WICHTIG, BITTE LESEN SIE DIESEN TEXT ZUERST. DIES IST EIN LIZENZVERTRAG.

DIE MH-SOFTWARE GMBH (NACHFOLGEND ANBIETER) IST NUR BEREIT, IHNEN EINE LIZENZ AN DER SOFTWARE ZU GEWÄHREN, WENN SIE SICH MIT ALLEN BESTIMMUNGEN DIESES LIZENZVERTRAGES UND ALLEN ZUSÄTZLICHEN ODER SPEZIELLEN LIZENZBESTIMMUNGEN (NACHFOLGEND VERTRAG) EINVERSTANDEN ERKLÄREN. AUCH DIE NUTZUNG DER SOFTWARE BEGRÜNDET IHRE ZUSTIMMUNG ZUR GELTUNG ALLER BESTIMMUNGEN DES LIZENZVERTRAGES.

# 1. Vertragsgegenstand

- 1.1 Gegenstand des Vertrages ist die zur Nutzung überlassene Software, der dazugehörige Kopierschutz (z.B. Schutzmodul / Dongel), die Programmbeschreibung und Bedienungsanleitung, sowie sonstiges zugehörige schriftliche Material. Sie werden im Folgenden auch als Lizenz bezeichnet.
  - Der Einsatz der Software ist nur in Verbindung mit einem Kopierschutz (z.B. Schutzmodul / Dongel) möglich. Software und Schutzmodul stellen somit eine Einheit dar. Der Verlust einer dieser Komponenten bedeutet den Verlust der Lizenz.
  - Die Beschaffenheit und der Leistungsumfang der Software sowie die freigegebene Einsatzumgebung ergeben sich aus der jeweiligen Programmbeschreibung, ergänzend aus der Bedienungsanleitung, soweit nichts anderes vereinbart ist.
- 1.2 Die Software wird in ausführbarer Form einschließlich einer Bedienungsanleitung (Benutzerdokumentation oder Online-Hilfe) und der Installationsanleitung geliefert. Die Bedienungsanleitung und die Installationsanleitung können dem Kunden auch in elektronischer Form zur Verfügung gestellt werden.
  - Soweit in Software des Anbieters Schnittstellen zu nicht von ihm zu liefernder Software bestehen, gilt § 69 d Urheberrechtsgesetz. Vor einer Dekompilierung fordert der Kunde die erforderlichen Informationen zunächst beim Anbieter an.
  - Der Anbieter macht darauf aufmerksam, dass es nach dem Stand der Technik nicht möglich ist, Computer-Software so zu erstellen, dass sie in allen Anwendungen und Kombinationen fehlerfrei arbeitet. Gegenstand des Vertrages ist daher nur eine Software, die im Sinne der Programmbeschreibung und der Benutzungsanleitung grundsätzlich brauchbar ist.
- 1.3 Die Software wird durch den Kunden installiert und in Betrieb genommen. Alle weiteren Leistungen des Anbieters, die auf Wunsch des Kunden erbracht werden (insbesondere Einweisung, Schulung und Beratung), werden nach Aufwand vergütet.
- 1.4 Der Anbieter ist berechtigt, Aktualisierungen der Software nach eigenem Ermessen zu erstellen.
  - Es liegt in der Verantwortung des Anwenders, sich über die Verfügbarkeit neuerer Programmversionen mit Erweiterungen und Fehlerkorrekturen zu informieren. Der Anbieter stellt dazu geeignete Informationsquellen zur Verfügung, z.B. über die Programmoberfläche oder die Homepage.

# 2. Nutzungsrechte an Software und Schutz vor unberechtigter Nutzung

2.1 Der Anbieter räumt dem Kunden mit vollständiger Bezahlung der vereinbarten Vergütung ein einfaches, nicht ausschließliches Nutzungsrecht ein, die vereinbarte Software in dem im Vertrag festgelegten Umfang einzusetzen.

Das Nutzungsrecht kann befristet (zum Einsatz auf Zeit) oder unbefristet (zum Einsatz auf Dauer) erworben werden. Das Nutzungsrecht umfasst nur den Einsatz für interne Zwecke des Kunden.

Eine erweiterte Nutzung ist stets vor ihrem Beginn vertraglich zu vereinbaren. Die Vergütung richtet sich nach dem Umfang des Einsatzrechts.

# a) Einzelplatzlizenz:

Diese berechtigt den Kunden zum Einsatz der Software in Verbindung mit dem Kopierschutz (z.B. Schutzmodul / Dongel) auf einem Computer durch einen einzelnen Nutzer zur gleichen Zeit.

Der Kunde darf die Software gemeinsam mit dem Kopierschutz (z.B. Schutzmodul / Dongel) von einem Computer auf einen anderen Computer übertragen, vorausgesetzt, dass sie zu irgendeinem Zeitpunkt auf immer nur einem einzelnen Computer genutzt wird. Eine weitergehende Nutzung ist nicht zulässig.

