# Windows MBox Viewer User Manual 1.0.3.31

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# **1** Modification History

Revision	Date	Comments
1.0	February 28, 2018	Initial Release
< 1.0.3.1		See ReadMe.markdown 1.0.3.1 included with the release package.
>= 1.0.3.1	September 26, 2019	See the section "What is new and what changed in version 1.0.3.x".

# 2 What is new and what changed in version 1.0.3.31

#### 2.1 What is new

1. none

#### 2.2 What changed

- 1. Fixed. Script to merge PDF files doesn't work when MBox Viewer executable and configured data folder reside on different drives.
- 2. Fixed. Page Break stopped working.

# **3 LICENSE**

The mbox viewer source code created by authors of the mbox viewer project is licensed under GNU AFFERO GENERAL PUBLIC LICENSE version 3 which permits free use of the code by individuals and organizations. Small portion of the source code is from Code Project site and licensed under the Code Project Open License (CPOL) 1.02 which permits, as we understand, free use of the that code except in a few unusual cases such as for example the immoral usage.

The mbox viewer executable doesn't link any non-free usage library and therefore it can be freely used, as we understand, by individuals and organizations.

The mbox viewer software is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.

Please check the below links for the detailed information on GPL and CPOL license terms.

```
https://www.gnu.org/licenses/agpl-3.0.txt
```

https://www.codeproject.com/info/cpol10.aspx

Links to additional publications that can be useful.

```
https://www.codeproject.com/info/Licenses.aspx
https://opensource.guide/legal/#which-open-source-license-is-appropriate-for-my-project
```

# 4 About this document

Starting with 1.0.3.27 version of MBox Viewer, icons representing folders and mail archives have changed. Mail archive used to be represented by the folder icon and now is represented as the stack of mail envelops. Mail folder was represented by the computer icon and now it is represented by the folder icon. However, not all screen snapshots were updated yet to reflect the change.

# **5** Feedback

To help to improve MBox Viewer, please post reviews what works and what doesn't, create bug reports and request for enhancements. Provide as many details as possible, such as country, screenshots, etc.

# 6 Overview

MBox Viewer (or mboxview) is Windows GUI based program to view mbox files such as Thunderbird Archives, Google mail archives or simple Eml files.

The mbox viewer is a simple but quite powerful email viewer that supports the following features:

- 1. large file support > 4Gb
- 2. fast parsing of mbox archives
- 3. quick access to all attachments
- 4. preview picture attachments
- 5. zoom in/out a picture
- 6. export of single mail in Eml
- 7. export of all mails in Eml format
- 8. export attachments of all mails
- 9. print all or multiple selected mails to CSV or Text or HTML or PDF files or send to PDF printer
- 10. print single mail to Text or HTML or PDF file or send to PDF printer
- 11. group all related mails as conversations
- 12. print mail conversation/related mails group to CSV or Text or HTML or PDF file or send to

PDF printer

- 13. open single or multiple selected mails or group of related mails in a browser
- 14. find user defined text in mail's message and highlight all occurrences
- 15. search the date, subject, sender, cc, bcc, message text, appendix text and appendix names
- 16. search for mails that didn't match the search criteria
- 17. sort by date, from, to, subject, size and conversation groups
- 18. support for mail's header fields and body encoded with different character sets
- 19. support for mail list editing capability to enable users to compose mail list by merging results of multiple searches and/or by merging one or more user selected mails
- 20. ability to set Message Window position to Bottom, Right or Left
- 21. ability to merge/concatenate multiple archive files and remove duplicate mails
- 22. ability to customize background colors of display panes and mail message
- 23. ability to customize HTML/PDF mail header output
- 24. view raw mail headers
- 25. forward mails directly from MBox Viewer
- 26. support for Gmail Labels
- 27. support for exported hierarchy of mail files from Thunderbird or similar mail clients

# 7 Known Issues

# 7.1 Mbox/Eml File Names

Non ANSI mail archive file names will likely be silently ignored by the Mbox Viewe and should be renamed.

# 7.2 Gmail Label names

Only ANSI characters are supported in Gmail Labels. Also, the displayed labels names may differ from received from Gmail if they contain one or more of the following characters:  $? <> :* | \setminus \%$ . The listed characters will be replaced with the underscore character and the unique number will be appear at the end the label name. Future releases will attempt to resolve this limitation.

# 7.3 Printing to PDF

Mbox Viewer relies on external applications to print directly to PDF.

Google Chrome browser always prints header and footer which is typically undesired.

Added support for Microsoft Edge browser in v1.0.3.19 to print directly to PDF with no header and footer.

Developer version of the Chrome browser called Chrome Canary can also be used to remove header and footer. Chrome Canary browser may not be fully stable but experience shows it seem to work well for printing to pdf. User can also leverage free wkhtmltopdf application to print to pdf. The wkhtmltopdf is highly customizable but not as reliable as Chrome and the user needs to evaluate whether it works reliably in his case.

Opening group of mails in a browser and printing from the browser offers additional options such as ability to remove color in the output or scale the pages.

# 7.4 Opening Multiple Selected Mails in External Browser

Mbox Viewer simply concatenates multiple mails in HTML format into a single HTML file and opens the created file within a browser. The format of the created file is as follows:

```
<div><html><mail 1 header in HTML format></html></div>
<div><html><mail 1 body in HTML format></html></div>
<div><html><mail 2 header in HTML format></html></div>
<div><html><mail 2 body in HTML format></html></div>
<div><html><mail 3 header in HTML format></html></div>
<div><html><mail 3 body in HTML format></html></div>
.....
```

The <div> tags are used in an attempt to create independent sections within HTML document.

The approach doesn't always work reliably for variety of reasons. One known issue is that some mails with content in HTML format rely on default values such as the font size and may inherit the font size from other mails. There is currently no work around such issue when viewing mails in a browser.

# 7.5 Mail Date and Time

Mails older than the epoch time, i.e. older than year 1970 are supported but the date and time of such mails will be mapped to Jan 1 1970. Windows supports may different date and time functions but only Unix style date and time functions support Daylight Saving Time. However, these functions do not support date older than year 1970.

# 8 Installation

The executable and the source code can be downloaded from Sourceforge or Github.

https://sourceforge.net/projects/mbox-viewer/files/

#### https://github.com/eneam/mboxviewer/releases

Download the executable package, the latest mbox-viewer.exe-v1.0.3.31.zip, to the working directory and unzip. This will create the mbox-viewer.exe-v1.0.3.31 directory containing the stand-alone mboxview.exe executable, User Guide, the scripts sub-directory and ReleasePlusStackTrace sub-directory. No administrator privileges are needed to install and run the mbox viewer.

Review the HELP.txt file in case of the Mbox Viewer crash.

# 9 Running MBox viewer

The mboxview program can be executed by double clicking the executable from the explorer window or from the command line by typing the command name and argument list to it.

# 9.1 Argument List Summary

The mboxview accept the following command line options.

**-FOLDER=**folderPath – the full path to the folder containing one or more mbox or eml files. Persists in the registry across multiple runs.

**-MAIL\_FILE**=fileName – full file path or just file name of mbox/eml file to load. If the full path is not specified, the full path is created from the folderPath and the fileName. Doesn't persist in the registry across multiple runs.

**-EML\_PREVIEW\_MODE** command line option to hide Mbox Tree and Mail List panes when - MAIL\_FILE is configured. ESCAPE key will terminate the mbox viewer.

**-EXPORT\_EML=**y|n – enables or disables automatic export of eml files generated from mbox archive. Improves traversing performance of mail if set to 'n". Persists in the registry across multiple runs.

**-PROGRESS\_BAR\_DELAY**=seconds – search progress bar is activated when the search duration lasts longer than the value set for PROGRESS\_BAR\_DELAY. If set to **-1**, the progress bar is disables. Default value is set to **1** seconds. Persists in the registry across multiple runs.

-**MBOX\_MERGE\_LIST\_FILE**=listFile Name and -**MBOX\_MERGE\_TO\_FILE**=mergedFile Name command line options to merge content of mbox files listed in the listFile Name. The merged mbox file is automatically open in mbox viewer.

If desired, instead of typing directly desired command line options, a simple .cmd or .bat file can be created for convenience and run from the explorer.

# 9.2 Setting Options from GUI

The **EXPORT\_EML** and **PROGRESS\_BAR\_DELAY** values can be changed on the fly at any time from GUI.

Click on the "File" to open the drop menu and then select the "Options" option. The below dialog will be presented. Set the desired values followed by OK button.

Note that if exporting of EML files is disabled, you can still export the eml file for the selected mail by selecting "View EML" under the "View" drop menu.

Two options, **"Show Charsets"** and **"Set Character Sets for Header Fields"**, can help to properly display header fields in the Message Window. See 9.29.1.1 for additional details.

The "Picture Viewer" check box enables/disables the dialog option to preview the picture

attachments, see 9.23 for additional details.

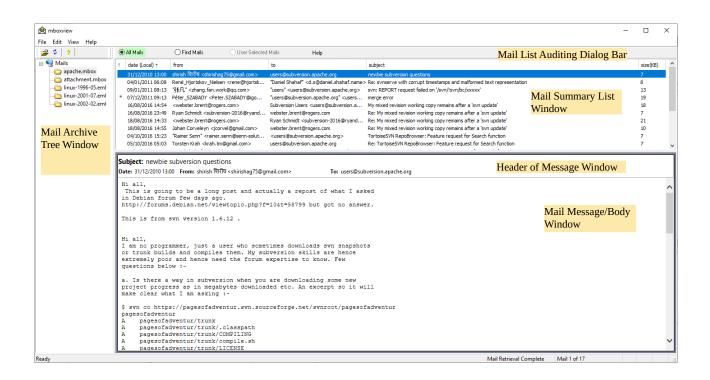
The **"Enhanced Select Mail Folder Dialog**" is different version of the **"Select Folder**" option and allows user to see if the mail archives are in the folder. User needs to select any mail file to select containing folder.

Options ×
Date format: Odd/mm/yyyy mm/dd/yyyy yyyy/mm/dd
Time: <ul> <li>Local</li> <li>GMT</li> </ul>
Search progress bar startup delay in seconds
Export EML: O no O yes
Message Header Character Set IDs (0-65001) from to subject 0 0 0 Show Charsets: O no • yes
Picture Viewer
Enhanced Select Mail Folder Dialog Subject Sort Type O alphanumeric  time ordered threads
OK Cancel

The "Time" option allows to display time as Local or GMT.

## 9.3 Basic Use Case

Double click of the mboxview to start the viewer. The picture below shows the screen created by the mboxview after few steps performed by a user. Mail Archive, Summary and Message windows are initially blank after start-up. Steps to load a mail archive and display the content are described next.



 Click on the "File" to open the drop menu and then select the "Select folder..." option. Browse to the folder containing one or more mbox and/or eml mail archive files and select it. All valid mail archive files will appear in the Mail Archive Tree window. Note that different "Select Folder" dialog can be configured via File → Options menu dialog.

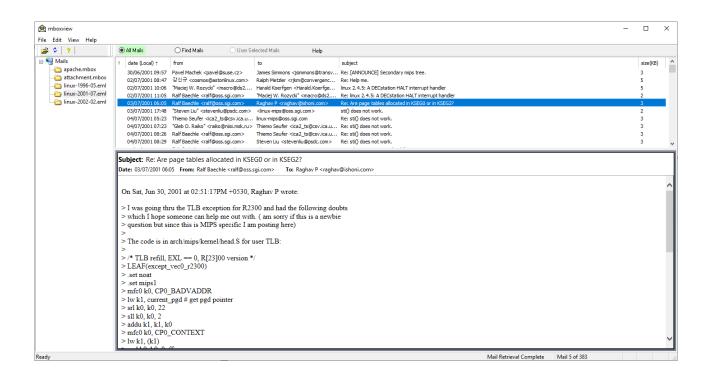
🙊 n	nboxview						-	×
File	Edit View Help							
1	Select folder		All Mails	O Found Mails	<ul> <li>User Selected Mails</li> </ul>	Help		
	Refresh	F5						
	Options							
	Print Config							
	Attachments Config							
	Color Style Config							
	Print To	>						
	Merge Archive Files Restore Hint Messages							
	Development Options	>						
-	most recent folders		ect: <empty></empty>					
	Exit		<empty> From</empty>		:mpty>			
Calast	folder containing mails							

2. Left click on one of the archive files to load all mails within that archive. Progress bar will appear and automatically close after the selected archive is fully processed. Mail header information of each email will appear in the Summary window. Note that parsing of very large archive file may take some time since the mail archives are text files and every character has to be examine one by one.

However, subsequent loading of mails is done from the index file created by the mboxview during the initial parsing of the archive file and is much faster. The created index file contains content meta data of each mail in the archive file. i.e. the mail header information and the position of each mail within the mail file for quick access to the mail message/body. The index files have the .mboxview suffix.

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File Edit View Help	
🚘 🗘 ? 🕂 🆛 🛛 🖓 All Mails 💿 Found Mails 💿 User Selected Mails 🛛 Help	
Wals         Imur 1996-05.eml         Timur 1996-05.eml         Timur 2002-02.eml	Subject: <empty> From: <empty> CC: <empty> BCC: <empty> Date: <empty> Cancel</empty></empty></empty></empty></empty>

3. Left Click on one of the mails in the Summary window to show the Message/Body of that email in the Message window. The mail retrieval state, total number of mails in the archive and the position of the selected mail within the archive is shown on the status bar. Opening a heperlinks within an external browser is recommended since running Java or scripts or ActiveX controls is disabled in the internal browser to improve security.



#### 9.4 Multiple Folders Support

Each time you click on the "File" to open the drop menu and select new mail archive folder via the "Select folder..." option, the selected folder will be added to list of folders under the Mail Archive Tree.

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ile Edit View Help		
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	04/01/2011 06:08 René Hjortskov Nielsen <rene@hjo "daniel="" <d.s@daniel.sha="" and="" corrupt="" malformed="" re:="" representation<="" shahaf"="" svnserve="" td="" text="" timestamps="" with=""><td>8</td></rene@hjo>	8
	09/01/2011 08:13 『ያዚብ』 <zhang.fan.work@qq.com> "users" <users@subversion.apach '="" bc="" failed="" isvn="" on="" report="" request="" svn="" svn:="" td="" xxxxx<=""><td>13</td></users@subversion.apach></zhang.fan.work@qq.com>	13
	07/12/2011 09:13 Péter SZABADY <peter.szabady "users@subversion.apache.org"="" <="" error<="" merge="" td=""><td>19</td></peter.szabady>	19
	16/08/2016 14:54 <webster.brent@rogers.com> Subversion Users <users@subvers 'svn="" a="" after="" copy="" mixed="" my="" remains="" revision="" td="" update'<="" working=""><td>18</td></users@subvers></webster.brent@rogers.com>	18
	16/08/2016 23:49 Ryan Schmidt <subversion-2016@ 'svn="" a="" after="" copy="" mixed="" my="" re:="" remains="" revision="" td="" update'<="" webster.brent@rogers.com="" working=""><td>7</td></subversion-2016@>	7
-	18/08/2016 14:33 <webster.brent@rogers.com> Ryan Schmidt <subversion-2016@ 'svn="" a="" after="" copy="" mixed="" my="" re:="" remains="" revision="" td="" update'<="" working=""><td>21</td></subversion-2016@></webster.brent@rogers.com>	21
	18/08/2016 14:55 Johan Corveleyn <td>10</td>	10
	04/10/2016 15:23 "Rainer Senn" <rainer.senn@senn <users@subversion.apache.org=""> TortoiseSVN RepoBrowser: Feature request for Search function</rainer.senn@senn>	7
	05/10/2016 05:03 Torsten Krah <krah.tm@gmail.com> users@subversion.apache.org Re: TortoiseSVN Repo8rowser: Feature request for Search function</krah.tm@gmail.com>	7
linux-2001-07.eml	05/10/2016 06:35 Daniel Shahaf < danielsh @apache Rainer Senn < rainer.senn @senn s Re: TortoiseSVN Repo8rowser: Feature request for Search function	5
linux-2002-02.eml	06/10/2016 03:42 Johan Corveleyn <td>7</td>	7
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	07/02/2018 08:06 Nico Kadel-Garcia <nkadel@gmail <brane@apache.org="" branko="" čibej=""> Re: svn diff non-temporary files option</nkadel@gmail>	6
	10/02/2018 02:59 Thorsten Schöning «tschoening@a users@subversion.apache.org Does svn client binary honors LANG env variable on Windows?	6
	19/02/2018 08:40 Ignacio González (Eliop) <igtorqu <users@subversion.apache="" cheap="" moves<="" not="" so="" td="" users=""><td>8</td></igtorqu>	8
	Subject: svn: REPORT request failed on '/svn/lsvn/bc/xxxxx'	
e Edit View Help	Date: 99/01/2011 08:13 From: "光川 べたhangfan.work@gg.com> To: "users" <users@subversion.apache.org></users@subversion.apache.org>	
	Hi , all. Here is my problem:	
	When I run svn log on my repository which version is 1.6.x with Apache 2.2 on Windows 2003 have suddenly begun getting an err windows:	or message in their log
	Error REPORT request failed on '/[path_to_repo]/!svn/bc/21008' 200 0K (http://[server_name])	
	Then I checked the log of apache,get like this:	
>	192.168.0.3 [09/Jan/2011-22:00:28 +08001 [0PTIONS /svn HTTP/1.1] 401.401	
	Mail Retrieval Complete Mail 3 c	-4.17

Use +/- icon on the toolbar to expand/collapse the list of archive file under all folders.

