# **EcoStruxure Operator Terminal Expert 3.5 Read Me**

Document Revision: 02

## **Table of Contents**

1	SOFTWARE DESCRIPTION	3
2	SYSTEM REQUIREMENTS (SCREEN EDITING SOFTWARE)	•
2.1	Software Berwirement	د
	Software Requirement	
2.2	Display Resolution	4
•	A COFOO DIQUEO	
3	ACCESS RIGHTS	
3.1	Screen Editing Software	
3.2	Runtime (iPC Series / PC/AT)	4
	FOR OFCURE ARRUPATIONS	4
4	FOR SECURE APPLICATIONS	
4.1	Cybersecurity Best Practices	
4.2	To build a secure network for unauthorized access prevention	
4.3	To prevent impersonation in Target Machine	5
4.3.	- J	
PC/	AT_5	_
4.4	To protect information from alteration	5
_	LIGENOE / DEGIGED ATION	_
5	LICENSE / REGISTRATION	6
•	TOOL 0	_
6	TOOLS	6
_	MANUATIO NEW	_
	WHAT'S NEW	
7.1	Hardware Support	
7.2	Updated Drivers	
7.3	New Features	6
•	CIVED LIMITATIONS	_
8	FIXED LIMITATIONS	
8.1	Screen Editing	
8.2	Display Unit Operation	٤
•	LIMITATIONO	_
9 9.1	LIMITATIONS	
9.1 9.2	License	
9.2 9.3	Installer	
	Screen Editing	
9.4	Display Unit Operation	
9.5 9.6	Communication Driver	
9.0	Cybersecurity	10
10	INSTALLER INTEGRITY VERIFICATION	46
10	INSTALLER INTEGRITT VERIFICATION	10
11	DOWNLOADING PROJECT TO PANEL RUNNING VIJEO DESIGNER	47
11	DOWNLOADING PROJECT TO PANEL RUNNING VIJEO DESIGNER	17
12	OPEN SOURCE SOFTWARE	47
12.1 12.2	LUA Plus	
12.3	OpenSSL	
12.4	mapm	
12.5 12.6	libpnglibxml2	
12.6		
14./	INSEL-INVIS	ZJ

12.8	ProtocolBuffers	24
12.9	protobufjs	
12.10	deepmerge	25
12.11	ClosedXml	
12.12	CommonServiceLocator	26
12.13	DbExecutor	27
12.14	DocumentFormat.OpenXml	27
12.15	Extended.Wpf.Toolkit	
12.16	log4net	28
12.17	MessagePack	28
12.18	Microsoft.CodeAnalysis Microsoft.CodeAnalysis.Analyzers	
	soft.CodeAnalysis.Common Microsoft.CodeAnalysis.CSharp	
Micros	soft.CodeAnalysis.CSharp.Workspaces Microsoft.CodeAnalysis.VisualBasic	
Micros	soft.CodeAnalysis.VisualBasic.Workspaces Microsoft.CodeAnalysis.Workspaces.Comm	
12.19	SharpSvn.1.9-x86	
12.20	Mvp.Xml	
12.21	NeoLua	
12.22	Newtonsoft.Json	
12.23	Nlog	
12.24	Reactive Extensions(RxCore, Rx-Interfaces,Rx-Linq,Rx-Main,Rx-PlatformServices)	32
12.25	System.Collections.Immutable System.Configuration.ConfigurationManager	
	m.Reflection.Emit System.Reflection.Metadata System.Threading.Tasks.Extensions	
Syster	n.ValueTuple	32
•		
12.26	Unity	34
12.27	GongSolutions.Wpf.DragDrop	34
12.27 12.28	GongSolutions.Wpf.DragDropXamlAnimatedGif	34 35
12.27 12.28 12.29	GongSolutions.Wpf.DragDropXamlAnimatedGifSystem.Data.SQLite	34 35 35
12.27 12.28 12.29 12.30	GongSolutions.Wpf.DragDrop  XamlAnimatedGif  System.Data.SQLite  XAMLMarkupExtensions	34 35 35
12.27 12.28 12.29 12.30 12.31	GongSolutions.Wpf.DragDrop XamlAnimatedGif System.Data.SQLite XAMLMarkupExtensions Caliburn.Micro	34 35 35 36
12.27 12.28 12.29 12.30 12.31 12.32	GongSolutions.Wpf.DragDrop XamlAnimatedGif System.Data.SQLite XAMLMarkupExtensions Caliburn.Micro Qt	34 35 35 36 37
12.27 12.28 12.29 12.30 12.31 12.32 12.33	GongSolutions.Wpf.DragDrop XamlAnimatedGif System.Data.SQLite XAMLMarkupExtensions Caliburn.Micro Qt Webkit	34 35 35 36 37 45
12.27 12.28 12.29 12.30 12.31 12.32 12.33 12.34	GongSolutions.Wpf.DragDrop XamlAnimatedGif System.Data.SQLite XAMLMarkupExtensions Caliburn.Micro Qt Webkit V8	34 35 35 36 37 45
12.27 12.28 12.29 12.30 12.31 12.32 12.33 12.34 12.35	GongSolutions.Wpf.DragDrop XamlAnimatedGif. System.Data.SQLite. XAMLMarkupExtensions Caliburn.Micro. Qt. Webkit. V8	34 35 35 36 37 45 45
12.27 12.28 12.29 12.30 12.31 12.32 12.33 12.34 12.35 12.36	GongSolutions.Wpf.DragDrop XamlAnimatedGif System.Data.SQLite XAMLMarkupExtensions Caliburn.Micro Qt Webkit V8 JavaScriptCore	34 35 35 36 37 45 45 46
12.27 12.28 12.29 12.30 12.31 12.32 12.33 12.34 12.35 12.36 12.37	GongSolutions.Wpf.DragDrop XamlAnimatedGif	34 35 35 36 37 45 45 46 54
12.27 12.28 12.29 12.30 12.31 12.32 12.33 12.34 12.35 12.36 12.37 12.38	GongSolutions.Wpf.DragDrop XamlAnimatedGif System.Data.SQLite XAMLMarkupExtensions Caliburn.Micro Qt Webkit V8 JavaScriptCore ANGLE ICU libmng	34 35 35 36 45 45 45 54 55
12.27 12.28 12.29 12.30 12.31 12.32 12.33 12.34 12.35 12.36 12.37 12.38 12.39	GongSolutions.Wpf.DragDrop XamlAnimatedGif	34 35 35 36 45 45 46 54 55 61
12.27 12.28 12.29 12.30 12.31 12.32 12.33 12.34 12.35 12.36 12.37 12.38 12.39 12.40	GongSolutions.Wpf.DragDrop XamlAnimatedGif	34 35 35 36 37 45 45 54 55 61 62
12.27 12.28 12.29 12.30 12.31 12.32 12.33 12.34 12.35 12.36 12.37 12.38 12.39 12.40 12.41	GongSolutions.Wpf.DragDrop XamlAnimatedGif	34 35 35 36 37 45 45 54 55 61 62 63
12.27 12.28 12.29 12.30 12.31 12.32 12.33 12.34 12.35 12.36 12.37 12.38 12.39 12.40 12.41 12.42	GongSolutions.Wpf.DragDrop           XamlAnimatedGif           System.Data.SQLite           XAMLMarkupExtensions           Caliburn.Micro           Qt           Webkit           V8           JavaScriptCore           ANGLE           ICU           libmng           libjpeg           PCRE           zlib           LuaSocket	34 35 35 36 37 45 45 54 55 61 62 63 64
12.27 12.28 12.29 12.30 12.31 12.32 12.33 12.34 12.35 12.36 12.37 12.38 12.39 12.40 12.41 12.42 12.43	GongSolutions.Wpf.DragDrop XamlAnimatedGif. System.Data.SQLite. XAMLMarkupExtensions Caliburn.Micro. Qt. Webkit V8 JavaScriptCore ANGLE ICU libmng libjpeg PCRE zlib LuaSocket rxi/json.lua	34 35 35 36 37 45 45 54 61 62 63 64 65
12.27 12.28 12.29 12.30 12.31 12.32 12.33 12.34 12.35 12.36 12.37 12.38 12.39 12.40 12.41 12.42 12.43 12.44	GongSolutions.Wpf.DragDrop           XamlAnimatedGif           System.Data.SQLite           XAMLMarkupExtensions           Caliburn.Micro           Qt           Webkit           V8           JavaScriptCore           ANGLE           ICU           libmng           libjpeg           PCRE           zlib           LuaSocket           rxi/json.lua           Anthy	34 35 35 36 37 45 45 54 61 62 63 65 65
12.27 12.28 12.29 12.30 12.31 12.32 12.33 12.34 12.35 12.36 12.37 12.38 12.39 12.40 12.41 12.42 12.43	GongSolutions.Wpf.DragDrop XamlAnimatedGif. System.Data.SQLite. XAMLMarkupExtensions Caliburn.Micro. Qt. Webkit V8 JavaScriptCore ANGLE ICU libmng libjpeg PCRE zlib LuaSocket rxi/json.lua	34 35 35 36 37 45 45 54 61 62 63 65 65

#### 1 SOFTWARE DESCRIPTION

This software provides an integrated development environment that enables you to use a personal computer to create a Human Machine Interface (HMI) user application. The HMI user application, used by the runtime software, can run on multiple platforms.

## 2 System requirements (Screen Editing Software)

	Minimum specifications	Comments
PC	Windows PC/AT compatible machine	-
CPU	8th Generation Intel(R) Core <sup>™</sup> i3/i5 Processors or faster	-
Memory	8 GB or more	-
Available Disk Space	30 GB or more	-
Operating System	Windows 10 Pro (64-bit) with latest update	-
Other non-operating-system programs	.NET Framework 4.7.2 full *1	-

<sup>\*1</sup> When installing the screen editing software, .NET Framework Ver.4.7.2 full is automatically installed. For disk space requirements, visit the Microsoft website.

#### Note:

- This product must be installed and configured by qualified software installation personnel with administrator rights.
- The software installation file is configured with a digital signature. If any issue regarding the digital signature arises during installation, cancel the installation and contact customer support.

## 2.1 Software Requirement

PDF reader is required to open the Readme.

#### 2.2 Display Resolution

The software application is best viewed with a screen resolution of 1280x800 pixels or higher.

#### 3 Access Rights

#### 3.1 Screen Editing Software

You can install or uninstall the screen editing software with administrator privileges.

#### 3.2 Runtime (iPC Series / PC/AT)

You can install or uninstall the run time with administrator privileges.

When transferring project files, launch the run time with administrator privileges before transferring.

#### 4 FOR SECURE APPLICATIONS

This section explains some points to securely configure applications.

Note: Security related messages appear in the Feedback Zone's [Security Warnings] tab. Review messages and take required corrective action to reduce your cybersecurity risk.

## 4.1 Cybersecurity Best Practices

To help keep your Schneider Electric products secure and protected, we recommend that you implement the cybersecurity best practices.

Following the recommendations may help significantly reduce your company's cybersecurity risk.

For the recommendations, refer to the following URL:

https://www.se.com/ww/en/download/document/7EN52-0390/

### 4.2 To build a secure network for unauthorized access prevention

- Build a communication environment using encrypted communications (ex. VPN).
- Check that the network is secured before communication is established and data is transferred through the Ethernet.
- Select a transfer option that is not based on Ethernet communication (ex. USB Cable or FileSystem). If you need transfer option based on Ethernet communication, we recommend to use IPsec.
- Open the port for data communication only when you use the communication service.

- Protect your PC with a firewall and make sure it is used on a trusted secure network.
- Install the panel on a trusted secure network and protect the panel with a firewall.

#### 4.3 To prevent impersonation in Target Machine

- Use the Security features.
  - Use the auto logout feature.
  - Give an appropriate security level for unlocking to limited users (allow only users with administrator rights to unlock, and so on).
- Password is not asked for the below operations:
  - External Device operation block Upload (USB Storage/SD Card)
  - External Device operation block Download (USB Storage/SD Card)
  - Display the Hardware Configuration

Set the security level for the Switches which are used for above operations.

When using Web Viewer to connect to the panel, do not touch the [\*\*\*] button to display
the password. The displayed password will become visible to all connected panels and
Web Viewer clients.

## 4.3.1 When Using HMIGTU Series Open Box (Windows 10 IoT Enterprise Model), iPC Series, or PC/AT

- Use runtime only on a trusted PC.
- Do not log in to Windows with an account that has administrator rights, except when transferring project files or performing other operations that specifically require administrator rights.
- Use the security features in Windows (set a password, use the auto-logout feature, etc.).
- Set secure passwords and security for the administrator account for your project.

#### 4.4 To protect information from alteration

- Harden your PC following the best cybersecurity practices (antivirus, updated operating systems, strong password policies, Application Allow Listing software, etc.) using the following guideline:
  - https://www.se.com/ww/en/download/document/7EN52-0390/
- Carefully manage your own data.
- Protect your project by adding a project password.
- When using transfer option based on USB Cable or Ethernet Cable, enable [Security Setting] in [Transfer Method].
- Do not execute screen editing software with Windows administrator rights.

Use screen editing software only on a trusted PC.

#### 5 LICENSE / REGISTRATION

Please refer to Help from the Schneider Electric License Manager.

#### 6 Tools

You can distribute the following tools installed in the [\Tools] folder.

- Export Validation Tool
- User Management Tool

#### 7 WHAT'S NEW

#### 7.1 Hardware Support

Harmony P6 Basic Box

Harmony P6 Basic Box is now supported.

#### 7.2 Updated Drivers

New version of L5K file (Studio 5000 (former RSLogix5000) V35) is now support by the following driver.

Rockwell Automation, Inc. - EtherNet/IP

#### 7.3 New Features

One-time Setting for Multiple Selections

 When you select multiple objects or variables, common properties are automatically filtered and you can now set them at one time for all the objects or variables. This reduces the time and effort required to set objects and variables when editing screens.

Support information improvement

The following functions are now supported in the Application Toolbar of screen editing software.

- Cut
- "?" menu
  - Offline Help

- Online Help
- > Readme

## **8 FIXED LIMITATIONS**

## 8.1 Screen Editing

HMIIMG-194	(Symbol Link) Fixed an issue where non-IEC formatted addresses in Unity-Pro File became blank after importing into Symbol Link.
HMIIMG-15887	(Uniform Grid) Fixed an issue where a graphical object with its [Visibility] property set to [Hidden] or [Collapsed] did not display properly when placed in a Uniform Grid.
HMIIMG-15938	(Symbol Link) Fixed an issue where some tags were not imported when importing a L5K file into Symbol Link.
HMIIMG-16240	(Layout Object) Fixed an issue with the behavior of a layout object inside another layout object: when the parent layout object included a Graphic Object with its [Visibility] property set to [Collapsed], resizing the child layout object was not possible.
HMIIMG-16326	(Picture Display) Fixed an issue in simulation where the error message "Images not found. There are no files with .png in the specified folder." displayed for the Picture Display even though the correct path to the image file was specified.
HMIIMG-16337	(Symbol Link) Fixed an issue where the screen editing software could not import a SoMachine Basic File only Modbus (.SMBP) file if it contained a Time or Counter tag.
HMIIMG-16374	(Parts / Shapes) Fixed an issue where nodes of the following objects did not snap when editing nodes and angles even though [Snap Objects] was enabledArc -Arch -Bezier -Doughnut -Line -Path -Pie -Polyline -Polygon
HMIIMG-16409	(Trigger / Operation) Fixed an issue where the screen editing software exited abruptly when a touch operation with binding was changed to a different operation type that did not require binding and the binding source for the original touch operation was deleted.
HMIIMG-16577	(Project File Conversion) Fixed an issue where the screen editing software could not open a project file created in a previous version if there were multiple symbol links with variables using the same structure definition.

