



Innovative eMessaging Solutions

Venali Internet Fax Desktop Solutions  
Email to Fax  
Technical Reference Manual  
Revision 1.1

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## Introduction

Venali's email to fax solution enables a registered customer to send faxes over the Internet to any recipient worldwide. To begin faxing directly from the desktop, simply use a commercial email program to create an email, attach the document(s) to be faxed, address, and send (see Faxing From a Commercial Email Client below).

If you need to automatically generate faxes from a custom interface, database, or other fax solution, you can programmatically generate emails and send them to the Venali system (see Creating Faxable Emails Programmatically below). In either case, emails must adhere to MIME standards.

Once sent, emails are processed by the Venali IP fax network and delivered to each of the fax numbers specified. A fax delivery confirmation email will be sent to the "From" address specified in the email.

## Faxing from a Commercial Email Client

Many standard email clients such as Microsoft Outlook, Outlook Express, and Qualcomm Eudora Pro are capable of sending MIME emails. Simply create a new email, address it properly (see below), complete the subject/body, and add attachments to be faxed. Each attachment will be faxed as a separate page. Follow these steps to send a fax from a commercial email client:

1. Establish an email to fax account with Venali
2. Open a commercial email client and create a new email message (MIME format)
3. Address the "To:" field: faxnumber@venali.net (all lower case letters, multiple addresses OK)
4. Ensure that the "From:" address is an email address assigned to your Venali account
5. Ensure that the format of the "To:" field Country code + Area code + Fax number (Ex. 17866954022@venali.net)
6. Attach any documents to the email to be faxed in the order that they should appear
7. Enter text in the "Subject" field of the email. This will appear on the fax cover page.
8. Optionally select a cover-page by adding ~cover-page-name as the part in the subject. The name of the cover-page has to match the settings in your account.
9. Enter any text you wish into the body of the email. This will appear on the fax cover page.
10. Click "Send".

## Creating Faxable Emails Programmatically

If you would like to develop a custom interface which accepts input and documents for faxing, consider developing a system which can perform one or more of the following:

1. Receive input data (recipients, subject, body, attachments, etc.) via a custom interface
2. Query a database for input data (recipients, subject, body, attachments, etc.)
3. Generate and send MIME email(s) with the specified input data

To create an email programmatically, you must follow some rules which were developed to permit heterogeneous computer systems to interoperate smoothly on the global Internet. These rules are described in documents called Requests For Comments, or RFCs. The format of Internet mail messages is defined by RFC 822, and the protocol used to send RFC-822 email between host computers is referred to as the Simple Mail Transfer Protocol, or SMTP, and is defined in RFC 821. Searching for these terms on any Internet search engine will provide a wealth of supplementary information.

#### SAMPLE EMAIL

What follows is a complete example of a programmatically generated email. This example email contains an HTML "body" which appears as the fax cover page, and an "attached" TIFF file which has been base64 encoded to facilitate transmission via this inherently character based medium. Items to make special note of include:

1. Pay attention to the line breaks; their placement is important.
2. Delivery confirmation will be sent to either "From:" or "Reply-To:" address (account configurable).
3. Format of the "To:" address is: country code + area code + Fax number (multiple addresses have to be separated by commas ','). (Ex. 17866954022@venali.net)
4. The "To:" address field should contain only lowercase letters
5. Each *boundaryIdentifier* delimited section represents a separate attachment and starts a new page.
6. You can base64 encode/attach any of the file types in the Supported Document Types section.

From: you@yourdomain.com  
Reply-To: you@yourdomain.com  
To: 13055551212@venali.net, 18005551212@venali.net  
Subject: Testing Email to Fax ~coverpagename  
Date: Mon, 28 April 2003 15:34:33 -0500  
MIME-Version: 1.0  
Content-Type: multipart/mixed; boundary="boundaryIdentifier"

Any text here will be ignored....