To remove folder from the list:

1. Left click on the folder to select the folder and then

2. Right click on the folder and select Delete Folder menu option

List of the selected folders will persist across multiple runs.

## 9.5 Support for Hierarchy of Folders

MBox Viewer can automatically open mail files residing under the root folder and all sub-folders. Using this capability, user can more easily view emails exported by Thunderbird or similar email clients.

User can select one of two options to leverage this feature.

- 1. Select "File  $\rightarrow$  Select folder as root folder ..." option. MBox Viewer will traverse root folder and all sub-folders and recreate folder hierarchy under the Mail Tree.
- 2. Select "File → Select root folder for merging …" option. MBox Viewer will traverse root folder and all sub-folders, merge all discovered mbox files and recreate folder structure as Gmail style labels. Duplicate email will be removed.

Option 2, that is merging, allows searching across all discovered mail archives while option1 allows searching within each folder only.

Screen snapshot illustrates both cases when applied to the same Thunderbird folder.

<b>≩ ≎ ? +  ⊷ </b>	All Mails     O Fou	ound Mails	OUser Selected	Mails Hel		
MailAccounts MailAccounts Sent NIBOX Project.sbd Sub-project-1.sbd Sub-project-2.sbd Project.sbd Project.sbd Sub-project-1.sbd Sub-project-2.sbd Sub-project-2.sbd Sub-project-2.sbd Sub-project-2.sbd Sub-project-2.sbd Sub-project-2.sbd	1         date (0.ccal) ↓         from           17/231/2015 13:500         dww           01/04/2011 06:08         Ren           01/04/2011 06:03         Ren           01/05/2011 06:03         Ren           02/07/2011 06:03         Pete           08/16/2015 14:54         web           08/16/2015 14:53         web           08/16/2016 14:33         web           08/18/2016 14:53         Ran           10/04/2011 06:55         John           10/05/2016 06:55         John           00/05/2016 06:55         John           00/05/2016 06:55         John           00/05/2015 08:50         Min           00/05/2015 08:50         Min           02/07/2018 08:06         Nic           02/19/2018 08:04         Igne           02/19/2018 08:40         Igne	reh Färftit u ne Hjortskov N U ter SZABADY u bster.brent S an Schmidt w bster.brent R an Corveleyn U nar Corveleyn U nar Schwidt and C niel Shahaf R ana Corveleyn U niel Shahaf a accent Lefevre u o Kadel-Garcia B	users @subversio Subversion Users Subversion Users Subversion Users Van Schmidt Van Schmidt vebster.brent users Lainer Senn Daniel Shahaf announce users Aranko Čibej users	subject newble subversion aut Re: swinserve with corr swin REPORT request 1 merge error My mixed revision work Re: My mixed revision Re: My mixed revision Re: My mixed revision Re: TortoiseSVN RepoR Re: TortoiseSVN RepoR Re: TortoiseSVN RepoR (ANNOUNCE] Apache : Re: Error ElooU16 * Re: swi diff non-tempc Does swi client binary Not so cheap moves	Subject: (/0) newbie subversion questions From: (UTF-8/65001) shirish RRN <shirishag75@gmail.com> To: (/0) users@subversion.apache.org Date: (Windows-1252/1252) 12/31/2010 13:00 Hi all, This is going to be a long post and actually a repost of what I asked in Debian forum few days ago. http://forums.debian.net/viewtopic.php?f=10&amp;t=58799 but got no answer. This is from svn version 1.6.12. <quote> Hi all, I am no programmer, just a user who sometimes downloads svn snapshots or trunk builds and compiles them. My subversion skills are hence extremely poor and hence need the forum expertise to know. Few questions below :- a. Is there a way in subversion when you are downloading some new project progress as in megabytes downloaded etc. An except so it will make clear what I am asking :- \$ svn co https://pagesofadventur.svn.sourceforge.net/svnroot/pagesofadventur pagesofadventur/trunk.COMPILING A pagesofadventur/trunk/COMPILING A pagesofadventur/trunk/CINFELING A pagesofadventur/trunk/LICENSE A pagesofadventur/trunk/lib/libopenal64.so</quote></shirishag75@gmail.com>	

#### 9.5.1 Select Root Folder for Merging Configuration Dialog

The following dialog is presented to users upon selection of the "Select root folder for merging.." option. In addition to support for folder hierarchy and Gmail style labels, other useful options for merging mbox or eml files are supported.

Merge Root Folder and Sub-folders Configuration	×
This dialog enables users to configure root data folder and sub-folders for merging mbox files exported from the same mail account.	
When merging thousands of mail files, typically eml files, make sure to select an option to assign the same label to all files within containing folder (or assign no label). Folder name will be assigned as the label name. By default, MBox Viewer creates a separate label per each mail file. This would create thousands of labels under the Mail Tree and make mail viewing unmanageable.	
O Merge Root Folder    Merge Root Folder and Subfolders	
O Assign no Labels	
Assign a label per each MBOX file	
O Assign same label to all MBOX files per containing folder	
OK Cancel	

#### 9.6 Data Folder Configuration

MBox Viewer will generate files and save them in the user selected data folder when executing some of the options such as "Print To...", Export All Mails as Eml ..", etc.

User can select data folder by selecting "File-->Data Folder Config" dialog.

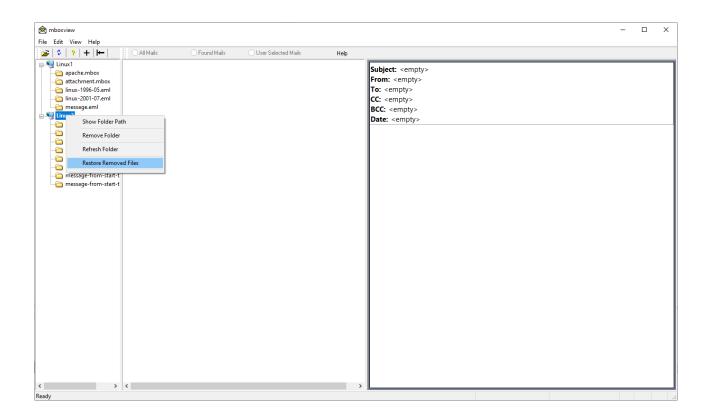
Data I	Fold	er Configuration	×						
	MB	s dialog enables users to configure root data folder. MBox Viewer will create oxViewer folder under the configured root data folder for all files generated by MBox wer such as mails exported in PDF format.							
	O Default. Per folder containing mbox files if writeable otherwise Standard Windows Created Application Folder								
	0	Standard Windows Created Application Folder							
		C:\Users\tata\AppData\Local\							
	Select Data Folder								
	F:\DataFolder2\								
		OK Cancel							

# 9.7 Hiding and Restoring Mbox Files in Mail Archive Tree Window

User can hide some mbox files temporarily if he is not actively working with these files and restore hidden files later when needed. To hide an mbox file, right click on a file and select "Remove File" option.

🙊 mboxvi	ew						-	$\times$
File Edit	View Help							
🗃   💲	?   +   ₩	All Mails	◯ Found Mails	🔿 User Se	lected Mails Hel	p		
🗐 🔩 Linu	×1	! date (Local) ↑	from	to	subject	sizt ^	Subject: Re: Help me.	 _
	pache.mbox	30/06/2001 09:57	Pavel Machek	James Simmons	Re: [ANNOUNCE] Secondary.	3		
	ttachment.mbox	02/07/2001 08:47		Ralph Metzler	Re: Help me.	5	From: 강신규 <cosmos@astonlinux.com></cosmos@astonlinux.com>	
🛅 li	inux-1996-05.eml		Maciej W. Rozycki	Harald Koerfgen	linux 2.4.5: A DECstation H	5	To: Ralph Metzler <rjkm@convergence.de></rjkm@convergence.de>	
🛅 li	inux-2001-07.eml	02/07/2001 11:05	Ralf Baechle	Maciej W. Rozycki	Re: linux 2.4.5: A DECstati	2	CC: linux-mips@fnet.fr, linux-mips@oss.sgi.com	
	nessage.eml	03/07/2001 06:05	Ralf Baechle	Raghav P	Re: Are page tables alloca	3	Date: 02/07/2001 08:47	
ား🧐 Linw		03/07/2001 17:48	Steven Liu	linux-mips	sti() does not work.	2		 -
	pache.mbox	04/07/2001 05:23		linux-mips	Re: sti() does not work.	3		
	ttachment3.mbox		Gleb O. Raiko	Thiemo Seufer	Re: sti() does not work.	3		
	nline_attachment.e			Thiemo Seufer	Re: sti() does not work.	3		
	inux-1996-05.eml	04/07/2001 08:29		Steven Liu	Re: sti() does not work.	3	Ralph Metzler wrote:	
	inux-2001-07.			linux-mips	Kernel panic: Attempted to ki.	.4	Kalph Metzler wrote.	
	inux-2002-02.er	Print To	>	linux-mips kilin	RTLinux for Mips Re: Kernel panic: Attempted t	-		
	nessage-from-:	Sort By	>	linux-mips@oss	OSS CVS Tree and 2.5.x	2	> Hi,	
i) 🛅 n	nessage-from-:			Ralf Baechle	linux 2.4.5: sysmips(MIPS	-	>	
		Open File Location	ki	Ralf Baechle	Re: sti() does not work.	3	> =?FUC-KR?B?sK29xbHU?= writes:	
		Properties		kilin	RE: Kernel panic: Attempted t		> > I am trying to port a linux 2.4 to R3000 based system (LSI LOGIC	
		Properties		Maciej W. Rozycki	Re: linux 2.4.5: sysmips(M	3		
		Export All Mail Attachr	ments ski	Florian Lohoff	Re: linux 2.4.5: sysmips(M	3	> > SC2000).	
				Maciej W. Rozycki	Re: linux 2.4.5: sysmips(M	3	> > SC2000 have caches. one is Two-way set associative or direct mapped	
		Export All Mails as Eml		Jun Sun	Re: linux 2.4.5: sysmips(M		> > Instruction cache (16K) and another is Direct-mapped data cache(8K).	
		Refresh Index File		vhouten	Illegal instruction	2	>	
	_				Re: Illegal instruction	3	> I also spent one or two weeks with Linux on an SC2000 a while ago	
		Remove File	zki		. Re: Illegal instruction	2		
	_	06/07/2001 13:14	her Con	Shaolin Zhang	Re: Illegal instruction Re: RTLinux for Mips	2	> but had to stop due to other more important projects. I also ran	
		06/07/2001 13:14		kilin	Re: Kernel panic: Attempted t		> into problems with the caching. Without caching I got it to boot	
		06/07/2001 13:48		Shaolin Zhang	Re: RTLinux for Mips	2	> via NFS. Anyway, at least one mistake is in this part:	
		06/07/2001 17:04			Re: Illegal instruction	12	>	
		07/07/2001 07:31		Ashu Joshi	Re: Kernel Version Question	3	> >lsi-cache.S	
		07/07/2001 11:37	Steven J. Hill	linux-mips	Documentation on MIPS kern.	. 2	S S	
		07/07/2001 13:51	Keith M Wesolowski	Steven J. Hill	Re: Documentation on MIPS .	2		
		07/07/2001 14:23		sjhill	Re: Documentation on MIPS .		> > /* void flush_icache(void) */	
		07/07/2001 18:47		linux-mips	Can mipsel linux support m		> > LEAF(flush_icache)	
		08/07/2001 13:32		Pavel Machek	Re: [ANNOUNCE] Secondary.		> > .set noreorder	
		09/07/200107:02		James Simmons	Re: [ANNOUNCE] Secondary.			
			Carsten Langgaard		Re: Illegal instruction	14		
		10/07/2001 10:57	Raif Baechie	Barry Wu	Re: Can mipsel linux suppo	2 ~	> > la a3, icache_size # 8Kbyte	
[		> <				>	> > lw t4. 0(a3)	 -
eady							Mail Retrieval Complete Mail 2 of 383	

To restore hidden windows, left click on the folder to select the folder and then right click on a folder and select "Restore Removed Folders" option.



Check files to restore in "Select Files to Restore" dialog.

File Edit View Help  File Edit View Help  Subject: <empty> From: <empty> From: <empty> From: <empty> CC: <empty> BCC: <empty> BCC: <empty> BCC: <empty> Date: <empty> Date</empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty>
Inux1       Subject: <empty>         → apachembox       From: <empty>         → apachembox       From: <empty>         → inux-1990-05.eml       CC: <empty>         → inux-2001-07.eml       BCC: <empty>         → attachment.mbox       BCC: <empty>         → attachment.mbox       Date: <empty>         → ining-attachment.mbox       Date: <empty></empty></empty></empty></empty></empty></empty></empty></empty>
Image: Subject: <empty>       Image: Subject: <empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty></empty>
Inux-2002-02.ent     message-from-start:     Select Files to Restore X     Inux-2001-07.emi     OK Cance

#### 9.8 Hiding of Mail Archive Tree Window

User can hide Mail Archive Tree Window to make larger Mail Summary and Mail Message Windows. Select button  $|\leftarrow \text{ or } \rightarrow|$  to hide/unhide the Tree Window. Tree Window can be hidden only

when one of the mbox mail files is selected.