HMIIMG-16789	(Project File Conversion) Fixed an issue in the screen editing software where the error "Property cannot be assigned to this block. Assign an Object" displayed erroneously on opening a previous version of the project.
HMIIMG-16899	(Screen Editing Software) Fixed an issue where copying and pasting objects did not work when logged into Windows with a long user name.
HMIIMG-16987	(Screen Editing Software) Fixed an issue where some script errors did not display in the error window and caused errors in simulation. Now all script errors display in the error window.
HMIIMG-17382	(Screen Editing Software) Fixed an error in the screen editing software where incorrect text displayed for the binding source of Alarms when the display language was German.
HMIIMG-17503	(Symbol Link) Fixed an issue where the incorrect number of bytes/words displayed for variables of all the drivers during symbol link import.
HMIIMG-17647	(Screen Editing Software) Fixed an issue where content with a missing binding source was not detected, leading to content that was not displayed. Now the missing binding source is detected and an error is displayed.
HMIIMG-18356	(Web Viewer) Fixed an issue so that you can now use a Basic License of the screen editing software to configure the Web Viewer function.

## 8.2 Display Unit Operation

HMIIMG-16071	(Screen / Content) Fixed an issue where changing to the previous screen did not work when the [Screen ID] was associated with a variable in the [Target01] property window.
HMIIMG-16714	(Script) Fixed an issue where periodic triggers did not work on the runtime after 50 days in the following cases: - The trigger was used in a global script The script was in a Screen or Content that displayed continuously for 50 days.

## 9 LIMITATIONS

This section lists the limitations that are applicable to both the Screen Editing Software and Runtime.

## 9.1 License

HMI-44117	(License) In the Schneider Electric License Manager, if a version 3.0 trial
	license is still active, please remove it.

## 9.2 Installer

HMIIMG-9134	(Screen Editing Software) Do not install the screen editing software in a path
	with Unicode characters. Select a path without any Unicode characters.

## 9.3 Screen Editing

HMIIMG-13566	(Screen Editing Software) There are multiple issues in tab management when the project is closed and opened again: - If you have multiple tabs in a single docking section, the order of tabs is not retained If a layout item is closed (for example, Cross Reference Window), it will be opened again when the project is opened.
HMIIMG-14578	(Screen Editing Software) Windows 8.1 and Windows Server 2012 R2 are not a supported operating system for the screen editing software. The screen editing software can be still installed, but it will not launch successfully.
-	(Screen Editing Software) In a screen, when there is an error in a navigation switch property, the screen editing software shows an error. In this scenario, the error window cannot direct you to the location of the error. Please check the [Source], [Path] and [Property] in the error window and find it manually.
HMIIMG-14754	(Screen Editing Software) The error message count in the error window may be different between the Block mode and Text mode for scripts.
HMIIMG-2239	(Project File Name) When using the project file with EcoStruxure Machine Expert (System Mode), the maximum length of the project file name is 42 characters. (In all other cases, the maximum is 200 characters.)
-	(Project File Conversion) Before opening a project file in this version, refer to the user documents.  From the Manual top page, click the [Feature Guide] icon and in the table of contents select [Before Use] and then [Notes of Project File Conversion].
HMIIMG-3101	(Content Display) The width and height of a content display and referenced content may not be correct when the values are referenced from other properties or script.
HMIIMG-337	(Font) Chinese_Simplified_GB2312_Gothic will not be supported in next version, nor in later versions. Project files that use this font from previous versions will be converted to Chinese_Simplified_GB18030_Gothic
HMIIMG-10595	(Script) When using Search and Replace in Text mode of the script editing screen, word searches containing some special characters ('\$','^','*', etc.) may not work properly.

HMIIMG-9909	(Script) When the script editing screen is in Text mode, the replace operation on text mode scripts from the [References] window does not work. Instead, use the find and replace operation in the script editing screen.
HMIIMG-3391	(Trigger / Operation) An error does not occur even if you set one of the following unsupported objects on a Touch trigger.  -Alarm Summary -Hardware Configuration -Ingredient Viewer -Picture Display -Web Browser -All Layout Objects -Screen / Content -Group Object
HMIIMG-8160	(Alarm) Script cannot change the alarm message. On the screen editing software, an error occurs when you create a script that changes the alarm message.
HMIIMG-6850	(Variables) Do not import a variable file with a variable named "Structure".
-	(Symbol Link) The following data types are either not supported or they are converted to another data type during Symbol Link import: Not Supported -ENUM -INTERFACE Converted to a primitive type of the source -SUBRANGE -POINTER TO -REFERENCE Converted to Structure -UNION -FUNCTION_BLOCK
-	(Symbol Link) NamedBasicType in Rockwell L5K File is imported as String type in Symbol Link.
-	(Symbol Link) When importing a SoMachine Basic Modbus Symbol file (.SMBP), variables associated with registers %IWS and %QWS do not import correctly.
HMIIMG-9036	(Symbol Link) When importing a symbol file that contains PLC variable names that use characters that are not supported by the screen editing software, the [Invalid unicode character] error may display. If possible, rename variables in the PLC software.
HMIIMG-13268	(Symbol Link) The equipment name and variable folder name must be unique in the project. Check for uniqueness before using the symbol import functionality.
HMIIMG-6037	(Companion Product Integration) While working with Machine Expert projects in EcoStruxure Operator Terminal Expert system mode, if system update does not display correctly, perform the following workaround in the Machine Expert project:  From the [Build] menu, run the following commands.  1. Clean All

	Generate Code     3. Build All / Rebuild     4. Save and Save in Repository
-	(Transfer) In broken mode, you cannot use File System transfer to upgrade the run time before version 3.1.100.
HMIIMG-3294	(Transfer) Do not press [ALT] key during a transfer operation. Pressing the [ALT] will sometimes cause the transfer operation to fail.
	(iPC Series and PC/AT) When using run time version 3.1 or earlier, you cannot transfer project files from version 3.1 Service Pack 1 or later. If you transfer the project file in the above condition, the following error message appears in the screen editing software.  [Unable to update using download operation. Use the installer to update run time to the latest version.]  In order to transfer, the run time must be re-installed with the same version, or later, as the screen editing software.  Install the run time from the following path on the installation DVD.  "\EOTERuntime\EcoStruxure Operator Terminal Expert Runtime.exe"  Installing the run time erases any previously transferred project files. After installation, transfer the project files again.  If .NET Framework is not already installed in the run time installation destination, or its version is older, .NET Framework is also installed.  After .NET Framework is installed, the installation destination is restarted. When installing the run time, there is notneed to uninstall the previously installed run time.
HMIIMG-16476	(Parts) In some cases, the binding associated with the Visibility property is lost for objects configured with states. If you encounter this issue, use the following workaround.
	<ol> <li>Open the screen editing software and copy and paste the screen that experienced this issue.</li> <li>Delete the original screen and set the original screen ID to the copied screen.</li> <li>Set binding again to the visibility property where the issue had occurred.</li> <li>Save and reopen the screen editing software. The binding should now be retained.</li> </ol>
HMIIMG-17148	(Project File Conversion) After converting projects from a previous version of the screen editing software, the Display Color ID of some of the objects may change. Check the Display Color ID of objects after conversion.
HMIIMG-17373	(N-State Lamp) When you configure display images for every state of an N-State Lamp, and then increase the number of states and configure images for the new states, sometimes the previously configured states may become invalid. If this issue occurs, please configure again to retain the states.
HMIIMG-17813	(Script) When using the script Text mode, the import operation for a recipe may not work correctly. To import recipes, use the script Block mode.
HMIIMG-18396	(Screen Editing Software) When opening a version 3.4 project with the latest version of the screen editing software, some properties of the script appear as errors in the error window.  As a result, you cannot use following properties in the screen editing software.

Block Trend, Trend Graph -Qualitylcon(struct) - Border - GoodFill - BadFill - StayBadFill - BadForeColor -TimeScalePen -PlateFill -GridFill -TimeLabelPen -LoggingStopFill -CursorPen
String Display -Locals(struct) - Fill - Border - TextColor  Recipe DropDown List
-ViewBehavior(Struct) - SelectedColor

## 9.4 Display Unit Operation

HMIIMG-14539	<ul> <li>(Panel) When using the following features, in certain settings the panel may not work correctly.</li> <li>Configure many alarm records with a string variable set with a long string.</li> <li>Configure many logging data records with a 64-bit variable set with a large value.</li> </ul>
HMIIMG-1773	(Screen / Content) If the Scroll Grid Content is smaller than the Content Display object, the Scroll Grid Content is magnified to the Content Display object.
HMIIMG-11913	(Screen / Content) If communication between the panel and external device is unstable, the screen on the panel may freeze for several seconds on a screen change.
HMIIMG-1198	(Hardware Configuration Screen) When restarting the run time by using an operation in the Hardware Configuration screen, the status of external storage may not be updated. When that happens, cycle the power on the panel.
HMIIMG-5458	(Hardware Configuration Screen) In the Hardware Configuration screen, when you configure EcoStruxure Secure Connect parameters for the first time, [Save & Restart] will not restart the panel. Use some other method to restart, such as powering OFF/ON.

HMIIMG-3272	(Hardware Configuration Screen) When implementing a filter in the filter setup screen [Filter Simplified] with the Operation Log Screen in a Hardware Configuration, sometimes items do not display correctly.
HMIIMG-9202	(Hardware Configuration Screen) In the Hardware Configuration screen, the Scan Control menu for up to 32 devices is displayed for each driver. If you cannot change the scan control from the Hardware Configuration screen, use the equipment source property '.ScanOffControl' to change the scan control.
HMIIMG-2768	(Keypad) While the keypad is displayed, reverse display may not show properly for rapid touches. This is only a display issue and values are written properly.
HMIIMG-10937	(Text Box) When using the Bold attribute in a Text Box object, the thickness of text may differ between the screen editing software and the panel.
HMIIMG-3157	(Alarm Summary) You can display up to 146 items in the Alarm Summary part's filter setup screen [Filter Simplified]. When there are more than 146 items, narrow down the list by either using the [Search] field or the [Filter Detailed] settings.
HMIIMG-3272	(Alarm Summary) When implementing a filter in the filter setup screen [Filter Simplified] with the Alarm Summary part, sometimes items do not display correctly.
HMIIMG-7465	(Numeric Display) In a Numeric Display part, if you use a source property together with a converter for the [Current Value], the [Format] and [Decimal Places] properties of the Numeric Display part are not applied even though you can set these properties. Instead of these properties, the settings in the converter properties apply. The target converters are as follows.  - Unit  - Scale  - Expression  The above operation is correct. In future versions, in the above case the
	[Format] and [Decimal Places] properties of the Numeric Display part will be disabled.
HMIIMG-9007	(Numeric Display) When setting the Prefix or Suffix in [Arabic_Gothic] or [Hebrew_Gothic] font, the Prefix or Suffix characters display in the wrong order in the panel.
HMIIMG-9613	(String Display) Do not enable [Display text as *] on a String Display part with IME Japanese input. The currently stored string is displayed while typing characters. If you want to use the [Display text as *] feature, design a mechanism to clear the string before starting input.
-	(Web Browser) The Web browser part no longer supports TIFF and MNG image file formats.
HMIIMG-14581	(Web Browser) Web Browser parts may not display correctly when viewing dynamic content defined using paths.
HMIIMG-439	(Trigger / Operation) When animation or change in visibility hides a pressing object, Touch trigger (Release or Click) does not occur during that. The triggers operate as if the object is not hidden.

-	(Trigger / Operation) When using the [File Management] Operation, if the file or folder name uses non-ASCII characters, the file or folder name will not display correctly in the [Confirmation Message] displayed by the [File Management] Operation.
HMIIMG-14432	(Trigger / Operation) When using the [Operation Result] operation, you may not get the correct result if the specified operation fails.
HMIIMG-3316	(Logging) If a data logging operation occurs while a [File Management] Operation is in progress, sometimes data may not be logged depending on the logging frequency.
HMIIMG-7560	(Logging) The display of a Trend Graph part could be very slow depending on the number of Trend Graph part display points, the maximum number of records in the logging group, and the model of the panel. The number of display points on the Trend Graph part increases or decreases depending on the following settings.  - Number of channels - Unit
-	(Network) If you set an IP address that duplicates another device on the local network in operation, or if you connect a device with an IP address that duplicates the panel to the local network, you cannot detect duplicating IP addresses.  Only at runtime startup, the runtime check the IP address of the device on the local network and a system error occurs if there is duplication with the panel. After changing the IP address of the panel, the runtime will be rebooted, so please check whether system error has occurred after rebooting.
HMIIMG-9614	(Web Viewer) If a project transfer operation fails, the Web Viewer license is removed. Activate Web Viewer again on the display unit with the same license keycode.
HMIIMG-15921	(Web Viewer) Pipe objects with [Shadow] enabled and either completely horizontal or completely vertical may not display correctly in the Web Viewer when run on iOS and iPadOS.
-	(iPC Series) You must have 4 GB or more memory in a Schneider Electric iPC target machine to install the PC runtime.
HMIIMG-438	(iPC Series and PC/AT) When using multibyte characters for file or folder names for logging, operation log, and alarm export destinations, the system locale for the operating system must be set appropriately.
HMIIMG-438	(iPC Series and PC/AT) When using multibyte characters for the file or folder name for an Image Display part's image save destination, the system locale for the operating system must be set appropriately.
HMIIMG-7325	(iPC Series and PC/AT) Use [Run as administrator] the first time you start the run time after installing it. From the Start menu, right-click the [EcoStruxure Operator Terminal Expert Runtime] icon and from the shortcut menu select [Run as administrator]. If you do not run as administrator, the Welcome Screen may not appear.
HMIIMG-9134	(iPC Series and PC/AT) Do not install the runtime in a path with Unicode characters. Select a path without any Unicode characters.

HMIIMG-16228	(iPC Series and PC/AT) If a display device with touch capability is turned on after the Runtime application is launched, touch operations may not work correctly. Turn on the display device before launching the Runtime application.
HMIIMG-3178	(External Storage (SDCard / USBStorage)) While USB storage is being continuously accessed, even though you eject the USB device, it may not work.  Provide a function to either interrupt access to USB storage or change the storage destination.
HMIIMG-16671	(Barcode Reader) The USB barcode reader reads only "Japanese keyboard 106" and "English keyboard 101" character codes.
HMIIMG-17723	(Security) After being locked out, the message that displays when the user attempts to log in again does not indicate that they are locked out. Use the System Error window or Operation Log to check if the user is locked out.

