

# An explanation of MIME content types

# SAY IT WITH MIME

JULIAN MOSS

Linux graphical environments use the Internet standard MIME content types to determine what the content of a file is. Julian Moss explains how to use them.

MIME stands for Multipurpose Internet Mail Extensions. It's an Internet standard that was originally created to enable information other than plain text to be sent across the Internet using electronic mail. MIME defines standards for a number of things: the way the various parts such as the message text and attachments are combined into a single file (the mail message), the way the content type of each part of a message is specified, and the way items are encoded for electronic transmission so that they can be handled by software designed to process messages containing only ASCII text.

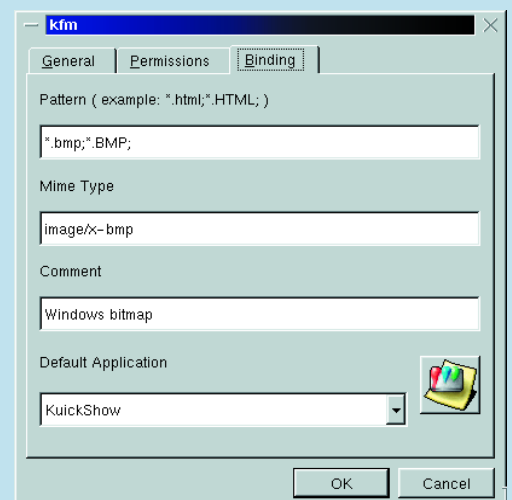
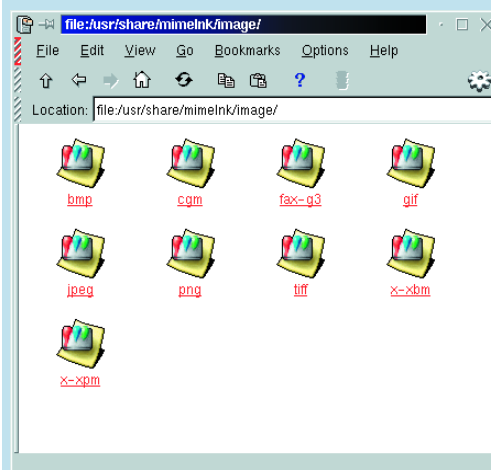
The role played by MIME in the sending and receiving of electronic mail messages and attachments is normally invisible to the user, who needn't be concerned about it. However, MIME standards have been adopted for use by more than just elec-

tronic mail. Web servers use them to tell web browsers the type of material they are about to receive. And MIME content types are used by graphical environments that run on Linux such as KDE and GNOME to identify different types of file and associate them with the applications that should be used to open them. For this reason, it is a good idea for Linux users to know a little bit about them.

MIME content types consist of two parts, a main type and a sub-type, which are separated by a forward slash. Main types that are commonly encountered are "application", "text", "image", "audio" and "video". The "text" main type contains various types of plain text file. Examples are: "text/plain" (unformatted text); "text/html" (text containing HTML coding); "text/rtf" (text in rich text format). The "application" type contains data files. Examples are: "application/msword" (Microsoft Word document) and "application/x-zip" (compressed archive in Zip format). The "image" type is used for still images. It includes a number of subtypes like "image/gif", "image/jpeg", "image/png" and so on, whose content is probably obvious, as will be the type of material covered by the "audio" and "video" main types. Table 1 shows a list of commonly encountered MIME content types.

MIME content types are assigned and listed by the Internet Assigned Numbers Authority (IANA). A

## How to add a new Mime type in KDE



1. From a KFM window select Edit, Mime types (to make changes that affect only the current user) or Edit, Global Mime types (while logged in as root, to make changes that affect the entire system.) You will see a set of folders that represent each of the main Mime types. Click on one of these folders to open it and you will see a set of icons representing all the Mime sub-types defined within it. To change the program used by default to open a file of a particular type, edit the icon's properties.

2. An easy way to create a new Mime type in KDE is to drag a similar one to the desktop to copy it, right-click it and click Properties. On the General tab, change the name. On the Binding tab change the Pattern entry so that it contains the file extensions used by files of this type. In the Mime Type field type the full content type descriptor. Add a comment that describes this type of file. If you wish, you can also select an application that will be used by default to open it. Then move the new Mime type icon back to the KFM window.

### INFO

**IANA Home Page:**

<http://www.iana.org/RFC Editor>

**Homepage:** [http://www.rfc-editor.org/RFC tree \(short\):](http://www.rfc-editor.org/RFC tree (short):)

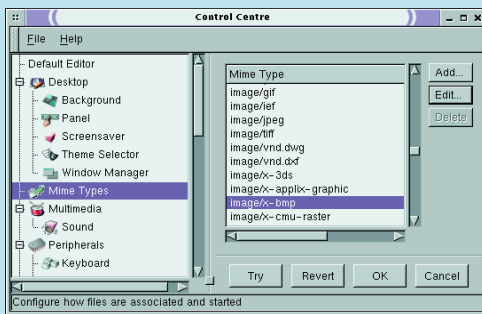
[http://www.magres.nottingham.ac.uk](http://www.magres.nottingham.ac.uk/~rourke/links/rfc/MIME Content)

[/~rourke/links/rfc/MIME Content](http://www.magres.nottingham.ac.uk/~rourke/links/rfc/MIME Content)