🙊 mboxview			-		×
File Edit View Help					
🚔   \$   <b>?</b>   +   🛏	All Mails     O Found Mails     User Selected	Mails Help			
Linux1     Japache.mbox     attachment.mbox	date (Local) ↑ from to 31/12/2010 13:00 shirish যিरीष <shirishag75@gmail td="" users@<=""><td>psubversion.apache.org nev</td><td>bject vbie subversion questions</td><td>7</td><td>ze(KB) ′</td></shirishag75@gmail>	psubversion.apache.org nev	bject vbie subversion questions	7	ze(KB) ′
inux-1996-05.eml			: svnserve with corrupt timestamps and malformed text representation 1: REPORT request failed on '/svn/lsvn/bc/xxxxx'	8	
🔄 linux-2001-07.eml		@subversion.apach svn		13	_
			mixed revision working copy remains after a 'svn update'	18	
🗄 🔩 Linux2	16/08/2016 23:49 Ryan Schmidt <subversion-2016@ td="" webste<=""><td>er.brent@rogers.com Re:</td><td>: My mixed revision working copy remains after a 'svn update'</td><td>7</td><td></td></subversion-2016@>	er.brent@rogers.com Re:	: My mixed revision working copy remains after a 'svn update'	7	
apache.mbox			: My mixed revision working copy remains after a 'svn update'	21	
attachment3.mbox			: My mixed revision working copy remains after a 'svn update'	10	4
inline_attachment.em	04/10/2016 15:23 "Rainer Senn" <rainer.senn@senn <users<="" td=""><td></td><td>toiseSVN RepoBrowser: Feature request for Search function</td><td>7</td><td></td></rainer.senn@senn>		toiseSVN RepoBrowser: Feature request for Search function	7	
🗀 linux-1996-05.eml			: TortoiseSVN RepoBrowser: Feature request for Search function : TortoiseSVN RepoBrowser: Feature request for Search function	7	
			: TortoiseSVN RepoBrowser: Heature request for Search function : TortoiseSVN RepoBrowser: Feature request for Search function	5	
	26/07/2017 12:15 Daniel Shahaf <danielsh@apache announ<="" td=""><td></td><td>(NOUNCE] Apache Subversion 1, 10.0-alpha3 released</td><td>7</td><td></td></danielsh@apache>		(NOUNCE] Apache Subversion 1, 10.0-alpha3 released	7	
message-from-start-t	31/10/2017 19:06 Vincent Lefevre <vincent-svn@vin td="" users@<=""><td></td><td>Error E 160016 " is not a directory in filesystem"</td><td>4</td><td></td></vincent-svn@vin>		Error E 160016 " is not a directory in filesystem"	4	
message-from-start-t	07/02/2018 08:06 Nico Kadel-Garcia <nkadel@gmail branko<="" td=""><td>Čibej  brane@apache.org&gt; Re:</td><td>: svn diff non-temporary files option</td><td>6</td><td></td></nkadel@gmail>	Čibej brane@apache.org> Re:	: svn diff non-temporary files option	6	
					>
				_	_
	Subject: svn: REPORT request failed on '/svn/!svn/bc	c/xxxxxx'			
	Date: 09/01/2011 08:13 From: "张凡" <zhang.fan.work@qq.cor< td=""><td>m&gt; To: "users" <users@subv< td=""><td>version.apache.org&gt;</td><td></td><td></td></users@subv<></td></zhang.fan.work@qq.cor<>	m> To: "users" <users@subv< td=""><td>version.apache.org&gt;</td><td></td><td></td></users@subv<>	version.apache.org>		
	Hi , all. Here is my problem:				î
	When I run svn log on my repository which v windows:	version is 1.6.x with	Apache 2.2 on Windows 2003 have suddenly begun getting an error message in th	eir log	5
	Error REPORT request failed on '/[path_to_repo]/!sv	vn/bc/21008' 200 OK (http:/	//[server_name])		
	Then I checked the log of apache,get like this:	:			
<	192.168.0.3 - [09/Jan/2011:22:00:28 +0600] "OPTIC 192.168.0.3 - #f [09/Jan/2011:22:00:28 +0600] "PDT 192.168.0.3 - #f [09/Jan/2011:22:00:28 +0600] "PROF 192.168.0.3 - #f [09/Jan/2011:22:00:28 +0600] "PROF 192.168.0.3 - #f [09/Jan/2011:22:00:28 +0600] "PROF	IONS /svn HTTP/1.1" 200 18: PFIND /svn HTTP/1.1" 207 6: PFIND /svn/!svn/vcc/defaul PFIND /svn/!svn/bln/21008 1	3 5 HTTP/1.1° 207 392 HTTP/1.1° 207 451		~
Ready			Mail Retrieval Complete Mail 3 of 17		

#### 9.9 Message Window Position

Message Window position can be set to Bottom, Right or Left via View  $\rightarrow$  Message Window option. After setting new position, mbox viewer needs to be restarted for the change to take effect.

When position is set to Right or Left, the mail address format will change to show mail name only or mail address if the name is missing.

By default Message Window position is set to Bottom.

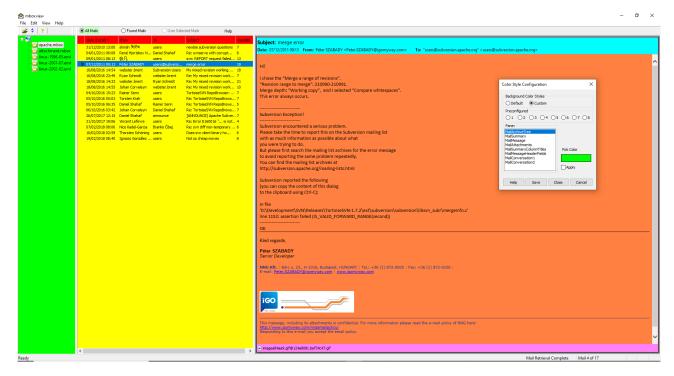
mboxview						
e Edit View Help						
≩ \$   <u>?</u>	All Mails	◯ Found Mails	🔿 User Selec	cted Mails Help		
Mais apachembox attachment.mbox inux-1996-05.eml inux-2001-07.eml inux-2002-02.eml	I         date (local) †           3/1/2/2010 13:00         0/40/2/2010 13:00           0/40/2/2010 2010 30:00         0/40/2/2010 2010 30:00           0         0/7/2/2011 09:13           0         0/7/2/2011 09:13           0         0/7/2/2010 109:13           18/08/2016 14:31         18/08/2016 14:53           0         0/10/2016 00:33           0         0/10/2016 00:33           0         0/10/2016 00:33           0         0/10/2016 00:33           0         0/10/2016 00:35           0         0/10/2016 00:35           0         0/10/2016 00:35           0         0/10/2016 00:35           0         0/10/2016 00:35           0         0/10/2016 00:35           0         0/10/2016 00:35           0         0/10/2016 00:35           0         0/10/2016 00:35           0         0/10/2016 00:35           0         0/10/2016 00:35           0         0/10/2016 00:35           0         0/10/2016 00:35           0         0/10/2016 00:35           0         0/10/2016 00:35           0         0/10/2016 00:35           0         0/10/2016 00:35	René Hjortskov N §K/R. Peter SZABADY webster.brent Johan Corveleyn Rainer Senn Torsten Krah Daniel Shahaf Johan Corveleyn Daniel Shahaf Wincent Lefevre Nico Kadel-Garcia Thorsten Scheinig	users Subversion Users Subversion Users webster brent Ryan Schmidt webster brent users users Rainer Senn Daniel Shahaf announce users Branko Čibej users	subject newbie subversion questions ret: pursaer with corrupt ym:REPORT request failed merge error Re: My model revision work Re: My midel revision work Re: My midel revision work Re: My midel revision work Re: TortbieSIN RepoRrower: Re: TortbieSIN RepoRrower: Not so cheap moves	8 13 19 18 7 21 10 0 .7 .7 .7 .7 .7 .4 .6	<pre>Subject: My mixed revision working copy remains after a 'svn update' Date: 16/08/2016 14:54 From: <webster.brent@rogers.com> To: Subversion Users <uses@subversion.t 'svn="" [linux]="" after="" attempts="" copy="" final="" here's="" mixed="" multiple="" my="" output:="" remains="" revision="" status="" the="" update'.="" with="" working="">&gt; svn st -u     x</uses@subversion.t></webster.brent@rogers.com></pre>

# 9.10 Preservation of Windows Placement

Mbox Viewer will save the windows placement upon exit and restore upon next run.

# 9.11 Background Color Style Customization

By default the background color of all display panes is set to the white color. Select the "File  $\rightarrow$  Color Style Config" menu option to customize colors of display panes. Left click on the Custom button to start customization. The screen similar to the below will be created.



Color Style Configuration dialog allows users to replace the white background of the 8 panes listed on the dialog box with the predefined colors or custom colors defined by users.

The dialog offers eight predefined color styles users can evaluate before attempting to configure the custom color style. It is helpful to open one of the mails with attachments to help to evaluate predefined and custom color styles.

Select "Custom" radio button to start configuration of the custom color style.

Configure the same or different color for each pane (MailArchiveTree, etc).

Select one of the panes and left click on the "Pick Color" button to start the "Color Selection Dialog".

8   7	All Mails	O Found Mails	🔿 User Sele	cted Mails	Help		
	1 date (Local) †	from	to	subject	size(KB)	Subject: merge error	
apache.mbox	31/12/2010 13:00	shirish थिरीष	users	newble subversion	questions 7	Date: 07/12/2011 09:13 From: Péter SZABADY < Peter.SZABADY@igomyway.com To: "users@subversion.apache.org" < user	a Barthannia an abh ann
attachment.mbox	04/01/2011 06:08		. Daniel Shahaf	Re: synserve with		Date: 07/12/2011 09:15 From: Peter 32AbAUT KPeter 32AbAUT wigomyway.com/ To: Users@subversion.apache.org Kuser	swsubversion.apache.org×
linux-1996-05.eml	09/01/2011 08:13		users	svn: REPORT requ			
linux-2001-07.emi	<b>07/12/2011 09:13</b>		users@subversi		19	HI	
j milak-2002-02/emil	16/08/2016 14:54 16/08/2016 23:49		Subversion Users webster.brent	My mixed revision ( Re: My mixed revision)			
	18/08/2016 14:33		Ryan Schmidt	Re: My mixed revis		I chose the "Merge a range of revisions".	
	18/08/2016 14:55		webster.brent	Re: My mixed revis		"Revision range to merge": 210990-210991.	Color Style Configuration X
	04/10/2016 15:23		users	TortoiseSVN Repot	rowser: 7	Merge depth: "Working copy", and I selected "Compare whitespaces".	
	05/10/2016 05:03	Torsten Krah	users	Re: TortoiseSVN R	poBrows 7	This error always occurs.	Background Color Styles
	05/10/2016 06:35		Rainer Senn	Re: TortoiseSVN R			O Default   Custom
	06/10/2016 03:42			Re: TortoiseSVN R		Colorestan December 1	Preconfigured
	26/07/2017 12:15		announce	[ANNOUNCE] Apac		Subversion Exception!	
	31/10/2017 19:06 07/02/2018 08:06		users Praeko Čibai	Re: Error E160016 Re: syn diff non-te		Subversion encountered a serious problem.	Pane:
	10/02/2018 08:06			Does syn diff non-te		Please take the time to report this on the Subversion mailing list	MalArchiveTree
	19/02/2018 08:40			Not so cheap move		with as much information as possible about what	MailSummary
						you were trying to do.	MailMessage MailAttachments
						But please first search the mailing list archives for the error message	MaiSummaryColumnTitles Pick Color
						to avoid reporting the same problem repeatedly.	MailMessageHeaderFields MailConversation 1
						You can find the mailing list archives at	MailConversation2
						http://subversion.apache.org/mailing-lists.html	Apply
						Subversion reported the following	Help Save Close Cancel
						(you can copy the content of this dialog	
						to the clipboard using Ctrl-C):	
							Color
						Infile	Basic colors:
						D:\Development\SVN\Releases\TortoiseSVN-1.7.2\ext\subversion\subversion\libsvn_subr\mergeinfo.c'	
						line 1152: assertion failed (IS_VALID_FORWARD_RANGE(second))	
						OK	
						<u>UK</u>	
						Kind regards,	
						tana regulas,	
						Péter SZABADY	
						Senior Developer	
						NNG Kft.   Bérc u. 23., H-1016. Budapest, HUNGARY   Tel.: +36 (1) 872-0000   Fax: +36 (1) 872-0100	Custom colors:
						NNG KR.   Berc u. 23., H-1016, Budapest, HOWGARY   Tel.: +36 (1) 872-0000   Fax: +36 (1) 872-0100   E-mail: Peter.SZABADY@igomyway.com   www.igomyway.com	
							Hue: 90 Red: 34
							Sat: 175 Green: 22
							Define Custom Colors >> Color/Solid Lum: 120 Blue: 81
							OK Cancel Add to Custom Colors
						• 10 - 00	
						This message, including its attachments is confidential. For more information please read the e-mail policy of NWG here:	
						http://www.igom/wav.com/nngemallpolicy/	
						Responding to this e-mail you accept the email policy.	

The "Pick Color" button will initially be populated with the color associated with the selected pane.

The top raw of the Custom Colors area will initially be populated with the colors associated with each pane.

You can change the color in four different areas. The top left section displays a list of 48 predefined colors.

If the desired color is not in that section, you can click on the crosshair and drag the mouse in the multi-colored palette.

You can also drag the right bar that displays a range based on the color of the palette.

For more precision, you can type the Red, Green and Blue values in the custom color editor area. Each uses an integral value that ranges from 1 to 255.

Once you are happy with the custom color, left click on the OK button in

the "Color Selection Dialog". The "Color Selection Dialog" will be closed and control will return to the "Color Style Configuration" dialog.

The "Pick Color" button will be painted with the created custom color. Left click on the "Apply" button to apply the new color to the selected pane. Left click on the "Apply" button again to cancel the change.

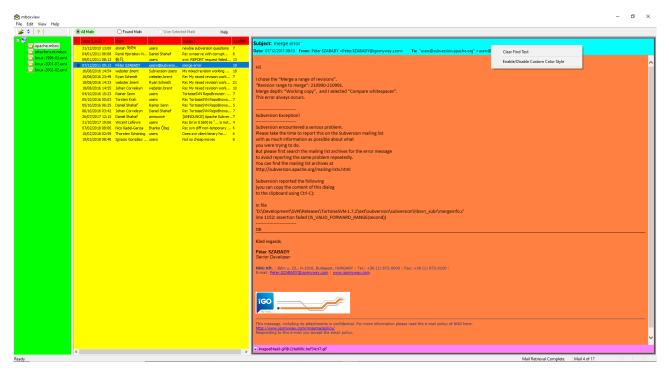
Left click on the Save button to save the change in order for the change to persist after the mbox viewer shutdown. Or, customize colors of all panes first and then left click on the Save button to save all changes.

Left click on the Cancel button to discard all changes made since the last Save or startup.

Left click on the Close button or standard Windows Close button to hide the "Color Selection Dialog". Changes made so far are not discarded.

To reopen, select File -> Color Style Config menu option.

**NOTE** that the saved color style will be applied to all mails. You can temporarily disable custom color style for the active mail by right click on the mail header in the mail message window and selecting Enable/Disable Custom Color Style menu option.



## 9.12 Support for Gmail Labels

User can perform a separate step to recreate Gmail Labels on Gmail mbox mail archives. Gmail Label information is included in every email downloaded from Gmail. To recreate labels, user needs to right click on an active Gmail mail archive in Tree Pane and select "Gmail Labels  $\rightarrow$  Create" option. This will create folders as in example below. Left click on the folder icon to view all mails within the label.

🗄 📲 Mail	
🖃 🚞 All mail Including Spam and Trash.mbox	
Inbox	
Sent	
Archived	
🗈 🕒 Category	
Drafts	
Important	
Opened	
🕢 🕒 Osobiste	

Select the folder icon to view all mails again. Button "All Mails and 'Found Mails" are scoped to

the label when a label is selected. Content of "User Selected Mails" is shared across all labels of the active folder and the folder.

#### 9.12.1 Limitations

Current implementation has some limitation which will be addressed in the future releases.

Only ANSI characters are supported in Gmail Labels. Also, the displayed labels names may differ from received from Gmail if they contain one or more of the following characters:  $? <> :* | \setminus \%$ . The listed characters will be replaced with the underscore character and the unique number will be appear at the end the label name.