## 9.5 Communication Driver

HMIIMG-3263	(OPC UA Server) When using the OPC UA server function, on first starting up the panel generates a server certificate. On first connecting to the server, the OPC UA client verifies the server's certificate.  As the server certificate is renewed in the following cases, the OPC UA client may have to check the server certificate again.  -In the Hardware Configuration screen, from the [OPC UA Server] menu the command [Regenerate Certificate] is selected.  -Transfer via File System (This issue does not arise with Ethernet and USB cable transfer.)
HMIIMG-8765	(Driver) When you use the Modbus driver from Schneider Electric and then create a Symbol link with TM devices, the screen editing software can successfully import that device. But, because TM devices are not supported, the associated variable will not work correctly.
HMIIMG-15528	(Driver) When using the Schneider Electric - Machine Expert Network driver, if an array structure has elements with variable names such as 'X' or 'Y', the runtime may not communicate properly when using these variables.
HMIIMG-7247	(HMIGTU Series Premium Box / Open Box) When using CANopen Slave and TIA Portal Ethernet drivers at the same time, do not add any more drivers. Additional drivers could interfere with CANopen Slave communication.
HMIIMG-1065	(HMIST6 Series) Flow control XON/XOFF is not available.
HMIIMG-17492	(Schneider Electric - Machine Expert Network) When using the Schneider Electric - Machine Expert Network driver, the runtime may not communicate properly if "Encrypted Communication" is enabled.
HMIIMG-17634	(Driver) When importing a symbol file that contains nested structure tags and was created under the following conditions, the symbol file will not import

correctly in the screen editing software:
- Rockwell Automation Micro 800 series
- Symbol file created with Connected Component Workbench (CCW)

#### 9.6 Cybersecurity

-	(Cybersecurity) Open only trusted project files in the screen editing software.
-	(Cybersecurity) Operator Terminal Expert Runtime uses an older Schneider Electric License Manager component that may have potential Cybersecurity vulnerabilities.  CWE-74: Improper Neutralization of Special Elements in Output Used by a Downstream Component ('Injection')  For more details, refer to the following website.  https://cwe.mitre.org/data/definitions/74.html

#### 10 INSTALLER INTEGRITY VERIFICATION

When you download the installer from our web site or Schneider Electric Software Update, you can get the SHA256 of the installer. To validate, follow the steps below.

Step 1 : Go to Windows Start menu command box and type 'PowerShell', it opens the Windows PowerShell prompt.

Step 2: Use 'Get-FileHash' command followed by the file path to calculate the Hash of a file.

Get-FileHash 'C:\Users\Public\Downloads\Schneider Electric\Software Update\Downloads\<installer executable fine name>' (e.g. EcoStruxure\_Operator\_Terminal\_Expert\_3.4.exe)

Step 3: Press Enter

This results in output similar to the example below:

Get-FileHash 'C:\Users\Public\Downloads\Schneider Electric\Software Update\Downloads\<installer executable fine name>'

Algorithm Path	Hash

SHA256

BCE70FCF3AA21663F828CF9244102533592F5721B10D6ABA1C050A5B815076EB C:\Users\Public\Downloads\...: Step 4 : Compare the calculated SHA256 hash value with the original hash value shown in the software updates.

## 11 DOWNLOADING PROJECT TO PANEL RUNNING Vijeo Designer

When using the HMISTO Series with a Vijeo Designer system V6.2 SP12 or later installed, because EcoStruxure Operator Terminal Expert does not support the FTPS protocol, follow the steps below to first downgrade to an older version.

Using the [Downloading to a CF Card/SD Card Reader or USB Drive] feature in a Vijeo Designer version before V6.2 SP12, create the file system download data and downgrade the Vijeo Designer system. Next, transfer a project file from the EcoStruxure Operator Terminal Expert screen editing software.

For details about [Downloading to a CF Card/SD Card Reader or USB Drive], refer to section 25.6.4 in the Vijeo Designer help.

#### 12 OPEN SOURCE SOFTWARE

Open source software used inthis product is protected by the copyright described below.

#### 12.1 LUA Plus

Copyright (c) 1994-2016 Lua.org, PUC-Rio.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

#### 12.2 SQLCipher

Copyright (c) 2008-2020 Zetetic LLC

All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

\* Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.

- \* Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
- \* Neither the name of the ZETETIC LLC nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY ZETETIC LLC "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL ZETETIC LLC BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

#### 12.3 OpenSSL

Copyright (c) 1998-2019 The OpenSSL Project. All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- 1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
- 2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
- 3. All advertising materials mentioning features or use of this software must display the following acknowledgment:
  - "This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit. (<a href="http://www.openssl.org/">http://www.openssl.org/</a>)"
- 4. The names "OpenSSL Toolkit" and "OpenSSL Project" must not be used to endorse or promote products derived from this software without prior written permission. For written permission, please contact

openssl-core@openssl.org.

- 5. Products derived from this software may not be called "OpenSSL" nor may "OpenSSL" appear in their names without prior written permission of the OpenSSL Project.
- 6. Redistributions of any form whatsoever must retain the following acknowledgment:

"This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit (http://www.openssl.org/)"

THIS SOFTWARE IS PROVIDED BY THE OpenSSL PROJECT ``AS IS" AND ANY EXPRESSED OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE OpenSSL PROJECT OR ITS CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

This product includes cryptographic software written by Eric Young (eay@cryptsoft.com). This product includes software written by Tim Hudson (tjh@cryptsoft.com).

Copyright (C) 1995-1998 Eric Young (eay@cryptsoft.com) All rights reserved.

This package is an SSL implementation written by Eric Young (<a href="mailto:eay@cryptsoft.com">eay@cryptsoft.com</a>). The implementation was written so as to conform with Netscapes SSL.

This library is free for commercial and non-commercial use as long as the following conditions are aheared to. The following conditions apply to all code found in this distribution, be it the RC4, RSA, lhash, DES, etc., code; not just the SSL code. The SSL documentation included with this distribution is covered by the same copyright terms except that the holder is Tim Hudson (tih@cryptsoft.com).

Copyright remains Eric Young's, and as such any Copyright notices in the code are not to be removed. If this package is used in a product, Eric Young should be given attribution as the author of the parts of the library used. This can be in the form of a textual message at program startup or in documentation (online or textual) provided with the package.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- 1. Redistributions of source code must retain the copyright notice, this list of conditions and the following disclaimer.
- 2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
- 3. All advertising materials mentioning features or use of this software must display the following acknowledgement:
  - "This product includes cryptographic software written by Eric Young (<a href="mailto:eay@cryptsoft.com">eay@cryptsoft.com</a>)" The word 'cryptographic' can be left out if the rouines from the library being used are not cryptographic related :-).
- 4. If you include any Windows specific code (or a derivative thereof) from the apps directory (application code) you must include an acknowledgement:

"This product includes software written by Tim Hudson (tih@cryptsoft.com)"

THIS SOFTWARE IS PROVIDED BY ERIC YOUNG ``AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHOR OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

The license and distribution terms for any publically available version or derivative of this code cannot be changed. i.e. this code cannot simply be copied and put under another distribution license

[including the GNU Public Licence.]

#### 12.4 mapm

Copyright (C) 1999 - 2010 Michael C. Ring

This software is Freeware.

Permission to use, copy, and distribute this software and its documentation for any purpose with or without fee is hereby granted, provided that the above copyright notice appear in all copies and that both that copyright notice and this permission notice appear in supporting documentation.

Permission to modify the software is granted. Permission to distribute the modified code is granted. Modifications are to be distributed by using the file 'license.txt' as a template to modify the file header.

'license.txt' is available in the official MAPM distribution.

To distribute modified source code, insert the file 'license.txt' at the top of all modified source code files and edit accordingly. This software is provided "as is" without express or implied warranty.

#### 12.5 libpng

COPYRIGHT NOTICE, DISCLAIMER, and LICENSE

PNG Reference Library License version 2

-----

- \* Copyright (c) 1995-2019 The PNG Reference Library Authors.
- \* Copyright (c) 2018-2019 Cosmin Truta.
- \* Copyright (c) 2000-2002, 2004, 2006-2018 Glenn Randers-Pehrson.
- \* Copyright (c) 1996-1997 Andreas Dilger.
- \* Copyright (c) 1995-1996 Guy Eric Schalnat, Group 42, Inc.

The software is supplied "as is", without warranty of any kind, express or implied, including, without limitation, the warranties of merchantability, fitness for a particular purpose, title, and non-infringement. In no event shall the Copyright owners, or anyone distributing the software, be liable for any damages or other liability, whether in contract, tort or otherwise, arising from, out of, or in connection with the software, or the use or other dealings in the software, even if advised of the possibility of such damage.

Permission is hereby granted to use, copy, modify, and distribute this software, or portions hereof, for any purpose, without fee, subject to the following restrictions:

- The origin of this software must not be misrepresented; you
  must not claim that you wrote the original software. If you
  use this software in a product, an acknowledgment in the product
  documentation would be appreciated, but is not required.
- 2. Altered source versions must be plainly marked as such, and must not be misrepresented as being the original software.
- This Copyright notice may not be removed or altered from any source or altered source distribution.

PNG Reference Library License version 1 (for libpng 0.5 through 1.6.35)

-----

libpng versions 1.0.7, July 1, 2000, through 1.6.35, July 15, 2018 are Copyright (c) 2000-2002, 2004, 2006-2018 Glenn Randers-Pehrson, are derived from libpng-1.0.6, and are distributed according to the same disclaimer and license as libpng-1.0.6 with the following individuals added to the list of Contributing Authors:

Simon-Pierre Cadieux Eric S. Raymond Mans Rullgard Cosmin Truta Gilles Vollant James Yu Mandar Sahastrabuddhe Google Inc. Vadim Barkov

and with the following additions to the disclaimer:

There is no warranty against interference with your enjoyment of the library or against infringement. There is no warranty that our efforts or the library will fulfill any of your particular purposes or needs. This library is provided with all faults, and the entire risk of satisfactory quality, performance, accuracy, and effort is with the user.

Some files in the "contrib" directory and some configure-generated files that are distributed with libpng have other copyright owners, and are released under other open source licenses.

libpng versions 0.97, January 1998, through 1.0.6, March 20, 2000, are Copyright (c) 1998-2000 Glenn Randers-Pehrson, are derived from libpng-0.96, and are distributed according to the same disclaimer and license as libpng-0.96, with the following individuals added to the

list of Contributing Authors:

Tom Lane Glenn Randers-Pehrson Willem van Schaik

libpng versions 0.89, June 1996, through 0.96, May 1997, are Copyright (c) 1996-1997 Andreas Dilger, are derived from libpng-0.88, and are distributed according to the same disclaimer and license as libpng-0.88, with the following individuals added to the list of Contributing Authors:

John Bowler Kevin Bracey Sam Bushell Magnus Holmgren Greg Roelofs Tom Tanner

Some files in the "scripts" directory have other copyright owners, but are released under this license.

libpng versions 0.5, May 1995, through 0.88, January 1996, are Copyright (c) 1995-1996 Guy Eric Schalnat, Group 42, Inc.

For the purposes of this copyright and license, "Contributing Authors" is defined as the following set of individuals:

Andreas Dilger Dave Martindale Guy Eric Schalnat Paul Schmidt Tim Wegner

The PNG Reference Library is supplied "AS IS". The Contributing Authors and Group 42, Inc. disclaim all warranties, expressed or implied, including, without limitation, the warranties of merchantability and of fitness for any purpose. The Contributing Authors and Group 42, Inc. assume no liability for direct, indirect, incidental, special, exemplary, or consequential damages, which may result from the use of the PNG Reference Library, even if advised of the possibility of such damage.

Permission is hereby granted to use, copy, modify, and distribute this source code, or portions hereof, for any purpose, without fee, subject to the following restrictions:

- 1. The origin of this source code must not be misrepresented.
- 2. Altered versions must be plainly marked as such and must not be misrepresented as being the original source.
- This Copyright notice may not be removed or altered from any source or altered source distribution.

The Contributing Authors and Group 42, Inc. specifically permit, without fee, and encourage the use of this source code as a component to supporting the PNG file format in commercial products. If you use this source code in a product, acknowledgment is not required but would be appreciated.

#### 12.6 libxml2

Except where otherwise noted in the source code (e.g. the files hash.c,list.c and the trio files, which are covered by a similar license but with different Copyright notices) all the files are:

Copyright (C) 1998-2012 Daniel Veillard. All Rights Reserved.

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FIT-NESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

#### 12.7 ipsec-tools

The code is copyright 1995, 1996, 1997, 1998, and 1999 by the WIDE Projectand licensed under the BSD license.

Copyright (c) The Regents of the University of California. All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- 1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
- 2. Redistributions in binary form must reproduce the above copyrightnotice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
- 3. Neither the name of the University nor the names of its contributorsmay be used to endorse or promote products derived from this softwarewithout specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE REGENTS AND CONTRIBUTORS "AS IS" ANDANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THEIMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSEARE DISCLAIMED. IN NO EVENT SHALL THE REGENTS OR CONTRIBUTORS BE LIABLEFOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIALDAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODSOR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)

HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICTLIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAYOUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OFSUCH DAMAGE.

The GSSAPI code is copyright 2000 Wasabi Systems, Inc and licensed underthe following license:

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- 1. Redistributions of source code must retain the above copyrightnotice, this list of conditions and the following disclaimer.
- 2. Redistributions in binary form must reproduce the above copyrightnotice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
- 3. All advertising materials mentioning features or use of this softwaremust display the following acknowledgement:

This product includes software developed by Wasabi Systems for Zembu Labs, Inc. http://www.zembu.com/

4. The name of Wasabi Systems, Inc. may not be used to endorseor promote products derived from this software without specific priorwritten permission.

THIS SOFTWARE IS PROVIDED BY WASABI SYSTEMS, INC. ``AS IS" ANDANY EXPRESS OR IMPLIED WARRANTIES. INCLUDING. BUT NOT LIMITED

TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULARPURPOSE ARE DISCLAIMED. IN NO EVENT SHALL WASABI SYSTEMS, INC BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, ORCONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OFSUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESSINTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER INCONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE)

ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THEPOSSIBILITY OF SUCH DAMAGE.

#### 12.8 ProtocolBuffers

Copyright 2008, Google Inc. All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- \* Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
- \* Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
- \* Neither the name of Google Inc. nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

Code generated by the Protocol Buffer compiler is owned by the owner of the input file used when generating it.

This code is not standalone and requires a support library to be linked with it. This support library is itself covered by the above license.

#### 12.9 protobufjs

This license applies to all parts of protobuf.js except those files either explicitly including or referencing a different license or located in a directory containing a different LICENSE file.

---

Copyright (c) 2016, Daniel Wirtz All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- \* Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
- \* Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
- \* Neither the name of its author, nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

---

Code generated by the command line utilities is owned by the owner of the input file used when generating it.

This code is not standalone and requires a support library to be linked with it. This support library is itself covered by the above license.

#### 12.10 deepmerge

The MIT License (MIT)

Copyright (c) 2012 James Halliday, Josh Duff, and other contributors

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

#### 12.11 ClosedXml

#### MIT License

Copyright (c) 2016 ClosedXML

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

#### 12.12 CommonServiceLocator

Microsoft Public License (MS-PL)

This license governs use of the accompanying software. If you use the software, you accept this license. If you do not accept the license, do not use the software.

#### 1. Definitions

The terms "reproduce," "reproduction," "derivative works," and "distribution" have the same meaning here as under U.S. copyright law.

A "contribution" is the original software, or any additions or changes to the software.

A "contributor" is any person that distributes its contribution under this license.

"Licensed patents" are a contributor's patent claims that read directly on its contribution.