--boundaryIdentifier  
Content-Type: text/html; charset="iso-8859-1"  
Content-Transfer-Encoding: quoted-printable

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 3.2//EN">
<HTML>
<HEAD>
</HEAD>
<BODY>
This is HTML formatted <b>message body text</b> which will
essentially comprise your <i>cover page</i>.
</BODY>
</HTML>
```

--boundaryIdentifier  
Content-Type: image/tiff;  
    name="attachedTiff.tif"  
Content-Transfer-Encoding: base64  
Content-Disposition: attachment;  
    filename="attachedTiff.tif"

SUkqAJhuAAAAAU2agAFNmoABTZqAAU2agAFNmoABTZqAAU2agAFNmoABTZqAAU2agAF  
NmoABTZqAAU2agAFNmoABTZqAAU2agAFNmoABTZqAAU2agAFNmoABTZqAAU2agAFNmo  
ABTZqAAU2agAFNmoABTZqAAU2agAFNmoABTZqAAU2agAFNmoABTZqAAU2agAFNmoABT  
ZqAAU2agAFNmoABTZqAAU2agAFNmoABTZqAAU2agAFNmoABTZqAAU2agAFNmoABTZqA  
AU2agAFNmoABXgNRMKwAAV4DUTCsAAFeA1EwAAAAAAAA

--boundaryIdentifier--

## Fax Delivery Confirmation Email

When a fax has been received by the recipient's fax machine, a delivery confirmation will automatically be emailed to either the "From:" or the "Reply-To:" address specified in the email (account configurable option). The following is an example of a fax delivery confirmation email:

Dear Customer,

Please keep the information below regarding your fax to 3055551212

Fax: 13055551212  
Subject: Testing Email to Fax  
Speed: 14400  
Description: Successful  
Pages: 2  
Time: 00:42  
Country: United States  
Code: 0  
Delivered: 04/28/2003 15:36:33  
Fax Id: 7be4aad77fb6644c145ef507f09f6d88d

Thank you for using Venali Internet Fax Service.

-----  
Venali, Inc.  
Innovative eMessaging Solutions  
<http://www.visionlab.com>

This email address is non-returnable and will not accommodate replies.

## Parse the Confirmation Email

If your Venali account is configured to return plain confirmations, you can programmatically process your fax delivery confirmation emails for fax transmission statistics by parsing out the proprietary extended header variables below:

```
x-fax-status: 0
x-fax-pages: 2
x-fax-speed: 14400
x-fax-attempts: 1
x-fax-completed: Mon, Apr 28 2003 15:36:33 -0000
x-fax-destination: 13055551212
x-fax-minutes: 0.9
x-fax-id: 7be4aad77fb6644c145ef507f09f6d88d
x-fax-sender: you@yourdomain.com
In-Reply-To: <message-id>
```

Status is the error code for the fax transmission (see Fax Errors below)

## Supported Document Formats

Typically, when you send a fax through Venali, you are sending documents which need to be faxed along with the out-bound message. The documents are automatically recognized by our system and eventually converted to a common image format (TIFF) prior to being delivered to the recipient. Venali currently supports the following document content-types:

### Microsoft Word (DOC)

Content-type: application/msword

Associated Program(s): List TBD

Remarks: Versions 95, 97, 2000. Files with passwords or macros will be rejected.

### Microsoft Excel (XLS)

Content-type: application/vnd.ms-excel

Associated Program(s): List TBD

Remarks: Versions 95, 97, 2000. Files with passwords or macros will be rejected. If you have more than 10 sheets in the workbook, consider converting them to TIFF using a third party printer driver and printing to file. Only the active worksheets will be printed. In order to print all they have to be selected (using SHIFT-mouse-click).

### Microsoft Powerpoint (PPT)

Content-type: application/vnd.ms-powerpoint

Associated Program(s): List TBD

Remarks: Versions 95, 97, 2000. Files with passwords or macros will be rejected.

### Visio Drawing (VSD)

Content-type: application/vnd.visio

Associated Program(s): Microsoft Visio graphics program

Remarks: None

### Adobe Postscript (PS)

Content-type: application/postscript  
Associated Program(s): Output from Postscript printer drivers, production applications  
Remarks: Non standard fonts needs to be included in the postscript document

#### **Adobe Portable Document Format (PDF)**

Content-type: application/pdf  
Associated Program(s): Adobe Acrobat  
Remarks: Password protected or encrypted documents will be rejected.

#### **Plain Text (TXT)**

Content-type: text/plain  
Associated Program(s): Unformatted text file produced by various text editor programs  
Remarks: Encoding has to be specified if sent MIME encoded (e.g. iso-8859-1).

#### **Printer Control Language (PCL5) (Hewlett Packard)**

Content-type: application/vnd.hp-PCL  
Associated Program(s): Print to file from HP PCL printer driver  
Remarks: Version 5 only

#### **HTML**

Content-type: text/html  
Associated Program(s): Text file produced by various text editor/markup programs  
Remarks: Frameless Web pages only. Avoid external links (i.e. images, scripts, etc.) since these resources may not be available when the document is converted by Venali, unless you encode HTML/MIME attachments according to RFC2110. Use common system fonts or they will be remapped. JavaScript is disabled, pages relying on this will not render correctly. Exact page breaks can not be specified (limitation of HTML) so results may vary.

#### **ASCII Files**

Remarks: see plain text but restricted to US-ASCII

#### **Rich Text Format (RTF)**

Content-type: application/rtf  
Associated Program(s): Text file (w/ formatting tags) produced by text editor programs  
Remarks: Microsoft RTF format

#### **Windows Bitmap (BMP)**

Content-type: image/ms-bitmap  
Associated Program(s): Windows Paint  
Remarks: consider using GIF/PNG as BMP files are very big

#### **CompuServe Graphics Interchange Format (GIF)**

Content-type: image/gif  
Associated Program(s): Graphic file produced by various imaging programs  
Remarks: RFC2045, RFC2046

#### **Joint Photography Experts Group (JPG, JPEG)**

Content-type: image/jpeg  
Associated Program(s): Graphic file produced by various imaging programs  
Remarks: RFC2045, RFC2046

### **TIFF Image (Groups 3 and 4)**

Content-type: image/tiff

Associated Program(s): Graphic file produced by various imaging programs

Remarks: RFC2302. LZW compression not supported.

### **Portable Network Graphics (PNG)**

Content-type: image/png

Associated Program(s): Graphic file produced by various imaging programs

Remarks: None

### **PC Paintbrush Graphics (DCX)**

Content-type: image/dcx

Associated Program(s): Graphic file produced by various imaging programs

Remarks: multipage PCX

### **PC Paintbrush Graphics (PCX)**

Content-type: image/pcx

Associated Program(s): Graphic file produced by various imaging programs

Remarks: None

### **ZIP**

Content-type: application/zip

Associated Program(s): Various compression programs

Remarks: Zip file may contain directories but not other .zip files. Cannot be password protected. All documents will be faxed in the order they appear in the .zip file. If one document in the zip fails, the entire fax is rejected and an error will be reported.

## **Fax Error Codes**

This table describes the Venali fax error messages:

<b>Error code</b>	<b>Description</b>
-1	Message is pending
0	Successful
100	Account is not valid (e.g. locked)
101	Account does not exist
103	Account does not originate from a valid source
104	Message is too big
114	Invalid password, pin, or digital signature
200	Message processing failed
201	Unable to deliver fax message at this time
202	Confirmation message unavailable
203	Unable to submit to a working queue
210	Message contains attachments of unknown type
211	Message is empty
212	Message does not contain a valid destination
213	Message cannot be read or seems to be corrupt
216	Message is not formatted properly

218	Message contains invalid attachments
300	Message could not be converted to a faxable format
301	Internal error
503	Message could not be submitted to the fax system at this time
3900	Invalid fax number
3920	Line is busy
3932	Destination is unreachable
3935	No answer
3936	Not a fax machine
3940	Call was disconnected

## Contact Information

VENALI SUPPORT TEAM  
 Customer Service/Technical Support  
 9 a.m. - 6 p.m. CST  
 Email: [support@venali.com](mailto:support@venali.com)  
 Role: Fax service end user issues.

24/7 NETWORK SUPPORT  
 Network Operations Center  
 P: 1 786 276 0770 x. 211  
 If busy, call: 305 987 4487  
 Email: [noc@vlnet.ca](mailto:noc@vlnet.ca)  
 Role: Report network related issues.  
 Initial contact, 6 p.m. - 9 a.m.



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