If you decide to hide/remove the folder from the Tree Pane Via "Remove File" option and later restore via "Restore Removed Files" option, Gmail labels will not be automatically restored until you restart the Mbox Viewer and recreate the labels. The same applies when you remove and then restore a folder.

MBox Viewer startup time might be affected by very large number of labels.

# 9.13 Expand Message Header Field List

When message window position is configured at the bottom, the message header list doesn't show CC and BCC message header fields. This can be changed via "View –> Message Header Pane Layout –>Expanded" option.

#### 9.14 Viewing raw message header

The raw message headers can be viewed in the message window by setting "View  $\rightarrow$  View Raw Message Headers" option. This is the global change and it needs to be disabled to view messages content again. The raw message header can be viewed by doing the right click on the message header pane and setting "View Raw Header" option. The setting doesn't persists when new mail is selected.

## 9.15 HTML/PDF Mail Header Customization

The HTML/PDF Header Configuration dialog allows users to select mail header fields for output and to configure fonts for the field name and field text. User can also configure to output the list of all attachments. The customization dialog is selected via "File" --> "Print Config" --> "HTML/PDF Header Configuration" button.

There are two options to configure fonts: Default and Custom.

The Default option allows to configure:

- 1. the font size which be applied to both the field name and text.
- 2. the bold font style which will be applied to the field names only.

The Custom option allows to configure:

- 1. the same or different font for the header field names and text.
- 2. the font dialog allows to configure the font name, style and size.
- 3. the generic family font in addition to the primary font configured via the font dialog.

The following links contain helpful information on HTML fonts.

<u>HTML Fonts</u> Fonts and Formatting

\$   <b>?</b>   +   <del>  +</del>	All Mails	○ Found Mails	<ul> <li>User Select</li> </ul>	ted Mails	Print Configuration >	
Linux1	! date (Local) ↑	from	to	subject	File Name Configuration	stions
apache.mbox	31/12/2010 13:00		users	newbie	Compose File Name Template From	शिरीष <shirishaq75@gmail.com> To: users@subversion.apache.org</shirishaq75@gmail.com>
attachment.mbox		René Hjortskov N	. Daniel Shahaf	Re: svn	Date Time From To Subject Unique Id	To: users@subversion.apache.org
Contraction 1996-05.eml	09/01/2011 08:13		users	svn: RE		
inux-2001-07.eml	07/12/2011 09:13		users@subversi	merge e	Max file path length supported by Windows is 260 characters	
inux-2002-02.emi	16/08/2016 14:54		Subversion Users	My mixe	Wanted Max File Name Length 260	nd actually a repost of what I asked
	16/08/2016 23:49		webster.brent	Re: My	Adjusted May Edu Name Langth 209	
	18/08/2016 14:33		Ryan Schmidt webster.brent	Re: My	Adjusted Max File Name Length 209	pic.php?f=10&t=58799 but got no answer.
	18/08/2016 14:55 04/10/2016 15:23		webster.brent users	Re: My		
	05/10/2016 05:03		users	HTML/PI	F Mail Header Configuration	×
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	06/10/2016 03:42		Daniel Shahaf		BJECT	
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	10/02/2018 02:59	Thorsten Schöning	users		ATE Pick Font	m expertise to know. Few
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#### 9.16 Single Mail Context Menu

Right Click on a selected mail in the Summary Window to open the context menu as shown below.

The "Print to" context menu allows to print the selected mail to Text, HTML or PDF file or to send to the user selected PDF printer.

The "Open in Browser" menu option will open the selected mail in the external default Web Browser.

The "Find Text" option allows to find user specified text and highlight all occurrences in the Message window.

The "Find Advanced" options will start the advanced search dialog and pre-populate From, To and Subject fields from the mail.

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Date: (Windows-1252/1252) 05/11/2017 22:42       From: (/0) americanairlines@aa.com       To: (/0)       Find Advanced       p1)         American Airlines       Image: Comparison of Comparison o		Date: (Windows-1252/1252) 05/11/2017/2242       From: (vi) americanaritines@ea.com       To: (v)       American Airlines       Image: Comparison of the airport. This is not a valid mobile boarding pass.         Reservations:       Advantage Account   Fare Sales & Offers       You must print all attached boarding pass(es) before proceeding to the airport. This is not a valid mobile boarding pass.       Gate and terminal may change. Check airport monitors when you arrive or visit flight status         Thank you for choosing American Airlines.       Image: Check airport monitors when you arrive or visit flight status         Image: or ensure or ensure of ensure       American Airlines         Image: or ensure or ensure of ensure       Image: Check airport monitors when you arrive or visit flight status         Image: or ensure or ensure of ensure       Image: Only a comparison of ensure or ensure status         Image: Only a comparison of ensure or ensure status       Image: Only a comparison of ensure or ensure status         Image: Only a comparison of ensure or ensure status       Image: Only a comparison of ensure or ensure status         Image: Only a comparison of ensure or ensure status       Image: Only a comparison of ensure or ensure status         Image: Only a comparison of ensure or ensure status       Image: Only a comparison of ensure or ensure status         Image: Only a comparison of ensure or ensure status       Image: Only a comparison of ensure or ensure status	

#### 9.16.1 File Names

User can configure file name pattern/template to apply when printing single mail by selecting File - > Print Config dialog. Pattern is composed from Date, Time, From, To, Subject and Unique Id fields. Only alpha numeric characters are selected from the Subject, other characters will be replaced with the underscore.

Files will be saved in the FolderHousingMailArchives/PrintCache/MailArchiveName folder, where MailArchiveName denotes the archive file name without the .mbox extension.

User must enter the target file name manually when printing to PDF printer, i.e. when selecting Print to  $\rightarrow$  Printer mail option or when printing mail to pdf file from the browser.

Print Config dialog allows users to configure the maximum length of created file name. The maximum file path length supported by Windows is 260 characters for non Unicode applications. Therefore the file name will be limited to (260 – length of FolderHousingMailArchives/PrintCache/ MailArchiveName/MailFileName) path. User can set wanted file name length limit and the mbox viewer will adjust the configured length if needed.

# 9.17 Multiple Selected Mails Context Menu

Multiple mails can be selected using Windows standard method, i.e. Left click followed by Shift+LeftClick or CTRL+LeftClick or CTRL+A.

Right Click on a multiple selected email in the Summary Window to open the context menu as shown below.

The "Print Selected Mails to" context menu option allows to print the selected mails to single Text or HTML or CSV or PDF files or send to the user selected PDF printer. See also 9.31.7 "Mail

Printing to PDF files by Power Users" section.

The "Open Selected Mails in Browser" menu option will open the selected mails in the external default Web Browser.

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		erican Airlines Boarding Pa: 2/1252) 05/11/2017 22:42 From: (		: (/0) John.Smith@gmail.com Body:	(UTF-8/65001)		
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#### 9.17.1 File Names

User can't configure file name pattern/template to apply when printing multiple mails to a single file. The file name is automatically composed from the archive file name with appropriate extension, i.e. .txt or .htm or .csv or .pdf.

Files will be saved in the FolderHousingMailArchives/PrintCache/MailArchiveName folder, where MailArchiveName denotes the archive file name without the mbox extension.

User must enter the target file name manually when printing to PDF printer, i.e. when selecting Print Selected mails to  $\rightarrow$  Printer mail option or when printing mail to PDF file from the browser.

# 9.18 Conversation Mail Group Context Menu

All Mails must be sorted by the conversation first before context options can be processed. See 9.25 section.

Right Click on any mail within the selected conversation group in the Summary Window to open the context menu as shown in 9.16 section.

The "Print Related Mails to" context menu option allows to print the selected group of mails (conversation) to Text, HTML, CSV or PDF file or to send to the user selected PDF printer.

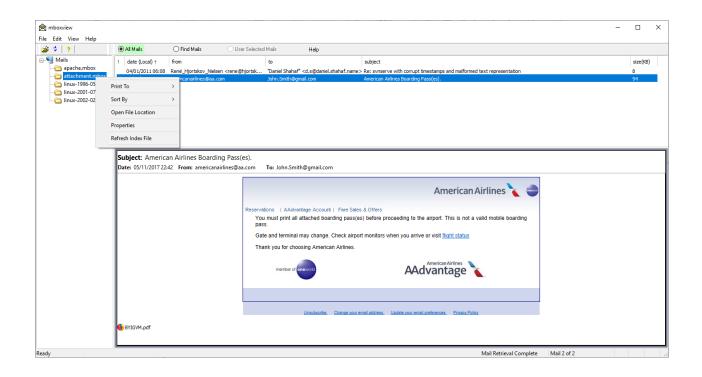
The "Open Related Mails in Browser" menu option will open the selected mail group in the external default Web Browser.

#### 9.18.1 File Names

See 9.17.1 section.

#### 9.19 Mail Archive Context menu

Right click on the active mail archive under the Mail Archive Tree Window to open the context menu as shown below.



The context menu allows to print all email to single CSV, Text , HTML and PDF files. The name of the created file will be created based on the archive file name with the .csv or .txt or .html or .pdf suffix in the FolderHousingMailArchives/PrintCache/MailArchiveName folder, where MailArchiveName denotes the archive file name without the mbox extension. NOTE that mails will be printed according to the sort order in the summary window.

Size of HTML file can be very large and opening in most of the browsers can be problematic. Microsoft Edge and Google Chrome browser seem to perform best as far as handling large HTML files.

When printing to TEXT file, HTML to Text conversion was added in 1.0.2.8 to handle mails with HTML text block and no Plain text. Conversion can be quite slow and print time could increase significantly compared to 1.0.2.7 in case the large number of conversions is required. Progress bar was added to indicate progress, possibly slow progress.

Printing to single PDF file is the most time consuming. See also 9.31.7 "Mail Printing to PDF files by Power Users" sections for larger scale printing to single PDF file.

All mails of the active archive can be sorted by date, from, to subject, size and conversations in the

Summary Window. This feature is the same as the left click on the selected column in the Summary Window.

The "Properties" option shows the archive file location, size and email count

The "Refresh Index File" option will perform fresh parse of the archive file if needed.

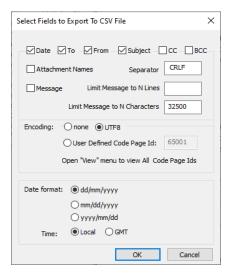
#### 9.19.1 Print to CSV File Dialog

When printing selected mail archive or selected set of mails by a user to CSV file, user can select what fields to export, the date format and one of two time zones.

Option to normalize content encoding is also available. Default encoding is set to UTF-8 and should not be changed except possibly in special cases.

The "Limit Message to N Characters" value is set by default to 32500 characters and it should not be set higher otherwise Excel and LibreOffice will complain that the character count limit per spreadsheet cell was exceeded. LibreOffice will gracefully handle the text overflow, Excel spreadsheet will get **corrupted**.

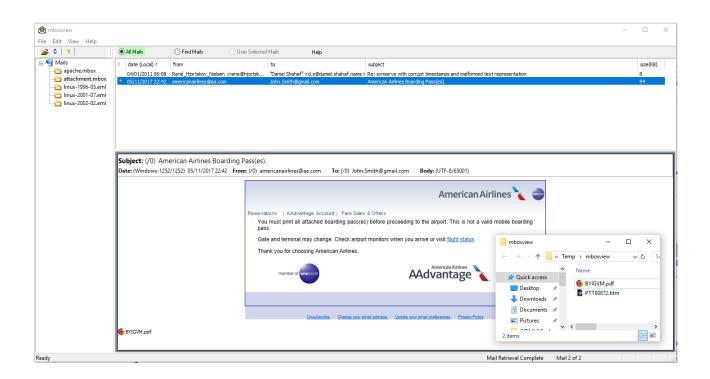
User can configure string that separates attachment names. The special CRLF string will be replaced with \r\n string in the CSV output.



# 9.20 Mail Attachments

Mail attachments are shown at the bottom of the Message window. Note that the "\*' character may appear in the first column for the associated mail to indicate presence of associated attachments. To open location of attachments, double click on the mail in the Summary window or select "View"  $\rightarrow$  "ViewEML" menu option. Temporary folder will open containing all attachments for the email. Use standard Windows applications to view attachments.

You can also double left click to view attachments. Picture attachments will be viewed in the Picture Viewer (if configured in the global Options) and other file types will be viewed by the associated default Windows applications.



#### 9.20.1 Attachment context menu

Right click on the selected attachment to open the context menu. The context menu allows to open or print the attachment by the associated default application. You can also open the folder housing the attachment. The selected attachment will be highlighted in the folder.

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#### 9.20.2 Attachments Configuration

Added "Attachment Config" dialog to configure attachment window size, content and attachment

indicator criteria. Select "File → Attachment Config" to access the dialog.

Attachments Config	×
Attachment Window Max Size in % of Message Window 25 By default attachments other than those embedde into mail message are shown in the attachment window Show All Attachments	
Mail Attachment Indicator By default the attachment indicator is set when the mail has at least one attachment marked as Attachment Type Set when any attachment present	
OK Cancel	

#### 9.20.3 Exporting All Attachments of All Mails

User can export all attachments to the AttachmentCache folder by right clicking on the active mail archive and selecting "Export All Mail Attachments" option. To avoid appendix name clashes, Mbox Viewer will prepend the following prefix to each attachment name:

YYYYMMDD-HHMMSS-IDDDDDD attachment name

where YYYY denotes the year, MM denotes the month, DD denotes day, HH denotes hour, MM denotes minues, SS denotes second of a mail abd IDDDDDD denotes unique ID assign to this email.

#### 9.21 Inline Image Cache

The mboxview will create the cache of inline images to support images embedded directly into the mail body/message. The cache with all images can be created during the initial parsing of the mail archive file or subset of images can be created later when needed. Separate cache sub-folder is created per each archive file (assuming at least one inline image was found) in the FolderHousingMailArchives/ImageCache folder. If the inline image cache is missing for any reason, try to refresh the index file by selecting "Refresh Index File" context option on the respective file archive.

## 9.22 Export of all Mails to a Separate Eml files

User can export all mails to separate Eml files via mail archive context menu. Right click on the selected mail archive and select "Export All Mails as Eml" option. Eml files will created in the FolderHousingAllMailArchives/EmlCache/SlectedMailArchiveName folder.

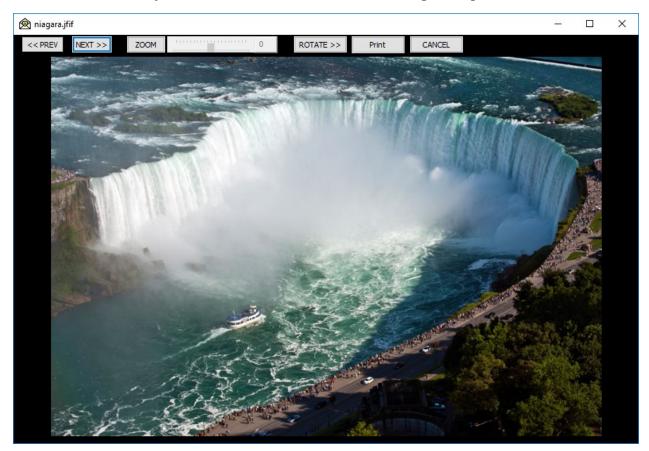
Mbox Viewer will create Eml file names as follow:

YYYYMMDD-HHMMSS-IDDDDDD name using File Name Configuration under File -> Print Config dialog.

where YYYY denotes the year, MM denotes the month, DD denotes day, HH denotes hour, MM denotes minues, SS denotes second of a mail abd IDDDDDD denotes unique ID assign to this email.

# 9.23 Picture Viewer

Double left Click on any attachment to start Picture Viewer dialog, example below.



The Picture Viewer supports files with the png, jpg, jpg, jpeg, jpeg, jpe, gif, bmp, ico, tif, tiff, jfif, emf, wmf, dib suffixes.