#### 2. Grant of Rights

- (A) Copyright Grant- Subject to the terms of this license, including the license conditions and limitations in section 3, each contributor grants you a non-exclusive, worldwide, royalty-free copyright license to reproduce its contribution, prepare derivative works of its contribution, and distribute its contribution or any derivative works that you create.
- (B) Patent Grant- Subject to the terms of this license, including the license conditions and limitations in section 3, each contributor grants you a non-exclusive, worldwide, royalty-free license under its licensed patents to make, have made, use, sell, offer for sale, import, and/or otherwise dispose of its contribution in the software or derivative works of the contribution in the software.

#### 3. Conditions and Limitations

- (A) No Trademark License- This license does not grant you rights to use any contributors' name, logo, or trademarks.
- (B) If you bring a patent claim against any contributor over patents that you claim are infringed by the software, your patent license from such contributor to the software ends automatically.
- (C) If you distribute any portion of the software, you must retain all copyright, patent, trademark, and attribution notices that are present in the software.
- (D) If you distribute any portion of the software in source code form, you may do so only under this license by including a complete copy of this license with your distribution. If you distribute any portion of the software in compiled or object code form, you may only do so under a license that complies with this license.
- (E) The software is licensed "as-is." You bear the risk of using it. The contributors give no express warranties, guarantees or conditions. You may have additional consumer rights under your local laws which

this license cannot change. To the extent permitted under your local laws, the contributors exclude the implied warranties of merchantability, fitness for a particular purpose and non-infringement.

#### 12.13 DbExecutor

DbExecutor is used in this product.

#### 12.14 DocumentFormat.OpenXml

The MIT License (MIT)

Copyright (c) Microsoft Corporation

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

#### 12.15 Extended.Wpf.Toolkit

Microsoft Public License (Ms-PL)

This license governs use of the accompanying software. If you use the software, you accept this license. If you do not accept the license, do not use the software.

#### 1. Definitions

The terms "reproduce," "reproduction," "derivative works," and "distribution" have the same meaning here as under U.S. copyright law. A "contribution" is the original software, or any additions or changes to the software. A "contributor" is any person that distributes its contribution under this license. "Licensed patents" are a contributor's patent claims that read directly on its contribution.

#### 2. Grant of Rights

(A) Copyright Grant- Subject to the terms of this license, including the license conditions and limitations in section 3, each contributor grants you a non-exclusive, worldwide, royalty-free copyright license to reproduce its contribution, prepare derivative works of its contribution, and distribute its contribution or any derivative works that you create.

(B) Patent Grant- Subject to the terms of this license, including the license conditions and limitations in section 3, each contributor grants you a non-exclusive, worldwide, royalty-free license under its licensed patents to make, have made, use, sell, offer for sale, import, and/or otherwise dispose of its contribution in the software or derivative works of the contribution in the software.

#### 3. Conditions and Limitations

- (A) No Trademark License- This license does not grant you rights to use any contributors' name, logo, or trademarks.
- (B) If you bring a patent claim against any contributor over patents that you claim are infringed by the software, your patent license from such contributor to the software ends automatically.
- (C) If you distribute any portion of the software, you must retain all copyright, patent, trademark, and attribution notices that are present in the software.
- (D) If you distribute any portion of the software in source code form, you may do so only under this license by including a complete copy of this license with your distribution. If you distribute any portion of the software in compiled or object code form, you may only do so under a license that complies with this license.
- (E) The software is licensed "as-is." You bear the risk of using it. The contributors give no express warranties, guarantees, or conditions. You may have additional consumer rights under your local laws which this license cannot change. To the extent permitted under your local laws, the contributors exclude the implied warranties of merchantability, fitness for a particular purpose and non-infringement.

#### 12.16 log4net

Copyright 2004-2021 The Apache Software Foundation

Licensed under the Apache License, Version 2.0 (the "License"); you may not use this file except in compliance with the License. You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software distributed under the License is distributed on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied. See the License for the specific language governing permissions and limitations under the License.

## 12.17 MessagePack

MessagePack for C#

MIT License

Copyright (c) 2017 Yoshifumi Kawai and contributors

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

---

Iz4net

Copyright (c) 2013-2017, Milosz Krajewski

All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.

Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

#### 12.18 Microsoft.CodeAnalysis

Microsoft.CodeAnalysis.Analyzers

Microsoft.CodeAnalysis.Common

Microsoft.CodeAnalysis.CSharp

Microsoft.CodeAnalysis.CSharp.Workspaces

Microsoft.CodeAnalysis.VisualBasic

Microsoft.CodeAnalysis.VisualBasic.Workspaces

Microsoft.CodeAnalysis.Workspaces.Common

The MIT License (MIT)

Copyright (c) .NET Foundation and Contributors

All rights reserved.

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

#### 12.19 SharpSvn.1.9-x86

Copyright 2006-2015 The SharpSvn Project

Licensed under the Apache License, Version 2.0 (the "License"); you may not use this file except in compliance with the License. You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software distributed under the License is distributed on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied. See the License for the specific language governing permissions and limitations under the License.

#### 12.20 Mvp.Xml

Mvp.Xml is used in this product.

#### 12.21 NeoLua

Copyright 2013-2021 Neolithos

Licensed under the Apache License, Version 2.0 (the "License"); you may not use this file except in compliance with the License. You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software distributed under the License is distributed on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied. See the License for the specific language governing permissions and limitations under the License.

#### 12.22 Newtonsoft. Json

The MIT License (MIT)

#### Copyright (c) 2007 James Newton-King

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

#### 12.23 Nlog

Copyright (c) 2004-2021 Jaroslaw Kowalski < jaak@jkowalski.net>, Kim Christensen, Julian Verdurmen

All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- \* Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
- \* Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
- \* Neither the name of Jaroslaw Kowalski nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

12.24

## Reactive Extensions(RxCore, Rx-Interfaces,Rx-Linq,Rx-Main,Rx-PlatformServices)

The MIT License (MIT)

Copyright (c) .NET Foundation and Contributors

All rights reserved.

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

#### 12.25

System.Collections.Immutable

System.Configuration.ConfigurationManager

System.Reflection.Emit

System.Reflection.Metadata

System.Threading.Tasks.Extensions

System. Value Tuple

#### MICROSOFT SOFTWARE LICENSE TERMS

#### MICROSOFT .NET LIBRARY

These license terms are an agreement between you and Microsoft Corporation (or based on where you live, one of its affiliates). They apply to the software named above. The terms also apply to any Microsoft services or updates for the software, except to the extent those have different terms.

IF YOU COMPLY WITH THESE LICENSE TERMS, YOU HAVE THE RIGHTS BELOW.

1. INSTALLATION AND USE RIGHTS.

You may install and use any number of copies of the software to develop and test your applications.

- 2. THIRD PARTY COMPONENTS. The software may include third party components with separate legal notices or governed by other agreements, as may be described in the ThirdPartyNotices file(s) accompanying the software.
- 3. ADDITIONAL LICENSING REQUIREMENTS AND/OR USE RIGHTS.
- a. DISTRIBUTABLE CODE. The software is comprised of Distributable Code. "Distributable Code" is code that you are permitted to distribute in applications you develop if you comply with the terms below.
- i. Right to Use and Distribute.
- You may copy and distribute the object code form of the software.

- Third Party Distribution. You may permit distributors of your applications to copy and distribute the Distributable Code as part of those applications.
- ii. Distribution Requirements. For any Distributable Code you distribute, you must
- use the Distributable Code in your applications and not as a standalone distribution;
- require distributors and external end users to agree to terms that protect it at least as much as this agreement; and
- indemnify, defend, and hold harmless Microsoft from any claims, including attorneys' fees, related to the distribution or use of your applications, except to the extent that any claim is based solely on the unmodified Distributable Code.
- iii. Distribution Restrictions. You may not
- use Microsoft's trademarks in your applications' names or in a way that suggests your applications come from or are endorsed by Microsoft; or
- modify or distribute the source code of any Distributable Code so that any part of it becomes subject to an Excluded License. An "Excluded License" is one that requires, as a condition of use, modification or distribution of code, that (i) it be disclosed or distributed in source code form; or (ii) others have the right to modify it.

#### 4. DATA.

- a. Data Collection. The software may collect information about you and your use of the software, and send that to Microsoft. Microsoft may use this information to provide services and improve our products and services. You may opt-out of many of these scenarios, but not all, as described in the software documentation. There are also some features in the software that may enable you and Microsoft to collect data from users of your applications. If you use these features, you must comply with applicable law, including providing appropriate notices to users of your applications together with Microsoft's privacy statement. Our privacy statement is located at https://go.microsoft.com/fwlink/?LinkID=824704. You can learn more about data collection and its use from the software documentation and our privacy statement. Your use of the software operates as your consent to these practices.
- b. Processing of Personal Data. To the extent Microsoft is a processor or subprocessor of personal data in connection with the software, Microsoft makes the commitments in the European Union General Data Protection Regulation Terms of the Online Services Terms to all customers effective May 25, 2018, at https://docs.microsoft.com/en-us/legal/gdpr.
- 5. SCOPE OF LICENSE. The software is licensed, not sold. This agreement only gives you some rights to use the software. Microsoft reserves all other rights. Unless applicable law gives you more rights despite this limitation, you may use the software only as expressly permitted in this agreement. In doing so, you must comply with any technical limitations in the software that only allow you to use it in certain ways. You may not
- work around any technical limitations in the software;
- reverse engineer, decompile or disassemble the software, or otherwise attempt to derive the source code for the software, except and to the extent required by third party licensing terms governing use of certain open source components that may be included in the software;
- remove, minimize, block or modify any notices of Microsoft or its suppliers in the software;
- use the software in any way that is against the law; or
- share, publish, rent or lease the software, provide the software as a stand-alone offering for others to use, or transfer the software or this agreement to any third party.
- 6. EXPORT RESTRICTIONS. You must comply with all domestic and international export laws and regulations that apply to the software, which include restrictions on destinations, end users, and end use. For further information on export restrictions, visit www.microsoft.com/exporting.
- 7. SUPPORT SERVICES. Because this software is "as is," we may not provide support services for it.
- 8. ENTIRE AGREEMENT. This agreement, and the terms for supplements, updates, Internet-based services and support services that you use, are the entire agreement for the software and support services.
- 9. APPLICABLE LAW. If you acquired the software in the United States, Washington law applies to interpretation of and claims for breach of this agreement, and the laws of the state where you live apply to all other claims. If you acquired the software in any other country, its laws apply.

- 10. CONSUMER RIGHTS; REGIONAL VARIATIONS. This agreement describes certain legal rights. You may have other rights, including consumer rights, under the laws of your state or country. Separate and apart from your relationship with Microsoft, you may also have rights with respect to the party from which you acquired the software. This agreement does not change those other rights if the laws of your state or country do not permit it to do so. For example, if you acquired the software in one of the below regions, or mandatory country law applies, then the following provisions apply to you:
- a) Australia. You have statutory guarantees under the Australian Consumer Law and nothing in this agreement is intended to affect those rights.
- b) Canada. If you acquired this software in Canada, you may stop receiving updates by turning off the automatic update feature, disconnecting your device from the Internet (if and when you re-connect to the Internet, however, the software will resume checking for and installing updates), or uninstalling the software. The product documentation, if any, may also specify how to turn off updates for your specific device or software.
- c) Germany and Austria.
- (i) Warranty. The software will perform substantially as described in any Microsoft materials that accompany it. However, Microsoft gives no contractual guarantee in relation to the software.
- (ii) Limitation of Liability. In case of intentional conduct, gross negligence, claims based on the Product Liability Act, as well as in case of death or personal or physical injury, Microsoft is liable according to the statutory law.

Subject to the foregoing clause (ii), Microsoft will only be liable for slight negligence if Microsoft is in breach of such material contractual obligations, the fulfillment of which facilitate the due performance of this agreement, the breach of which would endanger the purpose of this agreement and the compliance with which a party may constantly trust in (so-called "cardinal obligations"). In other cases of slight negligence, Microsoft will not be liable for slight negligence

- 11. DISCLAIMER OF WARRANTY. THE SOFTWARE IS LICENSED "AS-IS." YOU BEAR THE RISK OF USING IT. MICROSOFT GIVES NO EXPRESS WARRANTIES, GUARANTEES OR CONDITIONS. TO THE EXTENT PERMITTED UNDER YOUR LOCAL LAWS, MICROSOFT EXCLUDES THE IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NON-INFRINGEMENT.
- 12. LIMITATION ON AND EXCLUSION OF REMEDIES AND DAMAGES. YOU CAN RECOVER FROM MICROSOFT AND ITS SUPPLIERS ONLY DIRECT DAMAGES UP TO U.S. \$5.00. YOU CANNOT RECOVER ANY OTHER DAMAGES, INCLUDING CONSEQUENTIAL, LOST PROFITS, SPECIAL, INDIRECT OR INCIDENTAL DAMAGES.

This limitation applies to (a) anything related to the software, services, content (including code) on third party Internet sites, or third party applications; and (b) claims for breach of contract, breach of warranty, guarantee or condition, strict liability, negligence, or other tort to the extent permitted by applicable law.

It also applies even if Microsoft knew or should have known about the possibility of the damages. The above limitation or exclusion may not apply to you because your state or country may not allow the exclusion or limitation of incidental, consequential or other damages.

#### 12.26 Unity

Unity is used in this product.

### 12.27 GongSolutions.Wpf.DragDrop

**BSD 3-Clause License** 

Copyright (c) Jan Karger, Steven Kirk and Contributors. All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- \* Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
- \* Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
- \* Neither the name of gong-wpf-dragdrop nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

#### 12.28 XamlAnimatedGif

Copyright Thomas Levesque

Licensed under the Apache License, Version 2.0 (the "License"); you may not use this file except in compliance with the License. You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software distributed under the License is distributed on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied. See the License for the specific language governing permissions and limitations under the License.

## 12.29 System.Data.SQLite

All files in the "System.Data.SQLite.Linq/SQL Generation" directory (within the source tree) are covered by the Microsoft Public License (MS-PL). These files end up being compiled into both the "System.Data.SQLite.Linq" and "System.Data.SQLite.EF6" assemblies.

All other code and documentation in System.Data.SQLite has been dedicated to the public domain by the authors. All code authors, and representatives of the companies they work for, have signed affidavits dedicating their contributions to the public domain and originals of those signed affidavits are stored in a firesafe at the main offices of Hwaci. Anyone is free to copy, modify, publish, use, compile, sell, or distribute the original System.Data.SQLite code, either in source code form or as a compiled binary, for any purpose, commercial or non-commercial, and by any means.

## 12.30 XAMLMarkupExtensions

Microsoft Public License (Ms-PL)

This license governs use of the accompanying software. If you use the software, you accept this license. If you do not accept the license, do not use the software.

#### 1. Definitions

The terms "reproduce," "reproduction," "derivative works," and "distribution" have the same meaning here as under U.S. copyright law.

A "contribution" is the original software, or any additions or changes to the software.

A "contributor" is any person that distributes its contribution under this license.

"Licensed patents" are a contributor's patent claims that read directly on its contribution.

#### 2. Grant of Rights

- (A) Copyright Grant- Subject to the terms of this license, including the license conditions and limitations in section 3, each contributor grants you a non-exclusive, worldwide, royalty-free copyright license to reproduce its contribution, prepare derivative works of its contribution, and distribute its contribution or any derivative works that you create.
- (B) Patent Grant- Subject to the terms of this license, including the license conditions and limitations in section 3, each contributor grants you a non-exclusive, worldwide, royalty-free license under its licensed patents to make, have made, use, sell, offer for sale, import, and/or otherwise dispose of its contribution in the software or derivative works of the contribution in the software.