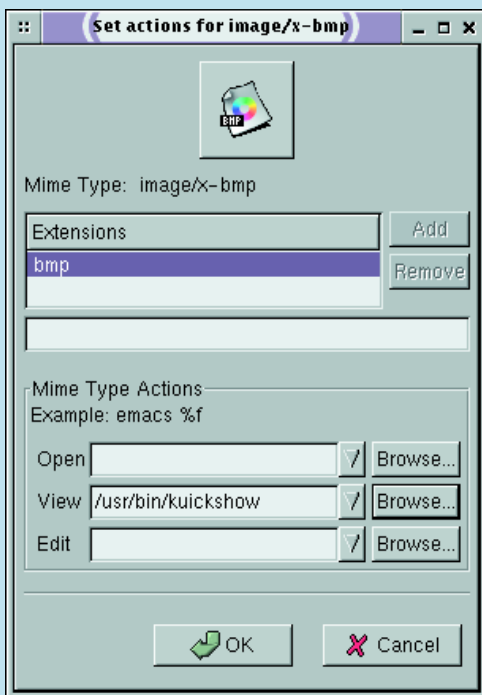
**Types:** [ftp://ftp.isi.edu/in-](ftp://ftp.isi.edu/in-notes/iana/assignments/media-types)

[notes/iana/assignments/media-types](ftp://ftp.isi.edu/in-notes/iana/assignments/media-types)

## How to add a new Mime type in GNOME



1. Open the GNOME Control and select Mime Types from the tree on the left. Check in the list on the right that the type you want doesn't already exist, then click Add. In the Add Mime Type dialog box type the full content type descriptor in the Mime Type field. Type the file extensions used by files of this type in the Extension field, separated using commas if more than one extension is used. Click OK.



2. Now the new Mime type is added to the list, click Edit. You can now set the Open, View and Edit actions to be performed on files of this type by selecting programs to carry out these actions. By clicking on the icon button you can also change the icon used for this type of file.

Table 1: Common MIME content types

MIME Type	Description
application/acad	AutoCAD drawing files (*.dwg)
application/dxf	Drawing Exchange Format drawing files (*.dxf)
application/msword	Microsoft Word file (*.doc)
application/octet-stream	Unknown binary data
application/pdf	Adobe Acrobat file (*.pdf)
application/postscript	PostScript (*.ai, *.ps, *.eps)
application/rtf	Microsoft rich text format (*.rtf)
application/vnd.ms-excel	Microsoft Excel file (*.xls)
application/vnd.ms-powerpoint	Microsoft PowerPoint file (*.ppt)
application/x-debian-package	Debian Package (*.deb)
application/x-javascript	JavaScript source file (*.js)
application/x-gzip	GNU zip archive (*.gzip)
application/x-msaccess	Microsoft Access file (*.mdb)
application/x-msexcel	Microsoft Excel file (*.xls)
application/x-mspowerpoint	Microsoft PowerPoint file (*.ppt)
application/x-rpm	Red Hat Package (*.rpm)
application/x-zip	ZIP archive (*.zip)
application/zip	ZIP archive (*.zip)
audio/basic	Basic audio (*.au, *.snd)
audio/x-aiff	AIFF audio (*.aif, *.aiff)
audio/x-midi	MIDI file (*.mid)
audio/x-mod	MOD audio (*.mod)
audio/x-mp3	MPEG audio (*.mp3)
audio/x-wav	WAV audio (*.wav)
image/bmp	Microsoft Windows bitmap image (*.bmp)
image/cgm	Computer Graphics Metafile (*.cgm)
image/gif	GIF image (*.gif)
image/jpeg	JPEG image (*.jpg; *.jpe; *.jpeg)
image/png	Portable Network Graphics image (*.png)
image/tiff	TIFF image (*.tif; *.tiff)
image/x-portable-pixmap	PBM Pixmap image (*.ppm)
image/x-xbitmap	X Bitmap image (*.xbm)
image/x-xpixmap	X Pixmap image (*.xpm)
text/css	Cascading style sheet (*.css)
text/html	HTML file (*.htm; *.html)
text/plain	Plain text (*.txt)
text/richtext	Internet standard rich text
text/rtf	Microsoft rich text format (*.rtf)
text/sgml	SGML file (RFC1874)
text/xml	XML file (*.xml)
video/mpeg	MPEG video (*.mpg; *.mpe; *.mpeg)
video/quicktime	Apple QuickTime video (*.mov; *.qt)
video/x-msvideo	Microsoft Windows video (*.avi)
video/x-sgi-movie	SGI movie player format

For a complete list of MIME types see:

<ftp://ftp.isi.edu/in-notes/iana/assignments/media-types>

full list of the officially recognised types can be found at <ftp://ftp.isi.edu/in-notes/iana/assignments/media-types>. The list includes standard content sub-types and vendor-specific sub-types (the ones with names beginning „vnd.“) In real life you will also come across sub-types that start with „x-“.

These are sub-types that have no official status. If you need to invent a content type in order to associate some type of file with a particular pro-

gram (perhaps one you have written) you should give it a sub-type that starts with „x-“.

If you use KDE you will need to have a MIME content type for any file that you want to have associated with an application for opening it. If you use the GNOME file manager you don't have to use MIME content types - it can use just the file extension to work out which program to use - but they are supported as an option. ■