The NEXT and PREV controls enable user to browse all picture/image attachments associated with the selected email. You can select specific attachment to be displayed. You can later browse through all picture attachments.

The ROTATE control allow to rotate clockwise the current/visible picture.

The ZOOM control allows to zoom in/out picture. Click on ZOOM to enable/disable zooming. Slide to right to enlarge an image, slide to left to shrink. Enlarged image can be dragged using the left and scroll buttons of the mouse. Click ZOOM to disable zooming and reset the image to original size.

The PRINT control allow to print via default application.

The Picture Viewer is enabled by default but it can be disabled via  $FILE \rightarrow Options$  dialog. Setting persists in the Registry across multiple runs.

All attachments are also accessible by double clicking on the selected mail in the Summary window or by selecting "View"  $\rightarrow$  "ViewEML" menu option.

## 9.24 Mail Navigation

Click on a specific mail in the Summary window and use **UP, DOWN** keys to move to the next or previous mail respectively.

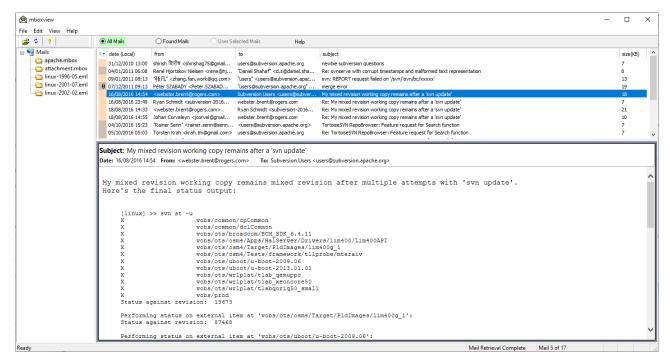
Use **HOME** key to jump to the first mail. Use **END** key to jump to the last mail.

Use the mouse wheel or vertical bar to scroll up and down mails and then select one of the mails.

# 9.25 Mail Sorting

The Summary window is divided into 6 columns: attachment indicator, date, from, to, subject and mail size. Each column can be sorted by clicking on the column title. Subsequent click on the same column title will reverse the sorting rule. By clicking on the first column title, emails are sorted by conversations and mark by different color as shown below.

Mail can also be sorted via the mail archive context menu or by selecting "File"->"Sort By" menu option.



#### 9.25.1.1 Subject Sorting Rules

Subject sorting creates subject threads, that is a group of mails (or threads) with the same subject. Emails within a thread are sorted by time.

By default the subject threads are sorted alphanumerically.

Subject threads can sorted by time by selecting "File-  $\rightarrow$  Options  $\rightarrow$  time ordered threads" option.

# 9.26 Dynamic Column Resize

Columns in the Summary windows are automatically resized when the window is resized.

However, if columns are resized manually, some of the columns may no longer be present in visible area/window.

You may need to use the scroll bar to see missing columns, otherwise maximize and then restore the window to see all columns within the Summary window again.

# 9.27 Mail Searching

Mbox viewer supports two search options, i.e. basic Find and Advanced Find.

The basic Find option allows users to specify single keyword for searching across header fields, mail text, attachment text and attachment names.

The advanced Find option allows user to specify keyword per each header field, mail text, attachment names and attachments.

#### 9.27.1 Basic Find

The basic Find option allows users to specify single keyword/string for searching across header fields, mail text and attachments.

Users can configure the search scope by selecting all or subset of the from, to, subject, message text, attachment names and attachment text options. The search succeeds if the specified keyword matches any of the checked fields.

Click the "Edit" drop menu and select "Find" option to configure and start the search. Alternatively the CTRL+F will also present the search dialog.

The search dialog box allows user to specify the search string, whether to match the whole word, whether the search is case sensitive, configure the search scope, the start and end dates to consider for filtering, the Next/Previous search direction and whether to highlight all occurrences of the matched text.

Note that the Next search start with the oldest email while the Previous search starts with the latest.

The search logic simple, i.e. mail is considered a match if the search string is found in any of the checked fields in that mail.

Find X
Find what: OK
Search scope
From To Subject Message CC BCC
Attachment Text Attachment Name
Filter dates:
To set new dates, open calendar by selecting down arrow, or
Left click on month, day or year field and type new value
start date: 10/27/2011
end date: 2/20/2019
Find all occurences Find mails that don't match
Search Direction O previous   next

To repeat the search in order to find the next matching mail, click the "Edit" drop menu and select "Find again" option, or select F3 key.

If "Find again" or F3 key is selected without prior "Find" or CTRL+F, the search dialog box will be presented to a user.

#### 9.27.1.1 Find All Occurrences Option

User can check "Find all occurrences" to find all matching mails. Automatic highlighting of all keyword occurrences is not supported in this case. Matched mails will be displayed under the Found Mails List and the corresponding button in the dialog bar will be highlighted. User can left click on All Mails button to switch mail list back to All Mails.

The basic Find can also be run while in the Found Mails list and while in User Selected Mails list when the list is enabled.

ind ×
Find what: maciej OK OK OK
Highlight all occurences in Message
From To Subject Message CC BCC
Attachment Text Attachment Name
To set new dates, open calendar by selecting down arrow, or Left click on month, day or year field and type new value
start date: 10/27/2011
end date: 2/20/2019
Find all occurences Find mails that don't match Search Direction previous  next

#### 9.27.1.2 Find mails that don't match option

User can check "Find mails that don't match" option to find mails that don't match search criteria.

#### 9.27.1.3 Handling of special '\*' search string

User can specify single '\*' character as the search string to find subset of mails as follows:

- 1. Find mails that have CC header field by checking out CC check box only.
- 2. Find mails that have BCC header field by checking only BCC check box only.
- 3. Find mails that have at least one attachment by checking out Attachment Name check box only.
- 4. Match all mails by checking out any of others check boxes only.

NOTE that if the Find all occurrences option is not selected, user will be traversing the subset of mails/matched mails between the start and end dates.

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inux-2002-02.eml	05/07/200109:27 Florian Lohoff <flo@rfc822.org> "Maciej W. Rozycki" <macro@ds2.pg.gd (yep,="" 2.4.5:="" again)<="" broken="" is="" linux="" re:="" sysmips(mips_atomic_set)="" td=""><td>3</td><td></td></macro@ds2.pg.gd></flo@rfc822.org>	3	
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	05/07/2001 12:51 Jun Sun <jsun@mvista.com> "Maciej W. Rozycki" <macro@ds2.pg.gd (yep,="" 2.4.5:="" again)<="" broken="" is="" linux="" re:="" sysmips(mips_atomic_set)="" td=""><td>3</td><td></td></macro@ds2.pg.gd></jsun@mvista.com>	3	
	05/07/2001 13:23 "Maciej W. Rozycki" <macro@ds2.pg.gd <jsun@mvista.com="" jun="" sun=""> Re: linux 2.4.5: sysmips(MIPS_ATOMIC_SET) is broken (yep, again)</macro@ds2.pg.gd>	3	
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			_
	Subject: (/0) linux 2.4.5: A DECstation HALT interrupt handler		
	Date: (Windows-1252/1252) 02/07/2001 10:06 From: (/0) "Maciej W. Rozycki" <macro@ds2.pg.gda.pl> To: (/0) Harald Koerfgen <harald.koerfgen@home.ivm.de>, Ralf Baechle <raff@uni-koblenz.de></raff@uni-koblenz.de></harald.koerfgen@home.ivm.de></macro@ds2.pg.gda.pl>		
	Hi,		
	Following is a minimal implementation of a HALT interrupt handler for		
	DECstations. The handler resets a system (invokes a warm restart) after		
	the HALT button or, in case of the MAXINE, the HALT sequence of keys is pressed. The patch should be OK to apply.		
	pressed. The patch should be ok to appry.		
	Maciej		
	+ Maciej W. Rozycki, Technical University of Gdansk, Poland +		
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	dec_intr_fpu: PANIC("Unimplemented FPU interrupt handler")		
	/*		
	- * Halt interrupt		
	- */		
			>

#### 9.27.2 Advanced Find

The advanced Find option allows user to specify different keyword per each header field, mail text, attachment name and attachments.

Users can configure the search scope by selecting all or subset of the from, to, subject, cc, bcc, message text, attachment name and text attachments options.

Click the "Edit" drop menu and select "Find Advanced" option to configure and start the search.

The Find Advanced is also available as menu option for the selected mail. Right click on the mail and select Find Advanced option. Mbox Viewer will pre-populate From, To and Subject fields in this case.

Find Advanced				×	
Select filter fields	Find what	Match wor	d Match cas	e	
From	shirishag75@gmail.com				
<b>∠</b> To	users@subversion.apache.org				
Subject	newbie subversion questions				
CC					
BCC					
Message					
Attachment					
Text Attachment					
Name Reset All		Set all	Set all		
Find all mails t	hat don't match Match TO field only if si				
Configure Filter	Rule Rule 1 is selected !!! Id CC and BCC and Subject and (Message Text or	Attachment 1	Text) and Atta	ichment Name	
filter dates:					
To set new da type new value	ates, open calendar by selecting down arrow, or Le	eft dick on m	onth, day or y	ear field and	
start o	date: 12/31/2010				
end da	ate: 2/19/2018				
Find all occure	nces	Г	ОК	Cancel	

Only checked fields are use by matching logic and search strings are ignored if present unless field is checked.

The search logic is hard-coded for the most common cases. Select "Configure Filter Rule" button to start dialog and select one of the preconfigured filter rules.

R mboxview								
File Edit View Help		Find Advanced			×			
<b>  ≄   १   +   ⊢</b>	All Mails	Select filter fields						
E-S Linux1	! date (Local) ↑ fr	0	Find what	Match word Match case			size(KB)	^
apache.mbox attachment.mbox	31/12/2010 13:00 sh	ir 🗹 From	shirishag75@gmail.com				7	
linux-1996-05.eml	04/01/2011 06:08	lect Filter Rule			×		8	
linux-2001-07.eml	09/01/2011 08:13 Se 07/12/2011 09:13				~		13 19	
	16/09/2016 14-54	Select Predefined Filter R	4-				18	
	16/08/2016 23:49	Select Predefined Hilter R	uie				7	
	18/08/2016 14:33	((From <> To) an	d CC and BCC and Subject and (Mess	age Text or Attachment Text) and Attachment N	lame		21	
	18/08/2016 14:55 04/10/2016 15:23	(From -> To) and C	C and BCC and Subject and (Message	Text or Attachment Text) and Attachment Name	e		10 7	
	05/10/2016 05:03		C or BCC)) and Subject and (Message	Text or Attachment Text) and Attachment Name			7	
								×
	Subject: newbie	○ ((From <> To) an	d no CC and no BCC and Subject and	(Message Text or Attachment Text) and Attachment	ment Name			
	Date: 31/12/2010 13	○ (From -> To) and n	o CC and no BCC and Subject and (M	essage Text or Attachment Text) and Attachmen	nt Name			
		(From or To or CC o	or BCC) and Subject and (Message Te	xt or Attachment Text) and Attachment Name				1
	Hi all.						^	1
	This is going to	NOTE:						1
	in Debian forun	1. (John <> Tod) wi	ll match (Jon> Tod) and (Tod> Jo	hn) mails				1
	http://forums.de	2. (John> Tod) will r	match Jon> Tod mails					1
		3. and no CC and no E	BCC will match mails without CC and B	CC fields				1
	This is from svr	4. If field is not select	ed in the parent dialog, it is removed i	rom the rule				1
		5. If field is selected in	the parent dialog and value set to $*$	it will match all mails with non empty field				1
	<quote> Hi all.</quote>							1
	I am no progran			ОК	Cancel			1
	or trunk builds and							1
	extremely poor and	l start o	iate: 12/31/2010					1
	questions below :-	end da	ate: 2/19/2018					1
	L. L. d		2/13/2010					J
	a. Is there a way in project progress as	End all occure	nces	OK Cano	cel		~	1
	project progress as	1 <u> </u>	•					_
Ready				Mail Ret	trieval Complete Ma	il 1 of 17		

More complex searching can be achieved by leveraging User Selected mails list. User can run multiple advanced searches and merge results into User Selected Mails list.

#### 9.27.2.1 Find all mails that don't match option

User can check "Find all mails that don't match" option to find mails that don't match search

criteria.

# 9.27.2.2 Handling of special '\*' search string

User can specify single '\*' character as the search string in any of the Filter fields to find subset of mails as follows:

- 1. Find all mails that have CC header field by checking out CC check box only.
- 2. Find all mails that have BCC header field by checking only BCC check box only.
- 3. Find all mails that have at least one attachment by checking out Attachment Name check box only.
- 4. Match all mails by checking out any of others check boxes only.

# 9.27.3 Search Reliability

Searching may not work as expected in all cases due to different character sets on input and in the mails.

Base64 or "quoted-printable" text content blocks and text attachments are first decoded before the search to eliminate false negative results.

Searching of the header fields is performed on the received raw data.

Raw mail data may contain plain text and/or html text blocks. Both encode the same/similar content. If the mail contains plain text blocks, only plain text will be searched. If the mail doesn't contain any plain text blocks, the html text blocks will be searched.

False positive results may happen when searching text/html content blocks since the html tags are not ignored when searching. The search string may match one of the html tags and result in false positive match.

If possible, use ASCII characters only to compose the search string.

# 9.27.4 Search Progress Bar

Search progress bar displays the progress along the configured search string and enables user to cancel the search is so desired. The progress bar is not created unless a given search duration lasts longer than the delay time controlled by -PROGRESS\_BAR\_DELAY command line option or specified via GUI. Default value is 1 second.

# 9.27.5 Search Performance

Searching of header fields performs best since all fields reside in the memory.

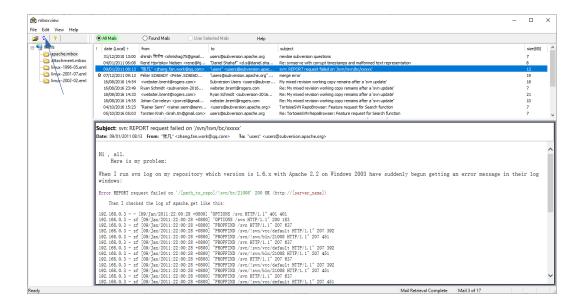
Searching of messages and text attachments may take some time for very large files, say larger than 10-20 Gbytes. Search requires to read the content blocks from the email file and decode the content when required. Worse case scenario is when the specified search string is not present in the mail archive. When activated, the search progress bar shows the configured search string and enables

user to cancel the search is so desired.

Note that when searching of message and text attachments is configured, all mails will be sorted by date first, except when sorted by conversations, to maximize search performance.

# 9.28 Refreshing Archive Tree Window

If an additional mbox or eml file is placed in the already selected folder, the Archive Tree window needs to be refreshed to see the new additions. This can be done by selecting "Refresh" option under the "File" drop menu or by clicking on the button showed below. Individual Folder can be refreshed by the right click on the folder and selecting "Refresh Folder" menu option.

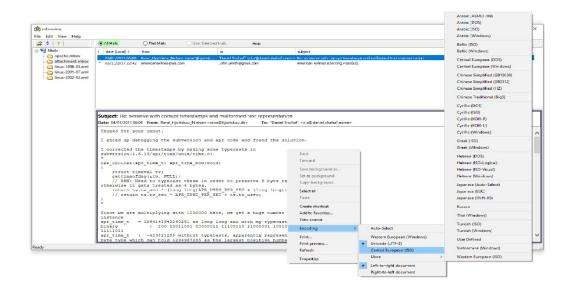


# 9.29 Language (Character Sets) Support

## 9.29.1 Message Window

Different languages (character sets) are properly supported in the Message Window. This is thanks to the Microsoft Web Browser emulation/control class integrated into the mboxview. The mboxview generates the htm file from the mail's body and Web Browser displays the generated file in the Message window.