#### 3. Conditions and Limitations

- (A) No Trademark License- This license does not grant you rights to use any contributors' name, logo, or trademarks.
- (B) If you bring a patent claim against any contributor over patents that you claim are infringed by the software, your patent license from such contributor to the software ends automatically.
- (C) If you distribute any portion of the software, you must retain all copyright, patent, trademark, and attribution notices that are present in the software.
- (D) If you distribute any portion of the software in source code form, you may do so only under this license by including a complete copy of this license with your distribution. If you distribute any portion of the software in compiled or object code form, you may only do so under a license that complies with this license.
- (E) The software is licensed "as-is." You bear the risk of using it. The contributors give no express warranties, guarantees or conditions. You may have additional consumer rights under your local laws which this license cannot change. To the extent permitted under your local laws, the contributors exclude the implied warranties of merchantability, fitness for a particular purpose and non-infringement.

#### 12.31 Caliburn.Micro

The MIT License

Copyright (c) 2010 Blue Spire Consulting, Inc.

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

### 12.32 Qt

#### GNU LESSER GENERAL PUBLIC LICENSE

The Qt Toolkit is Copyright (C) 2013 Digia Plc and/or its subsidiary(-ies). Contact: http://www.qt-project.org/legal

You may use, distribute and copy the Qt GUI Toolkit under the terms of GNU Lesser General Public License version 2.1, which is displayed below.

-----

### GNU LESSER GENERAL PUBLIC LICENSE Version 2.1, February 1999

Copyright (C) 1991, 1999 Free Software Foundation, Inc. 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.

[This is the first released version of the Lesser GPL. It also counts as the successor of the GNU Library Public License, version 2, hence the version number 2.1.]

#### Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public Licenses are intended to guarantee your freedom to share and change free software--to make sure the software is free for all its users.

This license, the Lesser General Public License, applies to some specially designated software packages--typically libraries--of the Free Software Foundation and other authors who decide to use it. You can use it too, but we suggest you first think carefully about whether this license or the ordinary General Public License is the better strategy to use in any particular case, based on the explanations below.

When we speak of free software, we are referring to freedom of use, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish); that you receive source code or can get it if you want it; that you can change the software and use pieces of it in new free programs; and that you are informed that you can do these things.

To protect your rights, we need to make restrictions that forbid distributors to deny you these rights or to ask you to surrender these rights. These restrictions translate to certain responsibilities for you if you distribute copies of the library or if you modify it.

For example, if you distribute copies of the library, whether gratis or for a fee, you must give the recipients all the rights that we gave you. You must make sure that they, too, receive or can get the source code. If you link other code with the library, you must provide complete object files to the recipients, so that they can relink them with the library after making changes to the library and recompiling it. And you must show them these terms so they know their rights.

We protect your rights with a two-step method: (1) we copyright the library, and (2) we offer you this license, which gives you legal permission to copy, distribute and/or modify the library.

To protect each distributor, we want to make it very clear that there is no warranty for the free library. Also, if the library is modified by someone else and passed on, the recipients should know that what they have is not the original version, so that the original author's reputation will not be affected by problems that might be introduced by others.

Finally, software patents pose a constant threat to the existence of any free program. We wish to make sure that a company cannot effectively restrict the users of a free program by obtaining a restrictive license from a patent holder. Therefore, we insist that any patent license obtained for a version of the library must be consistent with the full freedom of use specified in this license.

Most GNU software, including some libraries, is covered by the ordinary GNU General Public License. This license, the GNU Lesser General Public License, applies to certain designated libraries, and is quite different from the ordinary General Public License. We use this license for certain libraries in order to permit linking those libraries into non-free programs.

When a program is linked with a library, whether statically or using a shared library, the combination of the two is legally speaking a combined work, a derivative of the original library. The ordinary General Public License therefore permits such linking only if the entire combination fits its criteria of freedom. The Lesser General Public License permits more lax criteria for linking other code with the library.

We call this license the "Lesser" General Public License because it does Less to protect the user's freedom than the ordinary General Public License. It also provides other free software developers Less of an advantage over competing non-free programs. These disadvantages are the reason we use the ordinary General Public License for many libraries. However, the Lesser license provides advantages in certain special circumstances.

For example, on rare occasions, there may be a special need to encourage the widest possible use of a certain library, so that it becomes a de-facto standard. To achieve this, non-free programs must be allowed to use the library. A more frequent case is that a free library does the same job as widely used non-free libraries. In this case, there is little to gain by limiting the free library to free software only, so we use the Lesser General Public License.

In other cases, permission to use a particular library in non-free programs enables a greater number of people to use a large body of free software. For example, permission to use the GNU C Library in non-free programs enables many more people to use the whole GNU operating system, as well as its variant, the GNU/Linux operating system.

Although the Lesser General Public License is Less protective of the users' freedom, it does ensure that the user of a program that is linked with the Library has the freedom and the wherewithal to run that program using a modified version of the Library.

The precise terms and conditions for copying, distribution and modification follow. Pay close attention to the difference between a "work based on the library" and a "work that uses the library". The former contains code derived from the library, whereas the latter must be combined with the library in order to run.

## GNU LESSER GENERAL PUBLIC LICENSE TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License Agreement applies to any software library or other program which contains a notice placed by the copyright holder or other authorized party saying it may be distributed under the terms of this Lesser General Public License (also called "this License"). Each licensee is addressed as "you".

A "library" means a collection of software functions and/or data prepared so as to be conveniently linked with application programs (which use some of those functions and data) to form executables.

The "Library", below, refers to any such software library or work which has been distributed under these terms. A "work based on the Library" means either the Library or any derivative work under copyright law: that is to say, a work containing the Library or a portion of it, either verbatim or with modifications and/or translated straightforwardly into another language. (Hereinafter, translation is included without limitation in the term "modification".)

"Source code" for a work means the preferred form of the work for making modifications to it. For a library, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the library.

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running a program using the Library is not restricted, and output from such a program is covered only if its contents constitute a work based on the Library (independent of the use of the Library in a tool for writing it). Whether that is true depends on what the Library does and what the program that uses the Library does.

1. You may copy and distribute verbatim copies of the Library's complete source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and distribute a copy of this License along with the Library.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

- 2. You may modify your copy or copies of the Library or any portion of it, thus forming a work based on the Library, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:
  - a) The modified work must itself be a software library.
  - b) You must cause the files modified to carry prominent notices stating that you changed the files and the date of any change.
  - c) You must cause the whole of the work to be licensed at no charge to all third parties under the terms of this License.
  - d) If a facility in the modified Library refers to a function or a table of data to be supplied by an application program that uses

the facility, other than as an argument passed when the facility is invoked, then you must make a good faith effort to ensure that, in the event an application does not supply such function or table, the facility still operates, and performs whatever part of its purpose remains meaningful.

(For example, a function in a library to compute square roots has a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square roots.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Library, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Library, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Library.

In addition, mere aggregation of another work not based on the Library with the Library (or with a work based on the Library) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may opt to apply the terms of the ordinary GNU General Public License instead of this License to a given copy of the Library. To do this, you must alter all the notices that refer to this License, so that they refer to the ordinary GNU General Public License, version 2, instead of to this License. (If a newer version than version 2 of the ordinary GNU General Public License has appeared, then you can specify that version instead if you wish.) Do not make any other change in these notices.

Once this change is made in a given copy, it is irreversible for that copy, so the ordinary GNU General Public License applies to all subsequent copies and derivative works made from that copy.

This option is useful when you wish to copy part of the code of the Library into a program that is not a library.

4. You may copy and distribute the Library (or a portion or derivative of it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange.

If distribution of object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place satisfies the requirement to distribute the source code, even though third parties are not compelled to copy the source along with the object code. 5. A program that contains no derivative of any portion of the Library, but is designed to work with the Library by being compiled or linked with it, is called a "work that uses the Library". Such a work, in isolation, is not a derivative work of the Library, and therefore falls outside the scope of this License.

However, linking a "work that uses the Library" with the Library creates an executable that is a derivative of the Library (because it contains portions of the Library), rather than a "work that uses the library". The executable is therefore covered by this License. Section 6 states terms for distribution of such executables.

When a "work that uses the Library" uses material from a header file that is part of the Library, the object code for the work may be a derivative work of the Library even though the source code is not. Whether this is true is especially significant if the work can be linked without the Library, or if the work is itself a library. The threshold for this to be true is not precisely defined by law.

If such an object file uses only numerical parameters, data structure layouts and accessors, and small macros and small inline functions (ten lines or less in length), then the use of the object file is unrestricted, regardless of whether it is legally a derivative work. (Executables containing this object code plus portions of the Library will still fall under Section 6.)

Otherwise, if the work is a derivative of the Library, you may distribute the object code for the work under the terms of Section 6. Any executables containing that work also fall under Section 6, whether or not they are linked directly with the Library itself.

6. As an exception to the Sections above, you may also combine or link a "work that uses the Library" with the Library to produce a work containing portions of the Library, and distribute that work under terms of your choice, provided that the terms permit modification of the work for the customer's own use and reverse engineering for debugging such modifications.

You must give prominent notice with each copy of the work that the Library is used in it and that the Library and its use are covered by this License. You must supply a copy of this License. If the work during execution displays copyright notices, you must include the copyright notice for the Library among them, as well as a reference directing the user to the copy of this License. Also, you must do one of these things:

- a) Accompany the work with the complete corresponding machine-readable source code for the Library including whatever changes were used in the work (which must be distributed under Sections 1 and 2 above); and, if the work is an executable linked with the Library, with the complete machine-readable "work that uses the Library", as object code and/or source code, so that the user can modify the Library and then relink to produce a modified executable containing the modified Library. (It is understood that the user who changes the contents of definitions files in the Library will not necessarily be able to recompile the application to use the modified definitions.)
- b) Use a suitable shared library mechanism for linking with the Library. A suitable mechanism is one that (1) uses at run time a copy of the library already present on the user's computer system, rather than copying library functions into the executable, and (2) will operate properly with a modified version of the library, if

the user installs one, as long as the modified version is interface-compatible with the version that the work was made with.

- c) Accompany the work with a written offer, valid for at least three years, to give the same user the materials specified in Subsection 6a, above, for a charge no more than the cost of performing this distribution.
- d) If distribution of the work is made by offering access to copy from a designated place, offer equivalent access to copy the above specified materials from the same place.
- e) Verify that the user has already received a copy of these materials or that you have already sent this user a copy.

For an executable, the required form of the "work that uses the Library" must include any data and utility programs needed for reproducing the executable from it. However, as a special exception, the materials to be distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

It may happen that this requirement contradicts the license restrictions of other proprietary libraries that do not normally accompany the operating system. Such a contradiction means you cannot use both them and the Library together in an executable that you distribute.

- 7. You may place library facilities that are a work based on the Library side-by-side in a single library together with other library facilities not covered by this License, and distribute such a combined library, provided that the separate distribution of the work based on the Library and of the other library facilities is otherwise permitted, and provided that you do these two things:
  - a) Accompany the combined library with a copy of the same work based on the Library, uncombined with any other library facilities. This must be distributed under the terms of the Sections above.
  - b) Give prominent notice with the combined library of the fact that part of it is a work based on the Library, and explaining where to find the accompanying uncombined form of the same work.
- 8. You may not copy, modify, sublicense, link with, or distribute the Library except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense, link with, or distribute the Library is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.
- 9. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Library or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Library (or any work based on the Library), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Library or works based on it.

- 10. Each time you redistribute the Library (or any work based on the Library), the recipient automatically receives a license from the original licensor to copy, distribute, link with or modify the Library subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties with this License.
- 11. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Library at all. For example, if a patent license would not permit royalty-free redistribution of the Library by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Library.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply, and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

- 12. If the distribution and/or use of the Library is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Library under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.
- 13. The Free Software Foundation may publish revised and/or new versions of the Lesser General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Library specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Library does not specify a license version number, you may choose any version ever published by the Free Software Foundation.

14. If you wish to incorporate parts of the Library into other free programs whose distribution conditions are incompatible with these, write to the author to ask for permission. For software which is

copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

### **NO WARRANTY**

15. BECAUSE THE LIBRARY IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE LIBRARY, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE LIBRARY "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE LIBRARY IS WITH YOU. SHOULD THE LIBRARY PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

16. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE LIBRARY AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE LIBRARY (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE LIBRARY TO OPERATE WITH ANY OTHER SOFTWARE), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

### **END OF TERMS AND CONDITIONS**

How to Apply These Terms to Your New Libraries

If you develop a new library, and you want it to be of the greatest possible use to the public, we recommend making it free software that everyone can redistribute and change. You can do so by permitting redistribution under these terms (or, alternatively, under the terms of the ordinary General Public License).

To apply these terms, attach the following notices to the library. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

<one line to give the library's name and a brief idea of what it does.>
Copyright (C) <year> <name of author>

This library is free software; you can redistribute it and/or modify it under the terms of the GNU Lesser General Public License as published by the Free Software Foundation; either version 2.1 of the License, or (at your option) any later version.

This library 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. See the GNU Lesser General Public License for more details.

You should have received a copy of the GNU Lesser General Public License along with this library; if not, write to the Free Software Foundation, Inc., 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA

Also add information on how to contact you by electronic and paper mail.

You should also get your employer (if you work as a programmer) or your school, if any, to sign a "copyright disclaimer" for the library, if necessary. Here is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the library `Frob' (a library for tweaking knobs) written by James Random Hacker.

<signature of Ty Coon>, 1 April 1990 Ty Coon, President of Vice

That's all there is to it!

### 12.33 Webkit

Copyright (C) 2005, 2006, 2007, 2008, 2009 Apple Inc. All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- 1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
- 2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

THIS SOFTWARE IS PROVIDED BY APPLE INC. AND ITS CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL APPLE INC. OR ITS CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

### 12.34 V8

This license applies to all parts of V8 that are not externally maintained libraries. The externally maintained libraries used by V8 are:

- PCRE test suite, located in test/mjsunit/third\_party/regexp-pcre.js. This is based on the test suite from PCRE-7.3, which is copyrighted by the University of Cambridge and Google, Inc. The copyright notice and license are embedded in regexp-pcre.js.
- Layout tests, located in test/mjsunit/third\_party. These are based on layout tests from webkit.org which are copyrighted by Apple Computer, Inc. and released under a 3-clause BSD license.
- Strongtalk assembler, the basis of the files assembler-arm-inl.h, assembler-arm.cc, assembler-arm.h, assembler-ia32-inl.h, assembler-ia32.cc, assembler-ia32.h, assembler-x64-inl.h, assembler-x64.cc, assembler-x64.h, assembler-mips-inl.h, assembler-mips.cc, assembler-mips.h, assembler.cc and assembler.h. This code is copyrighted by Sun Microsystems Inc. and released

under a 3-clause BSD license.

Valgrind client API header, located at third\_party/valgrind/valgrind.h
 This is release under the BSD license.

These libraries have their own licenses; we recommend you read them, as their terms may differ from the terms below.

Copyright 2006-2012, the V8 project authors. All rights reserved. Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- \* Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
- \* Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
- \* Neither the name of Google Inc. nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

### 12.35 JavaScriptCore

NOTE! The LGPL below is copyrighted by the Free Software Foundation, but the instance of code that it refers to (the kde libraries) are copyrighted by the authors who actually wrote it.

