</tr>
</tbody>
</table>

Clear list

Answer call

Cancel
SCREEN SHOTS OF CONFIGURING FAX RECEPTION IN A "WINDOWS 8" COMPUTER:
Devices and Printers
Choose the fax modem that you want to use to send and receive faxes.

Device name: U.S. Robotics V.92 USB Modem

Send/receive options
- [ ] Allow the device to send faxes
- [ ] Allow the device to receive fax calls
  - Manually answer
  - Automatically answer after 4 rings

More options...
Fax Settings

Choose the fax modem that you want to use to send and receive faxes.

Device name: U.S. Robotics V.92 USB Modem

Send/receive options
- [ ] Allow the device to send faxes
- [x] Allow the device to receive fax calls
  - Manually answer
  - Automatically answer after 4 rings

[OK] [Cancel] [Apply]
Send/receive options

- Allow the device to send faxes
- Allow the device to receive fax calls
  - Manually answer
  - Automatically answer after [4] rings

More options...
Fax Settings

More options

Identification
Transmitting Subscriber ID (TSID) and Called Subscriber ID (CSID) typically contain a fax number or business name and are used to identify who sends and who receives a fax.

TSID: Fax
CSID: Fax

When a fax is received

- Print a copy to:
- Save a copy to:

OK  Cancel  Apply
Fax Settings

More options

Identification
Transmitting Subscriber ID (TSID) and Called Subscriber ID (CSID) typically contain a fax number or business name and are used to identify who sends and who receives a fax.

- TSID: Fax (123) 456-7890
- CSID: John Williams

When a fax is received:
-印制副本到:
-保存副本到:
Fax Settings

Choose the fax modem that you want to use to send and receive faxes.

Device name: U.S. Robotics V.92 USB Modem

Send/receive options

- Allow the device to send faxes
- Allow the device to receive fax calls

- Manually answer
- Automatically answer after 4 rings

More options...

OK Cancel Apply
Fax Settings

General

Choose the fax modem that you want to use to send and receive faxes.

Device name: U.S. Robotics V.92 USB Modem

[Select fax device...]

Send/receive options

- Allow the device to send faxes
- Allow the device to receive fax calls

- Manually answer
- Automatically answer after [4] rings

[More options...]

[OK] [Cancel] [Apply]
APPENDIX 1
USING FAX APPLICATIONS

• Third party fax application programs are especially useful for Windows Vista Starter, Windows Vista Home Basic, Windows Vista Home Premium because "Windows Fax" is not available for these versions of Windows.
• Even if "Windows Fax" is available in your version of "Windows..", you might prefer to use a "fax app" instead of "Windows Fax".
APPENDIX 1
USING FAX APPLICATIONS
(continued)

• The "Classic Phone Tools" software program is bundled with the "US Robotics" USB dial-up modem". See
The "Classic Phone Tools" software program is also bundled with the "Trendnet" USB dial-up modem.
APPENDIX 1
USING FAX APPLICATIONS
(continued)

• The Web site for "Classic Phone Tools" is located at
  http://www.avanquest.com/USA/software/classic-phonetools-9-27401?gclid=CPTVh9vWxK8CFWvktgodynrdaQ
The Web site for "Communicate!" is located at http://www.01com.com/communicate-voicemail-fax/
APPENDIX 2
USING LEGACY FAX MACHINES, FAX MODEMS, AND CREDIT CARD MACHINES ON "VOICE OVER IP" (VOIP) PHONE LINES

- See http://aztcs.org/meeting_notes/winhardsig/windowsfax/fax-and-Internet.pdf