Display may not be correct if the character set for the mail's body is not defined in the mail. To resolve the incorrect display, you can try to apply different encoding by right clicking within the window, selecting "encoding" and "more" options to apply different language.



### 9.29.1.1 Header of Message Window

The text of the mail header fields is displayed correctly as long as the corresponding field encoding type is present in the email.

mboxview		- 🗆	)
Edit View Help			
\$   <b>?</b>	Al Mails     O Found Mails     User Selected Mails     Help		
Mais     Anais     Anais     Anais     Atachment.mbox     Atachment.mbox     Inrux-1999-05.eml     Inrux-2001-07.eml     Inrux-2001-07.eml	I det Goody 7 from to subject     José Construint (Construints)     Stage 1	size(Ki 7 8	3)
	00/10/2011/0018         SUB_24/detroit frame/biologence         Inters 40.000 (biological control biological control control control biological control biological control biological	13 19 18 7 21 10 7 7	
	Subject: svn: REPORT request failed on //svn//svn/bc/xxxxxx Date: 09/01/20110813 From: 浩兄, "zhangfan.work@qq.com> To: "users" <users@subversion.apache.org></users@subversion.apache.org>		
	Hi , all. Here is my problem: When I run svn log on my repository which version is 1.6.x with Apache 2.2 on Windows 2003 have suddenly begun getting an error message i	n their log	
	Here is my problem: When I run svn log on my repository which version is 1.6.x with Apache 2.2 on Windows 2003 have suddenly begun getting an error message i windows:	n their log	
	Here is my problem: Then I run svn log on my repository which version is 1.6.x with Apache 2.2 on Windows 2003 have suddenly begun getting an error message i	n their log	

Two global options can be used to address incorrect field presentation in the Message Header in case the field encoding is not present in the email. Missing field encoding type may or may not be a problem. It should not be a problem if the default/local character set installed on your computer matches the original encoding of the header fields. It might be an issue if you are receiving emails from different countries.

As shown below, you can see all encoding/character sets applied to the header fields by enabling "Show Charsets" option. To enable, select "Options" from the "File" drop menu and enable "Show Charsets".

oxview		-		)
dit View Help				
2	All Mails O Found Mails User Selected Mails Help			
Mails	! date (Local) ↑ from to subject		size(KB)	
apache.mbox	31/12/2010 13:00 shirish যিশীেষ <shirishaq75@gmail newbie="" questions<="" subversion="" td="" users@subversion.apache.org=""><td></td><td>7</td><td></td></shirishaq75@gmail>		7	
🚞 attachment.mbox	04/01/2011 06:08 René Hjortskov Nielsen <rene@hj "daniel="" <d.s@daniel.sha="" and="" corrupt="" malformed="" re:="" representation<="" shahaf"="" synserve="" td="" text="" timestamps="" with=""><td></td><td>8</td><td></td></rene@hj>		8	
🛅 linux-1996-05.eml	09/01/2011 08:13  '3於凡'' <zhang.fan.work@qq.com>  "users" <users@subversion.apac '="" bc="" failed="" isvn="" on="" report="" request="" svn="" svn:="" td="" xxxxx'<=""><td></td><td>13</td><td></td></users@subversion.apac></zhang.fan.work@qq.com>		13	
linux-2001-07.eml	0 07/12/2011 09:13 Péter SZABADY <peter "users@subversion.apache.org"="" error<="" merge="" szabad="" td=""><td></td><td>19</td><td></td></peter>		19	
🗎 linux-2002-02.eml	16/08/2016 14:54 <webster.brent@rogers.com> Subversion Users <users@subver 'svn="" a="" after="" copy="" mixed="" my="" remains="" revision="" td="" update'<="" working=""><td></td><td>18</td><td></td></users@subver></webster.brent@rogers.com>		18	
	16/08/2016 23:49 Ryan Schmidt <subversion-2016 'svn="" a="" after="" copy="" mixed="" my="" re:="" remains="" revision="" td="" update'<="" webster.brent@rogers.com="" working=""><td></td><td>7</td><td></td></subversion-2016>		7	
	18/08/2016 14:33 <webster.brent@rogers.com> Ryan Schmidt <subversion-2016 'svn="" a="" after="" copy="" mixed="" my="" re:="" remains="" revision="" td="" update'<="" working=""><td></td><td>21</td><td></td></subversion-2016></webster.brent@rogers.com>		21	
	18/08/2016 14:55 Johan Corveleyn 04/10/2016 15:23 "Rainer Sern" <td></td> <td>10 7</td> <td></td>		10 7	
	04/10/2015 15:23 "Rainer Serni" crainer.senn@sern cueers@subversion.apache.org> TorbiteSEVNRepd8rowser: Feature request for Search function 05/10/2016 05:03 TorbiteR Krah drah humBonali.com> users@subversion.apache.org Re: TorbiteSEVN Repd8rowser: Feature request for Search function		7	
	03/10/2010 03:03 TO Stell Nail KNail Kna		1	
	Date: (Windows-1252/1252) 09/01/2011 08:13 From: (gbk/54936) "张凡" <zhang.fan.work@qq.com> Tox (gbk/54936) "users" <users@subversion.apache.org> Body: (gbk/54936) Hi , all. Here is my problem:</users@subversion.apache.org></zhang.fan.work@qq.com>	)		
	Hi , all. Here is my problem: When I run svn log on my repository which version is 1.6.x with Apache 2.2 on Windows 2003 have suddenly begun getting an e windows:		r log	
	Hi , all. Here is my problem: When I run svn log on my repository which version is 1.6.x with Apache 2.2 on Windows 2003 have suddenly begun getting an e		r log	
	Hi , all. Here is my problem: When I run svn log on my repository which version is 1.6.x with Apache 2.2 on Windows 2003 have suddenly begun getting an e windows:		r log	-

If the field text presentation is not correct, you can try to configure character set (or so called code page according to Microsoft terminology) for the selected header fields and see if that helps. Per field code pages can be configured via Options dialog box. Note that the user provided encoding doesn't override encoding in the email, if present, which is denoted by the code page greater than zero. Code Page set to zero indicates missing or unknown character set.

If you change the code page value(s) in the Options Dialog box, you need to refresh the selected email by going up and down (or down and up).

All Windows supported code pages are listed in chapter 12 or can be viewed in the external Browser by selecting "View"  $\rightarrow$  "View Code Page Ids".

The character set information appears after the field title and is formatted as "(character set name/code page)". The '\*" star character is appended after the code page if the user specified code is applied). Example "(UTF-8/65001\*)".

The character set information after the "Date:' title shows the local/default character set installed on your computer.

### 9.29.2 Summary Window

Mail header fields are displayed correctly as long as the corresponding field encoding type is present in the email.

# 9.30 Mail List Auditing

Mail list auditing capability enables users to compose mail list from all mails by merging results of multiple searches and/or by merging one or more user selected mails.

To support list auditing, the Mbox Viewer maintains 3 internal mail lists:

- All Mails list is populated from the selected archive file under the Mail Tree.
- **Found Mails** list is populated by the search results. User can run Find Advanced dialog or set the Find All Occurrences option in the Find dialog.
- User Selected Mails list is composed by a user from the mails in the All Mails and Found Mails lists. Mails on All Mails and Found Mails lists are marked by the red vertical bar in the first column if they are also on User Selected Mails list.

Each internal mail list has associated button in the dialog bar located next to the tool bar. When a particular mail list is shown in the Mail Summary Window, associated button is highlighted.

Access to the User Selected Mails list is disabled upon startup and the associated Button gray out. It can be enabled by the user to perform simple list auditing if desired by selecting View->User Selected Mail List to enable/disable.

When User Selected Mails list is enabled, additional mail menu options will also be enabled such as Copy Selected Mails to User Selected Mails.

Content of the User Selected Mails list is controlled by the user. User can merge search results with the content of the User Selected List.

User can run the search multiples time and merge results multiple times with the User Selected List. Search results can be pruned before merging.

In addition, user has an option to select/highlight one or more mails in the Summary Mail Window and copy to the User Selected Mails list.

Standard Windows method is used to select and highlight multiple mails, i.e. Shift+Left Click and CTRL+Left Click and CTRL+A.

Merging/copying process will not create duplicate mails in the User Selected List.

User can select and highlight one or more mails in the Summary Mail Window and remove from the active list. Mails can't be removed from the All Mails list.

All Mails list content persists until new mail archive is selected.

Found Mails list content persists until new search or when new mail archive is selected.

User Selected Mails list content persists until cleared by the user or new mail archive is selected.

### 9.30.1 Mail List Archiving

Found Mails list and User Selected Mails list content can be saved to new mbox archive files or just to the .mboxlist mail list files.

Mail Archive and Mail List files will be created in the FolderHousingMailArchives/ArchiveCache/ MailArchiveName folder.

Archive file created from the Found Mails list will be created by appending \_FIND suffix to the base name of the main archive file name.

The \_USER suffix will be appended when creating archive file from the User Selected Mails list.

For example, if the main mbox archive file from Gmail is called "All mail Including Spam and Trash.11.09.2018.mbox", then created archive file will be named "All mail Including Spam and Trash.11.09.2018\_USER.mbox."

When creation of the archive is completed, user is presented with the dialog to open the folder with the created archive file or to open the archive file within the Mbox Viewer.

Separately, user can save mails in User Select Mails list to .mboxlist file, for example "All mail Including Spam and Trash.11.09.2018\_USER.mbox.mboxlist". The .mboxlist files are much smaller than the mail archive files. To protect against catastrophic failure of the mbox viewer while saving mails to .mboxlist file, the mbox viewer maintains "All mail Including Spam and Trash.11.09.2018\_USER.mbox.mboxlist.bak1" and "All mail Including Spam and Trash.11.09.2018\_USER.mbox.mboxlist.bak2" files. To recover, user must copy one of these two files to "All mail Including Spam and Trash.11.09.2018\_USER.mbox.mboxlist.bak2" files.

User can reload the last mail list file into the User Select Mails. Reload can be requested at any time including after restart of the mbox viewer.

After mbox viewer is restarted or when User Selected Mails List is empty, User Selected Mails list can be restored when All Mails list is active.

When User Selected Mails list is active and not empty, it can be reloaded by a user from the last .mboxlist file.

**WARNING**: The .mboxlist file will no longer be valid if the master mail archive is changed.

## 9.30.2 Merging Multiple Mail Archives

### 9.30.2.1 Merging files using command line options

Multiple Mbox and Eml files (full path) can be listed in a file and concatenated into a single archive file using two command line options.

-MBOX\_MERGE\_LIST\_FILE=listFile Name and -MBOX\_MERGE\_TO\_FILE=mergedFile Name command line options to merge content of mbox files listed in the listFile Name. Wildcard file names to merge are supported. The merged mbox file is automatically open in the Mbox Viewer.

## 9.30.2.2 Merging files from GUI

Multiple archives can be concatenated into a single archive using "File -> Merge Archive Files" option. This is useful if you need to analyze multiple mail views, provided as separate archive files, derived from the same archive file.

After merging is completed, select "File -> Refresh" to request the Mbox Viewer to discover new archive.

In order to remove duplicate mails from the concatenated file:

1. Select the created archive.

- 2. Select "View -> User Selected Mails" to enable User Select Mails list.
- 3. Right click on any mail to select "Copy All into User Selected Mails" option to copy all mails into User Selected Mails list.
- 4. Click on the "User Selected Mails" button to select User Select Mails list.
- 5. Right click on any mail to select "Remove Duplicate Mails" option to remove duplicate mails from User Select Mails list.
- 6. Mails are considered duplicate if the Date, From, To header fields and unique message ID generated by the mail provider match.
- 7. Select "Save as Mail Archive file" option to save mails on the User Selected Mails list.
- 8. Select "File -> Refresh" to discover new no duplicate mails archive file by the Mbox Viewer.
- 9. You may want to rename the default name assigned to the archive file before the above step.

# 9.31 Mail Printing Overview

Mbox Viewer supports printing of all, single or multiple mails to CSV, Text, HTML, PDF files and to PDF printer. Mails can also be printed to PDF from any Web Browser by opening mails printed to HTML files.

By default all, single or multiple mails are printed to single CSV, Text, HTML and PDF files without any additional configuration or manual steps. However there is a limit how many mails can effectively be printed to a single file. Option is provided to print mails to separate files to scale to larger number of mails. See 9.31.7 section.

The next sections below will cover these limitations and alternate solutions.

## 9.31.1 Print Configuration Dialog

Many aspects of printing can be controlled via "File  $\rightarrow$  Print Config" option. The dialog is shown below and the usage is covered in the subsequent sections.

Print Configuration	×			
File Name Configuration         Compose File Name Template From         Date       Time         From       To         Subject       Unique Id         Max file path length supported by Windows is 260 characters         Wanted Max File Name Length       260         Adjusted Max File Name Length       168         CUSTOM TEMPLATE       Compose Custom Template				
Print to Printer Menu Option Setup O DO NOT PROMPT  PRINT PROMPT  Print To PDF Menu Option Setup				
Ohrome Browser  MSEdge Browser  User Defined Script Path to Chrome/MSEdge Browser executable C:\Program Files (x86)\Vicrosoft\Edge\Application\msedge.exe Path To User Defined Script F:\Documents\GIT1.0.3.27\mboxviewer\Win32\Debug\scripts\H				
Print selected mails to separate files         PDF       HTML         PDF       Text         PDF       Mail Not set to the set of the set o				
HTML/PDF Mail Header Configuration OK Cancel				

### 9.31.1.1 Custom Name Template

User can create custom name template by checking "CUSTOM TEMPLATE" and then selecting "Compose Custom Template". User will be presented with the below template configuration dialog.

Template Configuration	$\times$
Template Format	
%DATE_TIME% %FROM_NAME% %TO_NAME% %SUBJECT% %UNIQUE_ID%	
%Y-%m-%d Date and Time Format	
From Address: 🗹 User Account Name @ 🗹 Domain Name 🛛 To Address: 🗹 User Account Name @ 🗹 Domain Name	
Replace white spaces with underscore	
Valid template format keywords that will be replaced by values from mail. UNIQUE_ID is generated by the mbox viewer to eliminate name clashes.	
%DATE_TIME% %FROM_NAME% %FROM_ADDR% %TO_NAME% %TO_ADDR% %SUBJECT% %UNIQUE_ID%	
Keywords can be specified in any order. Any text can be specified between keywords.	
Date and Time Format follows format accepted by the standard srcftime function. For example:	
%Y-%m-%d %H:%M:%S will expand to for example 2020-1-31 16:59:59	
OK Cancel	

# 9.31.2 Mail Printing to CSV Spreadsheet file

By default, Mbox Viewer supports printing of all mails or selected group of mails to a single CSV file. All mails can be printed to single CSV file but a particular Spreadsheet tool may limit the maximum supported size of the spreadsheet file.

User can select and print groups/subset of mails to separate CVS files as a work around. There is no option to automatically split all mails into configurable number of mail groups for printing to separate CSV files.

# 9.31.3 Mail Printing to TEXT file

By default Mbox Viewer supports printing of all, single or selected group of mails to single Text file. All mails can be printed to single TEXT file but a particular Text viewer tool may limit the maximum supported size of the text file.

User can select and print groups/subset of mails to separate Text files as a work around. There is no option to automatically split all mails into configurable number of mail groups for printing to separate Text files

# 9.31.4 Mail Printing to HTML file

By default Mbox Viewer supports printing of all mails, single or selected group of mails to single HTML file. Mails can also be printed to a separate per mail HTML file for further processing as described in "Mail Printing to PDF" 9.31.6 section and "Mail Printing to PDF files by Power Users" 9.31.7 section.