GNU LIBRARY GENERAL PUBLIC LICENSE Version 2, June 1991

Copyright (C) 1991 Free Software Foundation, Inc. 51 Franklin Street, Fifth Floor Boston, MA 02110-1301, USA. Everyone is permitted to copy and distribute verbatim copies

of this license document, but changing it is not allowed.

[This is the first released version of the library GPL. It is numbered 2 because it goes with version 2 of the ordinary GPL.]

### Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public Licenses are intended to guarantee your freedom to share and change free software--to make sure the software is free for all its users.

This license, the Library General Public License, applies to some specially designated Free Software Foundation software, and to any other libraries whose authors decide to use it. You can use it for your libraries, too.

When we speak of free software, we are referring to freedom, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish), that you receive source code or can get it if you want it, that you can change the software or use pieces of it in new free programs; and that you know you can do these things.

To protect your rights, we need to make restrictions that forbid anyone to deny you these rights or to ask you to surrender the rights. These restrictions translate to certain responsibilities for you if you distribute copies of the library, or if you modify it.

For example, if you distribute copies of the library, whether gratis or for a fee, you must give the recipients all the rights that we gave you. You must make sure that they, too, receive or can get the source code. If you link a program with the library, you must provide complete object files to the recipients so that they can relink them with the library, after making changes to the library and recompiling it. And you must show them these terms so they know their rights.

Our method of protecting your rights has two steps: (1) copyright the library, and (2) offer you this license which gives you legal permission to copy, distribute and/or modify the library.

Also, for each distributor's protection, we want to make certain that everyone understands that there is no warranty for this free library. If the library is modified by someone else and passed on, we want its recipients to know that what they have is not the original version, so that any problems introduced by others will not reflect on the original authors' reputations.

Finally, any free program is threatened constantly by software patents. We wish to avoid the danger that companies distributing free software will individually obtain patent licenses, thus in effect transforming the program into proprietary software. To prevent this, we have made it clear that any patent must be licensed for everyone's free use or not licensed at all.

Most GNU software, including some libraries, is covered by the ordinary GNU General Public License, which was designed for utility programs. This license, the GNU Library General Public License, applies to certain designated libraries. This license is quite different from the ordinary one; be sure to read it in full, and don't assume that anything in it is the same as in the ordinary license.

The reason we have a separate public license for some libraries is that they blur the distinction we usually make between modifying or adding to a program and simply using it. Linking a program with a library, without changing the library, is in some sense simply using the library, and is analogous to running a utility program or application program. However, in a textual and legal sense, the linked executable is a combined work, a derivative of the original library, and the ordinary General Public License treats it as such.

Because of this blurred distinction, using the ordinary General Public License for libraries did not effectively promote software sharing, because most developers did not use the libraries. We concluded that weaker conditions might promote sharing better.

However, unrestricted linking of non-free programs would deprive the users of those programs of all benefit from the free status of the libraries themselves. This Library General Public License is intended to permit developers of non-free programs to use free libraries, while preserving your freedom as a user of such programs to change the free libraries that are incorporated in them. (We have not seen how to achieve this as regards changes in header files, but we have achieved it as regards changes in the actual functions of the Library.) The hope is that this will lead to faster development of free libraries.

The precise terms and conditions for copying, distribution and modification follow. Pay close attention to the difference between a "work based on the library" and a "work that uses the library". The former contains code derived from the library, while the latter only works together with the library.

Note that it is possible for a library to be covered by the ordinary General Public License rather than by this special one.

## GNU LIBRARY GENERAL PUBLIC LICENSE TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License Agreement applies to any software library which contains a notice placed by the copyright holder or other authorized party saying it may be distributed under the terms of this Library General Public License (also called "this License"). Each licensee is addressed as "you".

A "library" means a collection of software functions and/or data prepared so as to be conveniently linked with application programs (which use some of those functions and data) to form executables.

The "Library", below, refers to any such software library or work which has been distributed under these terms. A "work based on the Library" means either the Library or any derivative work under copyright law: that is to say, a work containing the Library or a portion of it, either verbatim or with modifications and/or translated straightforwardly into another language. (Hereinafter, translation is included without limitation in the term "modification".)

"Source code" for a work means the preferred form of the work for making modifications to it. For a library, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the library.

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running a program using the Library is not restricted, and output from such a program is covered only if its contents constitute a work based on the Library (independent of the use of the Library in a tool for writing it). Whether that is true depends on what the Library does and what the program that uses the Library does.

1. You may copy and distribute verbatim copies of the Library's complete source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and distribute a copy of this License along with the Library.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

- 2. You may modify your copy or copies of the Library or any portion of it, thus forming a work based on the Library, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:
  - a) The modified work must itself be a software library.
  - b) You must cause the files modified to carry prominent notices stating that you changed the files and the date of any change.
  - c) You must cause the whole of the work to be licensed at no charge to all third parties under the terms of this License.
  - d) If a facility in the modified Library refers to a function or a table of data to be supplied by an application program that uses the facility, other than as an argument passed when the facility is invoked, then you must make a good faith effort to ensure that, in the event an application does not supply such function or table, the facility still operates, and performs whatever part of its purpose remains meaningful.

(For example, a function in a library to compute square roots has a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square roots.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Library, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Library, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Library.

In addition, mere aggregation of another work not based on the Library with the Library (or with a work based on the Library) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may opt to apply the terms of the ordinary GNU General Public License instead of this License to a given copy of the Library. To do this, you must alter all the notices that refer to this License, so that they refer to the ordinary GNU General Public License, version 2, instead of to this License. (If a newer version than version 2 of the ordinary GNU General Public License has appeared, then you can specify that version instead if you wish.) Do not make any other change in these notices.

Once this change is made in a given copy, it is irreversible for that copy, so the ordinary GNU General Public License applies to all subsequent copies and derivative works made from that copy.

This option is useful when you wish to copy part of the code of the Library into a program that is not a library.

4. You may copy and distribute the Library (or a portion or derivative of it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange.

If distribution of object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place satisfies the requirement to distribute the source code, even though third parties are not compelled to copy the source along with the object code.

5. A program that contains no derivative of any portion of the Library, but is designed to work with the Library by being compiled or linked with it, is called a "work that uses the Library". Such a work, in isolation, is not a derivative work of the Library, and therefore falls outside the scope of this License.

However, linking a "work that uses the Library" with the Library creates an executable that is a derivative of the Library (because it contains portions of the Library), rather than a "work that uses the library". The executable is therefore covered by this License. Section 6 states terms for distribution of such executables.

When a "work that uses the Library" uses material from a header file that is part of the Library, the object code for the work may be a derivative work of the Library even though the source code is not. Whether this is true is especially significant if the work can be linked without the Library, or if the work is itself a library. The threshold for this to be true is not precisely defined by law.

If such an object file uses only numerical parameters, data structure layouts and accessors, and small macros and small inline functions (ten lines or less in length), then the use of the object file is unrestricted, regardless of whether it is legally a derivative work. (Executables containing this object code plus portions of the Library will still fall under Section 6.)

Otherwise, if the work is a derivative of the Library, you may distribute the object code for the work under the terms of Section 6. Any executables containing that work also fall under Section 6, whether or not they are linked directly with the Library itself.

6. As an exception to the Sections above, you may also compile or link a "work that uses the Library" with the Library to produce a work containing portions of the Library, and distribute that work under terms of your choice, provided that the terms permit modification of the work for the customer's own use and reverse engineering for debugging such modifications.

You must give prominent notice with each copy of the work that the Library is used in it and that the Library and its use are covered by this License. You must supply a copy of this License. If the work during execution displays copyright notices, you must include the copyright notice for the Library among them, as well as a reference

directing the user to the copy of this License. Also, you must do one of these things:

- a) Accompany the work with the complete corresponding machine-readable source code for the Library including whatever changes were used in the work (which must be distributed under Sections 1 and 2 above); and, if the work is an executable linked with the Library, with the complete machine-readable "work that uses the Library", as object code and/or source code, so that the user can modify the Library and then relink to produce a modified executable containing the modified Library. (It is understood that the user who changes the contents of definitions files in the Library will not necessarily be able to recompile the application to use the modified definitions.)
- b) Accompany the work with a written offer, valid for at least three years, to give the same user the materials specified in Subsection 6a, above, for a charge no more than the cost of performing this distribution.
- c) If distribution of the work is made by offering access to copy from a designated place, offer equivalent access to copy the above specified materials from the same place.
- d) Verify that the user has already received a copy of these materials or that you have already sent this user a copy.

For an executable, the required form of the "work that uses the Library" must include any data and utility programs needed for reproducing the executable from it. However, as a special exception, the source code distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

It may happen that this requirement contradicts the license restrictions of other proprietary libraries that do not normally accompany the operating system. Such a contradiction means you cannot use both them and the Library together in an executable that you distribute.

- 7. You may place library facilities that are a work based on the Library side-by-side in a single library together with other library facilities not covered by this License, and distribute such a combined library, provided that the separate distribution of the work based on the Library and of the other library facilities is otherwise permitted, and provided that you do these two things:
  - a) Accompany the combined library with a copy of the same work based on the Library, uncombined with any other library facilities. This must be distributed under the terms of the Sections above.
  - b) Give prominent notice with the combined library of the fact that part of it is a work based on the Library, and explaining where to find the accompanying uncombined form of the same work.
- 8. You may not copy, modify, sublicense, link with, or distribute the Library except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense, link with, or distribute the Library is void, and will automatically terminate your rights under this License. However, parties who have received copies,

or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

- 9. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Library or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Library (or any work based on the Library), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Library or works based on it.
- 10. Each time you redistribute the Library (or any work based on the Library), the recipient automatically receives a license from the original licensor to copy, distribute, link with or modify the Library subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties to this License.
- 11. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Library at all. For example, if a patent license would not permit royalty-free redistribution of the Library by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Library.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply, and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

- 12. If the distribution and/or use of the Library is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Library under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.
- 13. The Free Software Foundation may publish revised and/or new versions of the Library General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Library specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Library does not specify a license version number, you may choose any version ever published by the Free Software Foundation.

14. If you wish to incorporate parts of the Library into other free programs whose distribution conditions are incompatible with these, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

#### **NO WARRANTY**

15. BECAUSE THE LIBRARY IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE LIBRARY, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE LIBRARY "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE LIBRARY IS WITH YOU. SHOULD THE LIBRARY PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

16. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE LIBRARY AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE LIBRARY (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE LIBRARY TO OPERATE WITH ANY OTHER SOFTWARE), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

## END OF TERMS AND CONDITIONS How to Apply These Terms to Your New Libraries

If you develop a new library, and you want it to be of the greatest possible use to the public, we recommend making it free software that everyone can redistribute and change. You can do so by permitting redistribution under these terms (or, alternatively, under the terms of the ordinary General Public License).

To apply these terms, attach the following notices to the library. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

<one line to give the library's name and a brief idea of what it does.>
Copyright (C) <year> <name of author>

This library is free software; you can redistribute it and/or modify it under the terms of the GNU Lesser General Public License as published by the Free Software Foundation; either version 2 of the License, or (at your option) any later version.

This library 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. See the GNU Lesser General Public License for more details.

You should have received a copy of the GNU Lesser General Public License along with this library; if not, write to the Free Software Foundation, Inc., 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA

Also add information on how to contact you by electronic and paper mail.

You should also get your employer (if you work as a programmer) or your school, if any, to sign a "copyright disclaimer" for the library, if necessary. Here is a sample: alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the library 'Frob' (a library for tweaking knobs) written by James Random Hacker.

<signature of Ty Coon>, 1 April 1990 Ty Coon, President of Vice

That's all there is to it!

### 12.36 ANGLE

```
// Copyright (C) 2002-2010 The ANGLE Project Authors.
// All rights reserved.
//
// Redistribution and use in source and binary forms, with or without
// modification, are permitted provided that the following conditions
// are met:
//
//
      Redistributions of source code must retain the above copyright
//
      notice, this list of conditions and the following disclaimer.
II
      Redistributions in binary form must reproduce the above
//
      copyright notice, this list of conditions and the following
II
II
      disclaimer in the documentation and/or other materials provided
//
      with the distribution.
II
      Neither the name of TransGaming Inc., Google Inc., 3DLabs Inc.
//
//
      Ltd., nor the names of their contributors may be used to endorse
//
      or promote products derived from this software without specific
      prior written permission.
//
II
// THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
// "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
// LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS
// FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE
// COPYRIGHT OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT,
// INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING,
// BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES;
// LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER
// CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT
// LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN
// ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE
// POSSIBILITY OF SUCH DAMAGE.
```

### 12.37 ICU

ICU License - ICU 1.8.1 and later

#### COPYRIGHT AND PERMISSION NOTICE

Copyright (c) 1995-2016 International Business Machines Corporation and others

All rights reserved.

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, provided that the above copyright notice(s) and this permission notice appear in all copies of the Software and that both the above copyright notice(s) and this permission notice appear in supporting documentation.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT OF THIRD PARTY RIGHTS. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR HOLDERS INCLUDED IN THIS NOTICE BE LIABLE FOR ANY CLAIM, OR ANY SPECIAL INDIRECT OR CONSEQUENTIAL DAMAGES, OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.

Except as contained in this notice, the name of a copyright holder shall not be used in advertising or otherwise to promote the sale, use or other dealings in this Software without prior written authorization of the copyright holder.

All trademarks and registered trademarks mentioned herein are the property of their respective owners.

-----

Third-Party Software Licenses

This section contains third-party software notices and/or additional terms for licensed third-party software components included within ICU libraries.

1. Unicode Data Files and Software

### COPYRIGHT AND PERMISSION NOTICE

Copyright (C) 1991-2016 Unicode, Inc. All rights reserved. Distributed under the Terms of Use in http://www.unicode.org/copyright.html.

Permission is hereby granted, free of charge, to any person obtaining a copy of the Unicode data files and any associated documentation (the "Data Files") or Unicode software and any associated documentation (the "Software") to deal in the Data Files or Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, and/or sell copies of the Data Files or Software, and to permit persons to whom the Data Files

- or Software are furnished to do so, provided that
- (a) this copyright and permission notice appear with all copies of the Data Files or Software.
- (b) this copyright and permission notice appear in associated documentation, and
- (c) there is clear notice in each modified Data File or in the Software as well as in the documentation associated with the Data File(s) or Software that the data or software has been modified.

THE DATA FILES AND SOFTWARE ARE PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT OF THIRD PARTY RIGHTS.

IN NO EVENT SHALL THE COPYRIGHT HOLDER OR HOLDERS INCLUDED IN THIS NOTICE BE LIABLE FOR ANY CLAIM, OR ANY SPECIAL INDIRECT OR CONSEQUENTIAL DAMAGES, OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THE DATA FILES OR SOFTWARE.

Except as contained in this notice, the name of a copyright holder shall not be used in advertising or otherwise to promote the sale, use or other dealings in these Data Files or Software without prior written authorization of the copyright holder.