All archive mails can be printed to single HTML file but HTML viewer tools/Web Browsers may not be able to process large HTML files, become very slow or completely overloaded.

User can select and print groups/subset of mails to separate HTML files as a work around. There is no option to automatically split all mails into configurable number of mail groups for printing to separate HTML files.

There is no hard rule how many mails can be printed to a single HTML file and viewed by a Web Browser. It depends on the size and content (such as heavy graphics) of mails. It should be doable to print up to a couple of thousands small to medium size text mails to a single HTML file for further processing.

## 9.31.5 Mail Printing to PDF printer

Mbox Viewer supports printing of all, single or selected group of mails to PDF printer.

Printing to PDF printer relies on Microsoft HTML Document object to print its content. First, Mbox Viewer will print mails to a single HTML file, then it will load this file into HTML Document object and request the document object to print itself.

The limitations as far as the maximum number of mails that can be printed are described in the "Printing Mails to HTML file" section.

The "File -> Print Config -> Page Setup" dialog option allows users to control the page title, header, footer and background color.

By default user is prompted to select PDF printer for printing mails. If the PDF printer is configured as the default printer, user can set "File -> Print Config -> Do Not Prompt" dialog option to skip the printer prompt step.

# 9.31.6 Mail Printing to PDF file

Mbox Viewer supports multiple ways to print all, single or multiple mails to PDF file. All methods convert HTML files, created first from mails by the Mbox Viewer, to PDF format.

By default all, single or selected mails are printed to a single HTML file and then converted to PDF format. The default method limits the number of mails that can be effectively printed to single HTML file as noted in previous sections. More scalable method for is described in "Mail Printing to PDF files by Power Users" 9.31.7 section.

Mbox Viewer supports an option to print mails directly to PDF file without any user interaction. Direct printing to PDF file invokes external application to convert HTML files to PDF. Standard Google Chrome and/or Microsoft Edge browser in so called headless mode are used to perform conversion. Using MS Edge allows users to configure printing of pages without header and footer.

Two additional options are provided to leverage developer version of the Google Chrome Canary browser and free wkhtmltopdf application to covert HTML to PDF.

Options to leverage the Chrome Canary browser and wkhtmltopdf is provided since the standard Chrome browser in the headless mode doesn't support options to control the page title, header and footer and the background color.

The Google Chrome Canary browser can be downloaded from Chrome Canary browser downloads.

User can set "File -> Print Config -> Path To User Defined Script" to invoke HTML2PDF-singlewkhtmltopdf.cmd script included in the release package. HTML2PDF-single-wkhtmltopdf.cmd script creates PDF files with the right footer "Page Number of Total Pages" and no page Title and Header. The script can be customized by users if desired.

The wkhtmltopdf can be downloaded from <u>wkhtmltopdf.org downloads</u>. The wkhtmltopdf command line options are documented in <u>wkhtmltopdf.org usage</u>.

User can replicate HTML2PDF-single-wkhtmltopdf.cmd or HTML2PDF-single-chromecanary.cmd script to a new file and customize to leverage different converter possibly commercial. User will need to update "Path To User Defined Script" in "File -> Print Config" dialog to point to new script path.

In order to leverage the Chrome Canary browser, user will need to update "Path To User Defined Script" in "File -> Print Config" dialog to point to HTML2PDF-single-chrome-canary.cmd script.

When printing multiple mails to a single PDF file, user can

1. set "File -> Print Config -> Page Break After Each Mail" option to start each mail at new

page, or

2. set "File -> Print Config -> Page Break After Each Conversation Thread" to start conversation or subject thread at new page.

User can unset "File -> Print Config -> Mail Hdr Background Color" option to remove mail header background color and save on the ink when printing. Useful option when using Chrome browser to print.

User can set/unset "File -> Print Config -> Header and Footer" option to control printing of page header and footer via MS Edge browser.

Lastly, HTML files can be open within Firefox, Chrome, MS Edge, etc. Browser and printed to PDF file. Note that in order for links to attachments be clickable the "Save to PDF" option must be used when printing directly from Edge and Chrome browsers.

Note that links to attachments are clickable when PDF document is open in Edge or Chrome browser but they are not clickable in Firefox.

### 9.31.6.1 Setting Font Size when Printing of Multiple Mails to a Single PDF

MBox Viewer's solution to Print multiple mails to single PDF is non-standard and can affect font sizes in all mails. MBox Viewer concatenates content of all mails and headers in HTML format and ask Edge or Chrome Web Browser to convert HTML document into PDF.

Some of mails may have complex style definitions and "pollute" environment of other mails. Frequently, font sizes become smaller and may need to be zoomed in by the PDF viewer. There is no similar solution for zooming when printing generated PDF documents to paper.

#### The following approach is suggested when printing multiple mails into a single PDF.

1. <u>Print mails using default mode</u>. Right-click on selected mails and select "Print Selected Mails to --> PDF --> Default". Evaluate generated PDF document and if not acceptable, follow step 2.

2. <u>Print mails using Merge mode</u>. Right-click on selected mails and select "Print Selected Mails to --> PDF --> Merge" option. This will print all selected mails into separate PDF files first and then merge them into a single target PDF file. Conversion of mails into PDF format by Edge or Chrome Browsers is typically high quality and the merging process typically preserves original quality. Each mail starts at the beginning of a page in the merged PDF. This may be considered less than optimal for small mails. In order to run Merge mode, user must install free java PDFBox command line tool and Java VM. Java VM is typically installed on Windows but PDFBox application must be downloaded from the following link.

#### https://pdfbox.apache.org/download.html

Please download the latest pdfbox-app-3.\*.jar file and install in the same directory as mboxview.exe. Also, check whether java.exe is installed on your system as follow.

Start Command Prompt and type "**where java**". If java.exe is not listed in the output, you need to install java for Windows. You may also have to update PATH system environmental variable and

restart Explorer and MBox Viewer. Evaluate generated PDF document and if not acceptable, follow step 3.

3. <u>Set font size to 16px, 20px or 24px for printing</u>. Right-click on selected mails and select "Print Selected Mails to --> PDF --> 16px". This will force font size of every text to be set to 16px. This may not work well for mails with tables. Font size for text in tables is typically set to smaller to fit into table cells.

Note that in approach 1 and 2 you can configure MBox Viewer to print page break after each mail or after each conversation thread of mails. Select "File-  $\rightarrow$  Print Config-->PDF document options->Page Break After Each Mail/Page Break After Each Conversation Thread".

If none of the above print solutions works for you, you need to print each mail to a separate PDF file and use a professional tool such as PDF-XChange Editor to merge generated PDF files into a single PDF file. Reliability of these tools was not evaluated. To generate mails to separate PDF files, select "File-->Print Config-  $\rightarrow$  Print selected mails to separate files-  $\rightarrow$  PDF".

#### Performance

Maximum number of mails that can be merged by 1,2 or 3 options depends on the complexity and size of mails to be merged.

Merging may take minutes when merging relatively small plain text mails or it may take hours when merging large number of business mails with hyperlinks, graphics, tables, etc.

For example, running option 2 (that is merge option), it took 3 hours to print 3926 mails, mix of simple and business mails, into separate PDFs and another 40 minutes to merge them by PDFBox. Task Manager was showing that PDFBox process memory utilization was close to 8gigabytes.

Option 1 never finished with the same set of mails. I canceled the test when it didn't finish within 5 hours.

# 9.31.7 Mail Printing to PDF files by Power Users

Some users may need to print larger number of mails to a single PDF file. This is supported by Mbox Viewer but one or multiple manual steps are required. User must first print all mails to separate PDF files and then merge them into a single PDF file by running provided script.

In order to print mails to separate PDF files, user must first set "File -> Print Config -> Print mails to separate files -> PDF" option. After that, using standard mail print to PDF options, user can print all or large subset of mails to separate PDF files into sub-folder PDF\_GROUP created by Mbox Viewer.

Printing large number of mails to separate PDF files is time consuming. Depending on the size and content of a single mail, it may take fraction of a second to create PDF file or tens of seconds to print single mail.

PDFMerge-pdfbox.cmd script included in the release package can be used to merge PDF files. PDFMerge-pdfbox.cmd script invokes free PDFBox java tool to merge PDF files. Free PDFBox java tool can be downloaded from pdfbox.apache.org.

PDFBox command line tools usage example can be found in <u>pdfbox.apache.org commandline tools</u>.

Java 8 can must be installed and can be downloaded from jdk8-downloads.

PDFMerge-pdfbox.cmd script must be copied into the directory housing all per mail PDF files and executed. PDFMerge-pdfbox.cmd script will create one or more merged PDF files in the PDF\_MERGE sub-folder. If more than one merged PDF file is created in the PDF\_MERGE sub-folder, PDFMerge-pdfbox.cmd script needs to be copied to that sub-folder and script executed again. The above steps need to be repeated until PDFMerge-pdfbox.cmd script creates single PDF file only.

Printing mails to separate PDF files can also be done offline. User must first set "File -> Print Config -> Print mails to separate files -> HTML" option. After that, using standard mail print to HTML options, user can print all or large subset of mails to separate HTML files into sub-folder HTML\_GROUP created by Mbox Viewer.

HTML2PDF-all-chrome.cmd or HTML2PDF-all-wkhtmltopdf.cmd script included in the release package can then be used to convert HTML files to PDF files. One of these scripts must be copied into the directory housing all per mail HTML files, i.e. HTML\_GROUP, and executed. Created PDF files can then be merged into a single PDF file using PDFMerge-pdfbox.cmd script as described above.

# 9.31.8 Export and Print Directory Structure

MBox Viewer creates data directory and uses as target directory for files and sub-folders created by MboxViewer such as "Print..." export all mails as eml files, etc

The DIRECTORY is constructed as follow depending on the selected data folder as described in section 9.6.

If the data folder is selected per each folder with mbox files, then DIRECTORY is constructed as follow (assuming the mbox folder is not read-only).

 $DIRECTORY = PathToFolderHosingMboxFiles \MboxViewer$ 

Otherwise, that is, for data folder selected by user or created by Windows, DIRECTORY is constructed as follow:

DIRECTORY= UserSelectedDataFolder\MBoxViewer\MappedMboxFilePath

Mapping example. Assuming

MboxFilePath=F:\Account\Inbox.mbox, then it will be mapped to

MappedMboxFilePath=F\ Account\Inbox-mbox , and DIRECTORY to

DIRECTORY=UserSelectedDataFolder \F\ Account\Inbox-mbox

The ':' character will be removed and ".mbox" extension, if present, will be mapped to "-mbox"

DIRECTORY - target directory for files and sub-directories created by MBox Viewer DIRECTORY\MailArchiveFile1.mbox DIRECTORY\MailArchiveFile1.mbox.mboxview DIRECTORY\MailArchiveFile2.mbox DIRECTORY\MailArchiveFile2.mbox.mboxview **DIRECTORY**\ImageCache DIRECTORY/ImageCache/MailArchiveFile1- target directory for image files, such as png, jpg, etc, embeded into mails DIRECTORY\ImageCache\MailArchiveFile2 DIRECTORY\ArchiveCache DIRECTORY\ArchiveCache\MailArchiveFile1- target directory for saving Find Mails and User Selected Mails as .mbox archive files and .mboxlist mail list files DIRECTORY\ArchiveCache\MailArchiveFile2 **DIRECTORY\PrintCache** DIRECTORY\PrintCache\MailArchiveFile1 - target directory for printing to single CSV, TEXT, HTML and PDF files DIRECTORY\PrintCache\MailArchiveFile1\PDF\_GROUP - target directory for printing to separate PDF files DIRECTORY\PrintCache\MailArchiveFile1\PDF\_GROUP\PDF\_MERGE - target directory for merged PDF files DIRECTORY\PrintCache\MailArchiveFile1\PDF\_GROUP\PDF\_MERGE\PDF\_MERGE - target directory for merged PDF files if multiple merge steps are needed DIRECTORY\PrintCache\MailArchiveFile1\HTML\_GROUP - target directory for printing to separate HTML files DIRECTORY\PrintCache\MailArchiveFile1\HTML\_GROUP\PDF\_MERGE - target directory for merged PDF files DIRECTORY\PrintCache\MailArchiveFile1\HTML\_GROUP\PDF\_MERGE\PDF\_MERGE - target directory for merged PDF files if multiple merge steps are needed DIRECTORY\PrintCache\MailArchiveFile2 DIRECTORY\AttachmentCache\MailArchiveFile1 - target directory for all attachment files DIRECTORY\AttachmentCache\MailArchiveFile2 DIRECTORY\EmlCache\MailArchiveFile1 - target directory for all Eml files DIRECTORY\EmlCache\MailArchiveFile2 DIRECTORY\LabelCache - target directory for all Label files

 $DIRECTORY \ MergeCache - target directory for intermediate file created when "File- \rightarrow Select root folder for merging" is selected.$ 

Mbox Viewer also creates and manages temporary directory C:\Users\**UserName**\AppData\Local\ Temp\mboxview directory to store temporary files (attachments, eml and htm) created when a single mail is selected by the user.

Mbox Viewer created help files such as MailListsInfo.htm and MboxviewerHelp.htm are stored in the temporary directory C:\Users\**UserName**\AppData\Local\Temp\mboxview\MboxHelp directory.

# 10 Support for Read Only Media

MBox Viewer supports mbox mail archive files saved on Read Only media such as CDs.

MBox Viewer will create index files and other internal directories under the writable data directory as described sections 9.31.8 and 9.6.

# 11 Forward Mails directly from MBox Viewer

# 11.1 Overview

Users can forward single or selected group of emails directly from MBox Viewer. MBox Viewer connects to one of the preconfigured SMTP (Simple Mail Transport Protocol) Servers to forward

emails. Emails can be forwarded via Gmail, Yahoo, Outlook Live mail service or user configured Mail Service.

MBox Viewer relies on a separate standalone process, ForwardEmlFile.exe, to connect to SMTP Server and to send emails using the TLS encrypted communication. MBox Viewer links proven MailKit software library to communicate with the SMTP server.

# Note that ForwardEmlFile.exe can't access user mail account data since SMTP Server can send data only.

Be aware that all Mail Services impose limits on the rate, size of sending mails and other factors, see chapter 11.3. For regular users, Gmail seems to offer better more predictable service than Yahoo or Outlook. However, Outlook supports mails up to **35MB** in size vs **25MB** by Gmail and Yahoo.

# **11.2** User Accounts and Passwords

Mail Service providers usually require third-party applications to follow special authentication requirements in order to gain access to their services, i.e. to SMTP Server in this case.

If for whatever reasons you would rather not make changes to your main mail account, you can always create additional mail account on another mail service just to be able forward emails directly from MBox Viewer.

# 11.2.1 Yahoo Mail Service

In order for third-party SMTP client applications such as ForwardEmlFile.exe to access Yahoo SMTP Server, user must login to Yahoo mail account first and generate one time App Password that can later be used to authenticate ForwardEmlFile application to SMTP Server.

App Password is long string of 16 random characters. Using App Password is very safe since it practically can't be guessed by hackers using brute force.

Select the below link and click on + sign next to "Generate an App Password" and follow all steps to generate globally unique password for application named **ForwardEmlFile**. You will need App Password and Yahoo mail user name to communicate with Yahoo SMTP Server.

https://my.help.yahoo.com/kb/account/generate-third-party-passwords-sln15241.html

# 11.2.2 Gmail Mail Service

Third-party SMTP client application such as **ForwardEmlFile.exe** can connect to Gmail SMTP Server and be authenticated using either 1) Gmail user name and Gmail user password, or 2) Gmail user name and Gmail App Password.

## **11.2.2.1** Gmail user didn't enable 2-step verification to sign up into Gmail

In order to use Gmail user name and Gmail user password, user must login to the Gmail account and enable "Less secure app access" option, see the link:

https://myaccount.google.com/lesssecureapps?pli=1

If you are concerned about this change, you can disable "Less secure app access" option after you are done forwarding emails.