### 2. Chinese/Japanese Word Break Dictionary Data (cjdict.txt)

```
The Google Chrome software developed by Google is licensed under
# the BSD license. Other software included in this distribution is
# provided under other licenses, as set forth below.
#
#
  The BSD License
#
   http://opensource.org/licenses/bsd-license.php
#
   Copyright (C) 2006-2008, Google Inc.
#
#
  All rights reserved.
#
#
   Redistribution and use in source and binary forms, with or without
# modification, are permitted provided that the following conditions are met:
   Redistributions of source code must retain the above copyright notice,
# this list of conditions and the following disclaimer.
# Redistributions in binary form must reproduce the above
# copyright notice, this list of conditions and the following
# disclaimer in the documentation and/or other materials provided with
# the distribution.
# Neither the name of Google Inc. nor the names of its
# contributors may be used to endorse or promote products derived from
# this software without specific prior written permission.
#
#
  THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND
# CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES,
# INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF
# MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE
# DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE
# LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR
# CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF
# SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR
# BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF
# LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING
# NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS
# SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
```

```
#
#
   The word list in cidict.txt are generated by combining three word lists
# listed below with further processing for compound word breaking. The
# frequency is generated with an iterative training against Google web
# corpora.
#
#
   * Libtabe (Chinese)
#
     - https://sourceforge.net/project/?group id=1519
#
     - Its license terms and conditions are shown below.
#
#
   * IPADIC (Japanese)
#
     - http://chasen.aist-nara.ac.jp/chasen/distribution.html
#
     - Its license terms and conditions are shown below.
#
#
   -----COPYING.libtabe ---- BEGIN-----
#
#
#
    * Copyrighy (c) 1999 TaBE Project.
#
    * Copyright (c) 1999 Pai-Hsiang Hsiao.
#
    * All rights reserved.
#
#
    * Redistribution and use in source and binary forms, with or without
#
    * modification, are permitted provided that the following conditions
#
#
#
    * . Redistributions of source code must retain the above copyright
#
        notice, this list of conditions and the following disclaimer.
#
    * . Redistributions in binary form must reproduce the above copyright
#
        notice, this list of conditions and the following disclaimer in
#
        the documentation and/or other materials provided with the
#
        distribution.
#
    * . Neither the name of the TaBE Project nor the names of its
#
        contributors may be used to endorse or promote products derived
#
        from this software without specific prior written permission.
#
#
    * THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
    * "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
#
#
    * LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS
#
    * FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE
#
    * REGENTS OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT,
#
    * INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES
#
    * (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
#
    * SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
#
    * HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT,
#
    * STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE)
#
    * ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED
#
    * OF THE POSSIBILITY OF SUCH DAMAGE.
#
    */
#
#
#
    * Copyright (c) 1999 Computer Systems and Communication Lab,
#
                          Institute of Information Science, Academia
#
                              Sinica. All rights reserved.
#
#
    * Redistribution and use in source and binary forms, with or without
#
    * modification, are permitted provided that the following conditions
#
    * are met:
#
#
    * . Redistributions of source code must retain the above copyright
#
        notice, this list of conditions and the following disclaimer.
#
      . Redistributions in binary form must reproduce the above copyright
```

notice, this list of conditions and the following disclaimer in

#

```
#
        the documentation and/or other materials provided with the
#
        distribution.
#
    * . Neither the name of the Computer Systems and Communication Lab
#
        nor the names of its contributors may be used to endorse or
#
        promote products derived from this software without specific
#
        prior written permission.
#
#
    * THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
#
    * "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
#
    * LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS
#
    * FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE
#
    * REGENTS OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT,
#
    * INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES
#
    * (INCLUDING. BUT NOT LIMITED TO. PROCUREMENT OF SUBSTITUTE GOODS OR
#
    * SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
#
    * HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT,
#
    * STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE)
#
    * ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED
#
    * OF THE POSSIBILITY OF SUCH DAMAGE.
#
    */
#
#
   Copyright 1996 Chih-Hao Tsai @ Beckman Institute,
#
       University of Illinois
#
   c-tsai4@uiuc.edu http://casper.beckman.uiuc.edu/~c-tsai4
#
#
   -----COPYING.libtabe-----END------
#
#
#
   -----COPYING.ipadic----BEGIN-----
#
#
   Copyright 2000, 2001, 2002, 2003 Nara Institute of Science
#
   and Technology. All Rights Reserved.
#
#
   Use, reproduction, and distribution of this software is permitted.
#
   Any copy of this software, whether in its original form or modified,
#
   must include both the above copyright notice and the following
#
   paragraphs.
#
#
   Nara Institute of Science and Technology (NAIST),
#
   the copyright holders, disclaims all warranties with regard to this
#
   software, including all implied warranties of merchantability and
#
   fitness, in no event shall NAIST be liable for
   any special, indirect or consequential damages or any damages
#
#
   whatsoever resulting from loss of use, data or profits, whether in an
#
   action of contract, negligence or other tortuous action, arising out
#
   of or in connection with the use or performance of this software.
#
#
   A large portion of the dictionary entries
#
   originate from ICOT Free Software. The following conditions for ICOT
#
   Free Software applies to the current dictionary as well.
#
#
   Each User may also freely distribute the Program, whether in its
   original form or modified, to any third party or parties, PROVIDED
#
   that the provisions of Section 3 ("NO WARRANTY") will ALWAYS appear
   on, or be attached to, the Program, which is distributed substantially
   in the same form as set out herein and that such intended
   distribution, if actually made, will neither violate or otherwise
   contravene any of the laws and regulations of the countries having
#
  jurisdiction over the User or the intended distribution itself.
#
#
   NO WARRANTY
#
```

The program was produced on an experimental basis in the course of the

```
research and development conducted during the project and is provided
#
    to users as so produced on an experimental basis. Accordingly, the
 #
    program is provided without any warranty whatsoever, whether express,
 #
    implied, statutory or otherwise. The term "warranty" used herein
 #
    includes, but is not limited to, any warranty of the quality,
    performance, merchantability and fitness for a particular purpose of
 #
    the program and the nonexistence of any infringement or violation of
 #
    any right of any third party.
 #
 #
    Each user of the program will agree and understand, and be deemed to
 #
    have agreed and understood, that there is no warranty whatsoever for
 #
    the program and, accordingly, the entire risk arising from or
 #
    otherwise connected with the program is assumed by the user.
 #
 #
    Therefore, neither ICOT, the copyright holder, or any other
 #
    organization that participated in or was otherwise related to the
 #
    development of the program and their respective officials, directors,
 #
    officers and other employees shall be held liable for any and all
 #
    damages, including, without limitation, general, special, incidental
 #
    and consequential damages, arising out of or otherwise in connection
 #
    with the use or inability to use the program or any product, material
    or result produced or otherwise obtained by using the program,
 #
    regardless of whether they have been advised of, or otherwise had
 #
    knowledge of, the possibility of such damages at any time during the
    project or thereafter. Each user will be deemed to have agreed to the
 #
 #
    foregoing by his or her commencement of use of the program. The term
    "use" as used herein includes, but is not limited to, the use,
 #
    modification, copying and distribution of the program and the
 #
    production of secondary products from the program.
 #
 #
    In the case where the program, whether in its original form or
    modified, was distributed or delivered to or received by a user from
 #
    any person, organization or entity other than ICOT, unless it makes or
 #
    grants independently of ICOT any specific warranty to the user in
    writing, such person, organization or entity, will also be exempted
    from and not be held liable to the user for any such damages as noted
 #
    above as far as the program is concerned.
 #
 #
    -----COPYING.ipadic----END-----
Lao Word Break Dictionary Data (laodict.txt)
    Copyright (c) 2013 International Business Machines Corporation
    and others. All Rights Reserved.
 #
 # Project: http://code.google.com/p/lao-dictionary/
 # Dictionary: http://lao-dictionary.googlecode.com/git/Lao-Dictionary.txt
 # License: http://lao-dictionary.googlecode.com/git/Lao-Dictionary-LICENSE.txt
#
                 (copied below)
 #
 #
    This file is derived from the above dictionary, with slight
 #
    modifications.
 #
 #
    Copyright (C) 2013 Brian Eugene Wilson, Robert Martin Campbell.
 #
    All rights reserved.
 #
 #
    Redistribution and use in source and binary forms, with or without
 #
    modification.
 #
    are permitted provided that the following conditions are met:
 #
```

# Redistributions of source code must retain the above copyright notice, this # list of conditions and the following disclaimer. Redistributions in

#

```
binary form must reproduce the above copyright notice, this list of
 #
   conditions and the following disclaimer in the documentation and/or
   other materials provided with the distribution.
 #
 #
 # THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
 # "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
# LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS
 # FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE
 # COPYRIGHT HOLDER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT.
 # INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES
 # (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
 # SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
 # HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT,
 # STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE)
 # ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED
 # OF THE POSSIBILITY OF SUCH DAMAGE.
4. Burmese Word Break Dictionary Data (burmesedict.txt)
    Copyright (c) 2014 International Business Machines Corporation
   and others. All Rights Reserved.
#
 #
 #
   This list is part of a project hosted at:
 #
      github.com/kanyawtech/myanmar-karen-word-lists
 #
 #
 #
   Copyright (c) 2013, LeRoy Benjamin Sharon
 #
   All rights reserved.
 #
 #
   Redistribution and use in source and binary forms, with or without
 #
   modification, are permitted provided that the following conditions
 #
   are met: Redistributions of source code must retain the above
 #
   copyright notice, this list of conditions and the following
 #
   disclaimer. Redistributions in binary form must reproduce the
 #
   above copyright notice, this list of conditions and the following
 #
   disclaimer in the documentation and/or other materials provided
 #
   with the distribution.
 #
 #
      Neither the name Myanmar Karen Word Lists, nor the names of its
 #
      contributors may be used to endorse or promote products derived
 #
      from this software without specific prior written permission.
 #
 #
   THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND
   CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES.
 #
 #
   INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF
 #
   MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE
 #
   DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR CONTRIBUTORS
 #
   BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
 #
   EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED
 #
   TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
 #
```

## 5. Time Zone Database

SUCH DAMAGE.

#

#

#

#

ICU uses the public domain data and code derived from Time Zone Database for its time zone support. The ownership of the TZ database

DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON

ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF

THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF

is explained in BCP 175: Procedure for Maintaining the Time Zone Database section 7.

#### #7. Database Ownership # # The TZ database itself is not an IETF Contribution or an IETF # document. Rather it is a pre-existing and regularly updated work # that is in the public domain, and is intended to remain in the # public domain. Therefore, BCPs 78 [RFC5378] and 79 [RFC3979] do # not apply to the TZ Database or contributions that individuals make # to it. Should any claims be made and substantiated against the TZ # Database, the organization that is providing the IANA # Considerations defined in this RFC, under the memorandum of # understanding with the IETF, currently ICANN, may act in accordance # with all competent court orders. No ownership claims will be made # by ICANN or the IETF Trust on the database or the code. Any person # making a contribution to the database or code waives all rights to # future claims in that contribution or in the TZ Database.

### 12.38 libmng

```
/* * COPYRIGHT NOTICE:
/* * Copyright (c) 2000-2007 Gerard Juyn (gerard@libmng.com)
/* * [You may insert additional notices after this sentence if you modify
     this sourcel
/* * For the purposes of this copyright and license, "Contributing Authors" * */
/* * is defined as the following set of individuals:
/* *
/* *
       Gerard Juyn
/* *
       Glenn Randers-Pehrson
/* *
/* * The MNG Library is supplied "AS IS". The Contributing Authors
/* * disclaim all warranties, expressed or implied, including, without
/* * limitation, the warranties of merchantability and of fitness for any
/* * purpose. The Contributing Authors assume no liability for direct,
/* * indirect, incidental, special, exemplary, or consequential damages,
/* * which may result from the use of the MNG Library, even if advised of
/* * the possibility of such damage.
/* * Permission is hereby granted to use, copy, modify, and distribute this * */
/* * source code, or portions hereof, for any purpose, without fee, subject *
/* * to the following restrictions:
/* *
/* * 1. The origin of this source code must not be misrepresented;
       you must not claim that you wrote the original software.
/* * 2. Altered versions must be plainly marked as such and must not be
       misrepresented as being the original source.
/* * 3. This Copyright notice may not be removed or altered from any source *
       or altered source distribution.
/* * The Contributing Authors specifically permit, without fee, and
/* * encourage the use of this source code as a component to supporting
/* * the MNG and JNG file format in commercial products. If you use this
/* * source code in a product, acknowledgment would be highly appreciated. * */
```

### 12.39 libjpeg

The authors make NO WARRANTY or representation, either express or implied, with respect to this software, its quality, accuracy, merchantability, or fitness for a particular purpose. This software is provided "AS IS", and you, its user, assume the entire risk as to its quality and accuracy.

This software is copyright (C) 1991-2016, Thomas G. Lane, Guido Vollbeding. All Rights Reserved except as specified below.

Permission is hereby granted to use, copy, modify, and distribute this software (or portions thereof) for any purpose, without fee, subject to these conditions:

- (1) If any part of the source code for this software is distributed, then this README file must be included, with this copyright and no-warranty notice unaltered; and any additions, deletions, or changes to the original files must be clearly indicated in accompanying documentation.
- (2) If only executable code is distributed, then the accompanying documentation must state that "this software is based in part on the work of the Independent JPEG Group".
- (3) Permission for use of this software is granted only if the user accepts full responsibility for any undesirable consequences; the authors accept NO LIABILITY for damages of any kind.

These conditions apply to any software derived from or based on the IJG code, not just to the unmodified library. If you use our work, you ought to acknowledge us.

Permission is NOT granted for the use of any IJG author's name or company name in advertising or publicity relating to this software or products derived from it. This software may be referred to only as "the Independent JPEG Group's software".

We specifically permit and encourage the use of this software as the basis of commercial products, provided that all warranty or liability claims are assumed by the product vendor.

The Unix configuration script "configure" was produced with GNU Autoconf. It is copyright by the Free Software Foundation but is freely distributable. The same holds for its supporting scripts (config.guess, config.sub,

Itmain.sh). Another support script, install-sh, is copyright by X Consortium but is also freely distributable.

The IJG distribution formerly included code to read and write GIF files. To avoid entanglement with the Unisys LZW patent (now expired), GIF reading support has been removed altogether, and the GIF writer has been simplified to produce "uncompressed GIFs". This technique does not use the LZW algorithm; the resulting GIF files are larger than usual, but are readable by all standard GIF decoders.

### 12.40 PCRE

#### PCRE2 LICENCE

-----

PCRE2 is a library of functions to support regular expressions whose syntax and semantics are as close as possible to those of the Perl 5 language.

Releases 10.00 and above of PCRE2 are distributed under the terms of the "BSD" licence, as specified below, with one exemption for certain binary redistributions. The documentation for PCRE2, supplied in the "doc" directory, is distributed under the same terms as the software itself. The data in the testdata directory is not copyrighted and is in the public domain.

The basic library functions are written in C and are freestanding. Also included in the distribution is a just-in-time compiler that can be used to optimize pattern matching. This is an optional feature that can be omitted when the library is built.

### THE BASIC LIBRARY FUNCTIONS

\_\_\_\_\_

Written by: Philip Hazel Email local part: Philip.Hazel Email domain: gmail.com

Retired from University of Cambridge Computing Service, Cambridge, England.

Copyright (c) 1997-2022 University of Cambridge All rights reserved.

### PCRE2 JUST-IN-TIME COMPILATION SUPPORT

-----

Written by: Zoltan Herczeg
Email local part: hzmester
Email domain: freemail.hu

Copyright(c) 2010-2022 Zoltan Herczeg All rights reserved.