### 11.2.2.2 Gmail user did enable 2-step verification to sign up into Gmail

User must login to Google account and generate App Password for Gmail Account. App Password is long string of 16 random characters. Using App Password is very safe since it practically can't be guessed by hackers using brute force.

Use the link below to generate App Password:

https://myaccount.google.com/security

Alternatively, user can login to Gmail account and the select "Manage your Google Account" by clicking Google Account icon at the top right corner. Select Security option to generate 16-character long App Password. See also helpful links below.

https://www.lifewire.com/get-a-password-to-access-gmail-by-pop-imap-2-1171882

https://www.systoolsgroup.com/gmail-backup/turn-off-two-step-verification.html

### 11.2.3 Outlook Live Mail Service

Testing was done using Outlook Live free mail account. Microsoft also offers payable Premium Outlook mail service under Office 365 and Microsoft 365 plans. These plans offer much higher sending limits but no evaluation was performed.

If a user did enable 2-step versification, user needs to generate App Password to be properly authenticated, see chapter 11.2.3.2. App Password is long string of 16 random characters. Using App Password is very safe since it practically can't be guessed by hackers using brute force.

If a user didn't enable 2-step versification, there is no requirement to change any security setting for Outlook Live account to be able to send mails via Outlook SMTP Server.

Creating User name and Password to gain access to Outlook SMTP is not exactly clear and can be confusing to set up.

### 11.2.3.1 Create Outlook Account, User Name and Password

I suggest the following steps to create valid user names and password. For more information, examine the following link.

#### Everything you need to know about Microsoft accounts | Windows Community

In my case I already had Microsoft and Outlook accounts but had to perform additional configuration.

# 11.2.3.1.1 You don't have Microsoft Account (know as MSA) and you don't have Outlook Live account

Use the following link to create Microsoft account page:

#### https://account.microsoft.com/account

Select "Sign in", then select "Create one!", then select "Get a new email address" and create your new MyName@outlook.com email address.

The below link has more details.

https://support.microsoft.com/en-us/account-billing/how-to-create-a-new-microsoft-accounta84675c3-3e9e-17cf-2911-3d56b15c0aaf

Use your new Outlook User name and Password to open SMTP Server Configuration dialog and configure user name and password. Attempt to forward one of the mails and check if all works.

#### 11.2.3.1.2 You already have both Microsoft Account and Outlook Live Account

This is the case I faced. Forwarding of emails was not working properly until I created email alias and make this alias primary as described in following link:

https://support.microsoft.com/en-us/office/add-or-remove-an-email-alias-in-outlook-com-459b1989-356d-40fa-a689-8f285b13f1f2

For some reason, Outlook Account User Name and Password did not work for me but Microsoft Account User name and Password did work.

## 11.2.3.2 Generate App Password for Outlook

User must login to Outlook account, enable 2-step verification and generate App Password for Outlook Account. Follow the link below to generate App Password:

https://support.microsoft.com/en-us/account-billing/using-app-passwords-with-apps-that-don-t-support-two-step-verification-5896ed9b-4263-e681-128a-a6f2979a7944

# **11.3** Mail Sending and Size Limits

The limits are listed here to the best of our knowledge and they might be changed by the mail service providers anytime without notice. For regular users, Gmail seems to offer better more predictable service than Yahoo or Outlook. However, Outlook supports mails up to **35MB** in size vs **25MB** by Gmail and Yahoo.

Users are mainly responsible for observing sending limits. MBox Viewer will limit the sending rate to 30 mails/minute.

## 11.3.1 Gmail Mail Service

Sending can be rejected by Gmail for variety of reasons. If a user exceeds various limits, user account can be locked for up to 24 hours. User can take manual steps to restore access.

Regular users are allowed to send up to 500 mails per day.

Mails can be rejected if they are being sent too fast or to too many recipients.

Mails of up to **25MB** are accepted.

### 11.3.2 Yahoo Mail Service

Sending can be rejected by Yahoo for variety of reasons. If a user exceeds various limits, user account can be locked for up to 24 hours. User can take manual steps to restore access.

Yahoo does not disclose sending and size limits.

Mails of up to **25MB** are accepted.

### 11.3.3 Outlook Mail Service

Sending can be rejected by Outlook for variety of reasons including suspicion of spamming. If a user exceeds various limits, user account can be locked for up to 24 hours. User can take manual steps to restore access.

Mails of up to **35MB** are accepted. If you attempt to send larger mail, it will appear that the sending was successful. However, Outlook will post rejection mail into your Outlook account.

The other sending limits are not known.

# **11.4** SMTP Server Configuration

Select "File  $\rightarrow$  SMTP Mail Server Config" to open the configuration dialog. Select one of the listed mail services, enter User Account and Password and click on the "Save" button to save the changes.

When you select "Close" button, the SMTP.ini file is created for the selected service in C:\Users\ %USERNAME%\AppData\Local\MBoxViewer\MailService and used by ForwardEmlFile.exe to support forwarding of emails.

The "Cancel" button is used to clear unsaved changes made in the dialog. If you switch to different mail service, the unsaved changes in the dialog are lost.

When you exit MBox Viewer, User Password is not saved in the system for safety reasons and must be reentered before any mail can be forwarded again.

SMTP Mail Server Configuration X				
Please read the overview first> Help				
Mail Service				
● Gmail ○ Yahoo ○ Outlook ○ Custom				
SMTP Server Addres				
Name smtp.gmail.com				
Port 587				
SMTP Server Connection Encryption Type				
StartTls V				
User				
Account				
Password				
Max Mail Size in KB 25590				
Close Save Cancel				

### **11.4.1** SMTP Servers Default Settings

SMTP Server Address	smtp.gmail.com	smtp.mail.yahoo.com	smtp-mail.outlook.com
SMTP Server Port	587	587	587
SMTP Security	StartTls	StartTls	StartTls

# **11.5** Forwarding Mails

MBox viewer supports forwarding of a single and multiple emails.

### **11.5.1** Forwarding a single email

Right click on any email and select "Forward Mail" option to open the dialog to forward the selected email. The dialog can be manually resized if needed.

Forward M	ail	—		×
Service:	Gmail			
Subject:	Re: svnserve with corrupt timestamps and malformed t	ext repre	sentation	
From:	john.silver@gmail.com			
To:	tom.field@gmail.com			
CC:	barbara.forest@gmail.com			
BCC:				
User Tex	t:			
Please I Thank y John	review the attachment and provide feedback. /ou,			
Cle	ar Sei	nd	Cance	2

The non-empty To field is required. Other fields are optional. When you open the dialog, To, CC, BCC and User Text fields will show the values set in the last dialog. You can clear these fields by clicking on the "Clear" button.

It is important to make sure all addresses are correct and valid. If any address is not valid, a rejection email will be send by the mail service to the respective user's mail account. **MBox Viewer doesn't have access to user's mail accounts.** 

## **11.5.2** Forwarding a list of selected emails

User can select multiple email, then right click on any of the selected emails and select "Forward Mails" option to open the dialog to forward the selected email.

To avoid suspension of the user account, the user is warned if the user attempts to forward batch of emails larger than 100. User is also warned when any of the select mails to forward is larger than supported maximum size.

# 11.5.3 Error Reporting

If forwarding of a mail fails, MBox Viewer will create Message Box with relevant error text.

# **12 Windows Code Page Identifiers**

The table below shows the supported character sets/code pages by Windows platform. The list is based on the following link.

0.7		
37	IBM037	IBM EBCDIC (US-Canada)
437	IBM437	OEM United States
500	IBM500	IBM EBCDIC (International)
708	ASMO-708	Arabic (ASMO 708)
720	DOS-720	Arabic (DOS)
737	ibm737	Greek (DOS)
775	ibm775	Baltic (DOS)
850	ibm850	Western European (DOS)
852	ibm852	Central European (DOS)
855	IBM855	OEM Cyrillic
857	ibm857	Turkish (DOS)
858	IBM00858	OEM Multilingual Latin I
860	IBM860	Portuguese (DOS)
861	ibm861	Icelandic (DOS)
862	DOS-862	Hebrew (DOS)
863	IBM863	French Canadian (DOS)
864	IBM864	Arabic (864)
865	IBM865	Nordic (DOS)
866	cp866	Cyrillic (DOS)
869	ibm869	Greek , Modern (DOS)
870	IBM870	IBM EBCDIC (Multilingual Latin-2)
874	windows-874	Thai (Windows)
875	cp875	IBM EBCDIC (Greek Modern)
932	shift_jis	Japanese (Shift-JIS)
936	gb2312	Chinese Simplified (GB2312)
949	ks_c_5601-1987	Korean
950	big5	Chinese Traditional (Big5)
1026	IBM1026	IBM EBCDIC (Turkish Latin-5)
1047	IBM01047	IBM Latin-1
1140	IBM01140	IBM EBCDIC (US-Canada-Euro)

https://msdn.microsoft.com/en-us/library/windows/desktop/dd317756(v=vs.85).aspx

Code Page	Name	Display Name
1141	IBM01141	IBM EBCDIC (Germany-Euro)
1142	IBM01142	IBM EBCDIC (Denmark-Norway-Euro)
1143	IBM01143	IBM EBCDIC (Finland-Sweden-Euro)
1144	IBM01144	IBM EBCDIC (Italy-Euro)
1145	IBM01145	IBM EBCDIC (Spain-Euro)
1146	IBM01146	IBM EBCDIC (UK-Euro)
1147	IBM01147	IBM EBCDIC (France-Euro)
1148	IBM01148	IBM EBCDIC (International-Euro)
1149	IBM01149	IBM EBCDIC (Icelandic-Euro)
1200	utf-16	Unicode
1201	unicodeFFFE	Unicode (Big-Endian)
1250	windows-1250	Central European (Windows)
1251	windows-1251	Cyrillic (Windows)
1252	Windows-1252	Western European (Windows)
1253	windows-1253	Greek (Windows)
1254	windows-1254	Turkish (Windows)
1255	windows-1255	Hebrew (Windows)
1256	windows-1256	Arabic (Windows)
1257	windows-1257	Baltic (Windows)
1258	windows-1258	Vietnamese (Windows)
1361	Johab	Korean (Johab)
10000	macintosh	Western European (Mac)
10001	x-mac-japanese	Japanese (Mac)
10002	x-mac-chinesetrad	Chinese Traditional (Mac)
10003	x-mac-korean	Korean (Mac)
10004	x-mac-arabic	Arabic (Mac)
10005	x-mac-hebrew	Hebrew (Mac)
10006	x-mac-greek	Greek (Mac)
10007	x-mac-cyrillic	Cyrillic (Mac)
10008	x-mac-chinesesimp	Chinese Simplified (Mac)
10010	x-mac-romanian	Romanian (Mac)
10017	x-mac-ukrainian	Ukrainian (Mac)
10021	x-mac-thai	Thai (Mac)
10029	x-mac-ce	Central European (Mac)
10079	x-mac-icelandic	Icelandic (Mac)

Code Page	Name	Display Name
10081	x-mac-turkish	Turkish (Mac)
10082	x-mac-croatian	Croatian (Mac)
12000	utf-32	Unicode (UTF-32)
12001	utf-32BE	Unicode (UTF-32 Big-Endian)
20000	x-Chinese-CNS	Chinese Traditional (CNS)
20001	x-cp20001	TCA Taiwan
20002	x-Chinese-Eten	Chinese Traditional (Eten)
20003	x-cp20003	IBM5550 Taiwan
20004	x-cp20004	TeleText Taiwan
20005	x-cp20005	Wang Taiwan
20105	x-IA5	Western European (IA5)
20106	x-IA5-German	German (IA5)
20107	x-IA5-Swedish	Swedish (IA5)
20108	x-IA5-Norwegian	Norwegian (IA5)
20127	us-ascii	US-ASCII
20261	x-cp20261	T.61
20269	x-cp20269	ISO-6937
20273	IBM273	IBM EBCDIC (Germany)
20277	IBM277	IBM EBCDIC (Denmark-Norway)
20278	IBM278	IBM EBCDIC (Finland-Sweden)
20280	IBM280	IBM EBCDIC (Italy)
20284	IBM284	IBM EBCDIC (Spain)
20285	IBM285	IBM EBCDIC (UK)
20290	IBM290	IBM EBCDIC (Japanese katakana)
20297	IBM297	IBM EBCDIC (France)
20420	IBM420	IBM EBCDIC (Arabic)
20423	IBM423	IBM EBCDIC (Greek)
20424	IBM424	IBM EBCDIC (Hebrew)
20833	x-EBCDIC-KoreanExtended	IBM EBCDIC (Korean Extended)
20838	IBM-Thai	IBM EBCDIC (Thai)
20866	koi8-r	Cyrillic (KOI8-R)
20871	IBM871	IBM EBCDIC (Icelandic)
20880	IBM880	IBM EBCDIC (Cyrillic Russian)
20905	IBM905	IBM EBCDIC (Turkish)
20924	IBM00924	IBM Latin-1

Code Page	Name	Display Name
20932	EUC-JP	Japanese (JIS 0208-1990 and 0212-1990)
20936	х-ср20936	Chinese Simplified (GB2312-80)
20949	x-cp20949	Korean Wansung
21025	cp1025	IBM EBCDIC (Cyrillic Serbian-Bulgarian)
21866	koi8-u	Cyrillic (KOI8-U)
28591	iso-8859-1	Western European (ISO)
28592	iso-8859-2	Central European (ISO)
28593	iso-8859-3	Latin 3 (ISO)
28594	iso-8859-4	Baltic (ISO)
28595	iso-8859-5	Cyrillic (ISO)
28596	iso-8859-6	Arabic (ISO)
28597	iso-8859-7	Greek (ISO)
28598	iso-8859-8	Hebrew (ISO-Visual)
28599	iso-8859-9	Turkish (ISO)
28603	iso-8859-13	Estonian (ISO)
28605	iso-8859-15	Latin 9 (ISO)
29001	x-Europa	Europa
38598	iso-8859-8-i	Hebrew (ISO-Logical)
50220	iso-2022-jp	Japanese (JIS)
50221	csISO2022JP	Japanese (JIS-Allow 1 byte Kana)
50222	iso-2022-jp	Japanese (JIS-Allow 1 byte Kana - SO/SI)
50225	iso-2022-kr	Korean (ISO)
50227	x-cp50227	Chinese Simplified (ISO-2022)
51932	euc-jp	Japanese (EUC)
51936	EUC-CN	Chinese Simplified (EUC)
51949	euc-kr	Korean (EUC)
52936	hz-gb-2312	Chinese Simplified (HZ)
54936	GB18030	Chinese Simplified (GB18030)
57002	x-iscii-de	ISCII Devanagari
57003	x-iscii-be	ISCII Bengali
57004	x-iscii-ta	ISCII Tamil
57005	x-iscii-te	ISCII Telugu
57006	x-iscii-as	ISCII Assamese
57007	x-iscii-or	ISCII Oriya
57008	x-iscii-ka	ISCII Kannada

Code Page	Name	Display Name
57009	x-iscii-ma	ISCII Malayalam
57010	x-iscii-gu	ISCII Gujarati
57011	x-iscii-pa	ISCII Punjabi
65000	utf-7	Unicode (UTF-7)
65001	utf-8	Unicode (UTF-8)

# 12.1 Handling Unknown Code Page Names

In a few cases, mboxview will map unknown code names to the equivalent code names supported by Windows.

Unknown Code Name	Mapped To Code Name
gbk	GB18030
cp1252	Windows-1252
ascii	us-ascii
cp819	iso-8859-1
latin1	iso-8859-1
latin2	iso-8859-2
big-5	big5
SJIS	shift_jis