### STACK-LESS JUST-IN-TIME COMPILER

-----

Written by: Zoltan Herczeg

Email local part: hzmester

Email domain: freemail.hu

Copyright(c) 2009-2022 Zoltan Herczeg All rights reserved.

### THE "BSD" LICENCE

-----

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- \* Redistributions of source code must retain the above copyright notices, this list of conditions and the following disclaimer.
- \* Redistributions in binary form must reproduce the above copyright notices, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
- \* Neither the name of the University of Cambridge nor the names of any contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

### EXEMPTION FOR BINARY LIBRARY-LIKE PACKAGES

\_\_\_\_\_

The second condition in the BSD licence (covering binary redistributions) does not apply all the way down a chain of software. If binary package A includes PCRE2, it must respect the condition, but if package B is software that includes package A, the condition is not imposed on package B unless it uses PCRE2 independently.

End

### 12.41 zlib

(C) 1995-2022 Jean-loup Gailly and Mark Adler

This software is provided 'as-is', without any express or implied warranty. In no event will the authors be held liable for any damages arising from the use of this software.

Permission is granted to anyone to use this software for any purpose, including commercial applications, and to alter it and redistribute it freely, subject to the following restrictions:

1. The origin of this software must not be misrepresented; you must not

- claim that you wrote the original software. If you use this software in a product, an acknowledgment in the product documentation would be appreciated but is not required.
- 2. Altered source versions must be plainly marked as such, and must not be misrepresented as being the original software.
- 3. This notice may not be removed or altered from any source distribution.

Jean-loup Gailly Mark Adler

jloup@gzip.org madler@alumni.caltech.edu

If you use the zlib library in a product, we would appreciate \*not\* receiving lengthy legal documents to sign. The sources are provided for free but without warranty of any kind. The library has been entirely written by Jean-loup Gailly and Mark Adler; it does not include third-party code. We make all contributions to and distributions of this project solely in our personal capacity, and are not conveying any rights to any intellectual property of any third parties.

If you redistribute modified sources, we would appreciate that you include in the file ChangeLog history information documenting your changes. Please read the FAQ for more information on the distribution of modified source versions.

### 12.42 LuaSocket

LuaSocket 2.0.2 license Copyright (C) 2004-2007 Diego Nehab

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

## 12.43 rxi/json.lua

Copyright (c) 2020 rxi

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all

copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

### 12.44 Anthy

Source code in this package is released under the terms of LGPL, so you can use shared libraries under the terms of LGPL.

files listed below are released under the terms of GPL (alt-cannadic/COPYING)
./alt-cannadic/\*
./mkworddic/\*.t (except base.t, zipcode.t)
anything else is released under the terms of LGPL

I think GPLed dictionary is almost in same situation of GPLed fonts. It would be considered `mere aggregation' in GPL. anyway http://www.gnu.org/licenses/gpl-faq.html#MereAggregation says `This is a legal question, which ultimately judges will decide.'

-----

### GNU LESSER GENERAL PUBLIC LICENSE Version 2.1, February 1999

Copyright (C) 1991, 1999 Free Software Foundation, Inc. 59 Temple Place, Suite 330, Boston, MA 02111-1307 USA Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.

[This is the first released version of the Lesser GPL. It also counts as the successor of the GNU Library Public License, version 2, hence the version number 2.1.]

### Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public Licenses are intended to guarantee your freedom to share and change free software--to make sure the software is free for all its users.

This license, the Lesser General Public License, applies to some specially designated software packages--typically libraries--of the Free Software Foundation and other authors who decide to use it. You can use it too, but we suggest you first think carefully about whether this license or the ordinary General Public License is the better strategy to use in any particular case, based on the explanations below.

When we speak of free software, we are referring to freedom of use, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish); that you receive source code or can get it if you want it; that you can change the software and use pieces of it in new free programs; and that you are informed that you can do these things.

To protect your rights, we need to make restrictions that forbid distributors to deny you these rights or to ask you to surrender these rights. These restrictions translate to certain responsibilities for you if you distribute copies of the library or if you modify it.

For example, if you distribute copies of the library, whether gratis or for a fee, you must give the recipients all the rights that we gave you. You must make sure that they, too, receive or can get the source code. If you link other code with the library, you must provide complete object files to the recipients, so that they can relink them with the library after making changes to the library and recompiling it. And you must show them these terms so they know their rights.

We protect your rights with a two-step method: (1) we copyright the library, and (2) we offer you this license, which gives you legal permission to copy, distribute and/or modify the library.

To protect each distributor, we want to make it very clear that there is no warranty for the free library. Also, if the library is modified by someone else and passed on, the recipients should know that what they have is not the original version, so that the original author's reputation will not be affected by problems that might be introduced by others. ^L

Finally, software patents pose a constant threat to the existence of any free program. We wish to make sure that a company cannot effectively restrict the users of a free program by obtaining a restrictive license from a patent holder. Therefore, we insist that any patent license obtained for a version of the library must be consistent with the full freedom of use specified in this license.

Most GNU software, including some libraries, is covered by the ordinary GNU General Public License. This license, the GNU Lesser General Public License, applies to certain designated libraries, and is quite different from the ordinary General Public License. We use this license for certain libraries in order to permit linking those libraries into non-free programs.

When a program is linked with a library, whether statically or using a shared library, the combination of the two is legally speaking a combined work, a derivative of the original library. The ordinary General Public License therefore permits such linking only if the entire combination fits its criteria of freedom. The Lesser General Public License permits more lax criteria for linking other code with the library.

We call this license the "Lesser" General Public License because it does Less to protect the user's freedom than the ordinary General Public License. It also provides other free software developers Less of an advantage over competing non-free programs. These disadvantages are the reason we use the ordinary General Public License for many libraries. However, the Lesser license provides advantages in certain special circumstances.

For example, on rare occasions, there may be a special need to encourage the widest possible use of a certain library, so that it becomes a de-facto standard. To achieve this, non-free programs must be allowed to use the library. A more frequent case is that a free library does the same job as widely used non-free libraries. In this case, there is little to gain by limiting the free library to free software only, so we use the Lesser General Public License.

In other cases, permission to use a particular library in non-free programs enables a greater number of people to use a large body of free software. For example, permission to use the GNU C Library in non-free programs enables many more people to use the whole GNU operating system, as well as its variant, the GNU/Linux operating system.

Although the Lesser General Public License is Less protective of the users' freedom, it does ensure that the user of a program that is linked with the Library has the freedom and the wherewithal to run that program using a modified version of the Library.

The precise terms and conditions for copying, distribution and modification follow. Pay close attention to the difference between a "work based on the library" and a "work that uses the library". The former contains code derived from the library, whereas the latter must be combined with the library in order to run. ^L

# GNU LESSER GENERAL PUBLIC LICENSE TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License Agreement applies to any software library or other program which contains a notice placed by the copyright holder or other authorized party saying it may be distributed under the terms of this Lesser General Public License (also called "this License"). Each licensee is addressed as "you".

A "library" means a collection of software functions and/or data prepared so as to be conveniently linked with application programs (which use some of those functions and data) to form executables.

The "Library", below, refers to any such software library or work which has been distributed under these terms. A "work based on the Library" means either the Library or any derivative work under copyright law: that is to say, a work containing the Library or a portion of it, either verbatim or with modifications and/or translated straightforwardly into another language. (Hereinafter, translation is included without limitation in the term "modification".)

"Source code" for a work means the preferred form of the work for making modifications to it. For a library, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the library.

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running a program using the Library is not restricted, and output from such a program is covered only if its contents constitute a work based on the Library (independent of the use of the Library in a tool for writing it). Whether that is true depends on what the Library does and what the program that uses the Library does.

1. You may copy and distribute verbatim copies of the Library's complete source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and distribute a copy of this License along with the Library.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a

fee.

- 2. You may modify your copy or copies of the Library or any portion of it, thus forming a work based on the Library, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:
  - a) The modified work must itself be a software library.
  - b) You must cause the files modified to carry prominent notices stating that you changed the files and the date of any change.
  - c) You must cause the whole of the work to be licensed at no charge to all third parties under the terms of this License.
  - d) If a facility in the modified Library refers to a function or a table of data to be supplied by an application program that uses the facility, other than as an argument passed when the facility is invoked, then you must make a good faith effort to ensure that, in the event an application does not supply such function or table, the facility still operates, and performs whatever part of its purpose remains meaningful.

(For example, a function in a library to compute square roots has a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square roots.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Library, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Library, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Library.

In addition, mere aggregation of another work not based on the Library with the Library (or with a work based on the Library) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may opt to apply the terms of the ordinary GNU General Public License instead of this License to a given copy of the Library. To do this, you must alter all the notices that refer to this License, so that they refer to the ordinary GNU General Public License, version 2, instead of to this License. (If a newer version than version 2 of the ordinary GNU General Public License has appeared, then you can specify that version instead if you wish.) Do not make any other change in these notices.

^L

Once this change is made in a given copy, it is irreversible for that copy, so the ordinary GNU General Public License applies to all subsequent copies and derivative works made from that copy. This option is useful when you wish to copy part of the code of the Library into a program that is not a library.

4. You may copy and distribute the Library (or a portion or derivative of it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange.

If distribution of object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place satisfies the requirement to distribute the source code, even though third parties are not compelled to copy the source along with the object code.

5. A program that contains no derivative of any portion of the Library, but is designed to work with the Library by being compiled or linked with it, is called a "work that uses the Library". Such a work, in isolation, is not a derivative work of the Library, and therefore falls outside the scope of this License.

However, linking a "work that uses the Library" with the Library creates an executable that is a derivative of the Library (because it contains portions of the Library), rather than a "work that uses the library". The executable is therefore covered by this License. Section 6 states terms for distribution of such executables.

When a "work that uses the Library" uses material from a header file that is part of the Library, the object code for the work may be a derivative work of the Library even though the source code is not. Whether this is true is especially significant if the work can be linked without the Library, or if the work is itself a library. The threshold for this to be true is not precisely defined by law.

If such an object file uses only numerical parameters, data structure layouts and accessors, and small macros and small inline functions (ten lines or less in length), then the use of the object file is unrestricted, regardless of whether it is legally a derivative work. (Executables containing this object code plus portions of the Library will still fall under Section 6.)

Otherwise, if the work is a derivative of the Library, you may distribute the object code for the work under the terms of Section 6. Any executables containing that work also fall under Section 6, whether or not they are linked directly with the Library itself. ^L

6. As an exception to the Sections above, you may also combine or link a "work that uses the Library" with the Library to produce a work containing portions of the Library, and distribute that work under terms of your choice, provided that the terms permit modification of the work for the customer's own use and reverse engineering for debugging such modifications.

You must give prominent notice with each copy of the work that the Library is used in it and that the Library and its use are covered by this License. You must supply a copy of this License. If the work during execution displays copyright notices, you must include the copyright notice for the Library among them, as well as a reference directing the user to the copy of this License. Also, you must do one of these things:

- a) Accompany the work with the complete corresponding machine-readable source code for the Library including whatever changes were used in the work (which must be distributed under Sections 1 and 2 above); and, if the work is an executable linked with the Library, with the complete machine-readable "work that uses the Library", as object code and/or source code, so that the user can modify the Library and then relink to produce a modified executable containing the modified Library. (It is understood that the user who changes the contents of definitions files in the Library will not necessarily be able to recompile the application to use the modified definitions.)
- b) Use a suitable shared library mechanism for linking with the Library. A suitable mechanism is one that (1) uses at run time a copy of the library already present on the user's computer system, rather than copying library functions into the executable, and (2) will operate properly with a modified version of the library, if the user installs one, as long as the modified version is interface-compatible with the version that the work was made with.
- c) Accompany the work with a written offer, valid for at least three years, to give the same user the materials specified in Subsection 6a, above, for a charge no more than the cost of performing this distribution.
- d) If distribution of the work is made by offering access to copy from a designated place, offer equivalent access to copy the above specified materials from the same place.
- e) Verify that the user has already received a copy of these materials or that you have already sent this user a copy.

For an executable, the required form of the "work that uses the Library" must include any data and utility programs needed for reproducing the executable from it. However, as a special exception, the materials to be distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

It may happen that this requirement contradicts the license restrictions of other proprietary libraries that do not normally accompany the operating system. Such a contradiction means you cannot use both them and the Library together in an executable that you distribute.

7. You may place library facilities that are a work based on the Library side-by-side in a single library together with other library facilities not covered by this License, and distribute such a combined library, provided that the separate distribution of the work based on

^L

- the Library and of the other library facilities is otherwise permitted, and provided that you do these two things:
  - a) Accompany the combined library with a copy of the same work based on the Library, uncombined with any other library facilities. This must be distributed under the terms of the Sections above.
  - b) Give prominent notice with the combined library of the fact that part of it is a work based on the Library, and explaining where to find the accompanying uncombined form of the same work.

- 8. You may not copy, modify, sublicense, link with, or distribute the Library except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense, link with, or distribute the Library is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.
- 9. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Library or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Library (or any work based on the Library), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Library or works based on it.
- 10. Each time you redistribute the Library (or any work based on the Library), the recipient automatically receives a license from the original licensor to copy, distribute, link with or modify the Library subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties with this License. ^L
- 11. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Library at all. For example, if a patent license would not permit royalty-free redistribution of the Library by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Library.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply, and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

12. If the distribution and/or use of the Library is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Library under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates

the limitation as if written in the body of this License.

13. The Free Software Foundation may publish revised and/or new versions of the Lesser General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Library specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Library does not specify a license version number, you may choose any version ever published by the Free Software Foundation.

14. If you wish to incorporate parts of the Library into other free programs whose distribution conditions are incompatible with these, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

#### **NO WARRANTY**

15. BECAUSE THE LIBRARY IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE LIBRARY, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE LIBRARY "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE LIBRARY IS WITH YOU. SHOULD THE LIBRARY PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

16. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE LIBRARY AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE LIBRARY (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE LIBRARY TO OPERATE WITH ANY OTHER SOFTWARE), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

### **END OF TERMS AND CONDITIONS**

^L

How to Apply These Terms to Your New Libraries

If you develop a new library, and you want it to be of the greatest possible use to the public, we recommend making it free software that everyone can redistribute and change. You can do so by permitting redistribution under these terms (or, alternatively, under the terms of the ordinary General Public License).

To apply these terms, attach the following notices to the library. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

<one line to give the library's name and a brief idea of what it does.>
Copyright (C) <year> <name of author>

This library is free software; you can redistribute it and/or modify it under the terms of the GNU Lesser General Public License as published by the Free Software Foundation; either version 2.1 of the License, or (at your option) any later version.

This library 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. See the GNU Lesser General Public License for more details.

You should have received a copy of the GNU Lesser General Public License along with this library; if not, write to the Free Software Foundation, Inc., 59 Temple Place, Suite 330, Boston, MA 02111-1307 USA

Also add information on how to contact you by electronic and paper mail.

You should also get your employer (if you work as a programmer) or your school, if any, to sign a "copyright disclaimer" for the library, if necessary. Here is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the library `Frob' (a library for tweaking knobs) written by James Random Hacker.

<signature of Ty Coon>, 1 April 1990 Ty Coon, President of Vice

That's all there is to it!

### 12.45 LuaFileSystem

Copyright © 2003 Kepler Project.

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

### **REVISION HISTORY**

Document Revision: 01 (03/2024)

Document was created.

Document Revision: 02 (05/2024)

Limitations and Fixed Limitations were updated.