Hat der Kunde mehrere Einzelplatzlizenzen erworben, so gilt diese Regelung sinngemäß für die Anzahl der erworbenen Lizenzen.

b) lokale Netzwerklizenz (standortgebundenes Lizenzsharing):

Die Lizenzen eines lokalen Netzwerkes werden über eine Lizenzverwaltungssoftware und einen zentralen Kopierschutz (z.B. Schutzmodul / Dongel) verwaltet. Die Benutzung der Software innerhalb eines lokalen Netzwerkes ist an allen, am Standort der Lizenzverwaltungssoftware vorhandenen Arbeitsplätze, erlaubt (floating licence).

Der standortfremde Zugriff (z.B. über VPN, Terminal Server, Remote Desktop oder vergleichbare Technologien) ist nicht gestattet.

Hat der Kunde mehrere Lizenzen für das lokale Netzwerk erworben, so ist an den Arbeitsplätzen innerhalb des lokalen Netzwerkes eine gleichzeitige Nutzung in der Anzahl der vorhandenen Lizenzen möglich.

c) überregionale Netzwerklizenz(standortunabhängiges Lizenzsharing):

Die Lizenzen eines überregionalen Netzwerkes werden über eine Lizenzverwaltungssoftware und ein zentrales Kopierschutzmodul (Dongel) verwaltet und gestatten die Nutzung innerhalb mehreren, z.B. über VPN verbundenen, lokalen Netzwerken.

Hat der Kunde mehrere Lizenzen für das überregionale Netzwerk erworben, so ist an den Arbeitsplätzen innerhalb des Netzwerkverbundes eine gleichzeitige Nutzung in der Anzahl der vorhandenen Lizenzen möglich (floating licence).

2.2 Eine Übertragung der Nutzungsrechte auf Dritte ist nur bei vollständiger Aufgabe der Rechte des Kunden zulässig. Der Kunde ist verpflichtet, die ihn treffenden Pflichten und Nutzungsbeschränkungen dem Dritten aufzuerlegen. Dies gilt insbesondere für die Pflichten

- nach Ziffer 3.5. Der Kunde wird den Anbieter über die Übertragung informieren und die Aufgabe der eigenen Nutzung schriftlich bestätigen.
- 2.3 Der Kunde darf Software nur kopieren, soweit dies für den vertragsgemäßen Einsatz erforderlich ist. Urheberrechtsvermerke in der Software dürfen nicht verändert oder gelöscht werden.
- 2.4 Der Anbieter ist berechtigt, angemessene technische Maßnahmen zum Schutz vor einer nicht vertragsgemäßen Nutzung zu treffen. Der Einsatz der Software auf einer Ausweich- oder Nachfolgekonfiguration darf dadurch nicht wesentlich beeinträchtigt werden.
- 2.5 Das Eigentum an überlassenen Vervielfältigungsstücken bleibt vorbehalten bis zur vollständigen Bezahlung der geschuldeten Vergütung. Soweit zuvor individuelle Nutzungsrechte eingeräumt werden, sind diese stets nur vorläufig und durch den Anbieter frei widerruflich eingeräumt.
- 2.6 Der Anbieter kann das Nutzungsrecht des Kunden widerrufen, wenn dieser nicht unerheblich gegen Einsatzbeschränkungen oder sonstige Regelungen zum Schutz vor unberechtigter Nutzung (siehe auch Ziffer 3.4 und 3.5) verstößt. Der Anbieter hat dem Kunden vorher eine Nachfrist zur Abhilfe zu setzen. Im Wiederholungsfall und bei besonderen Umständen, die unter Abwägung der beiderseitigen Interessen den sofortigen Widerruf rechtfertigen, kann der Anbieter den Widerruf ohne Fristsetzung aussprechen. Der Kunde hat dem Anbieter die Einstellung der Nutzung nach dem Widerruf schriftlich zu bestätigen. Der Anbieter wird dem Kunden das Einsatzrecht wieder einräumen, nachdem der Kunde schriftlich dargelegt und versichert hat, dass keinerlei Verstöße gegen das Einsatzrecht mehr vorliegen sowie vorherige Verstöße und deren Folgen beseitigt sind.

## 3. Pflichten des Kunden

- 3.1 Der Kunde sorgt dafür, dass spätestens zum Zeitpunkt der Lieferung fachkundiges Personal für die Unterstützung des Anbieters und den Einsatz der Software zur Verfügung steht.
- 3.2 Der Kunde wird dem Anbieter unverzüglich über Änderungen der Einsatzumgebung unterrichten. Ziffer 1.1 bleibt unberührt.
- 3.3 Der Kunde wird den Anbieter, soweit erforderlich, bei der Beseitigung von Mängeln unterstützen und auf Wunsch des Anbieters die betreffenden Projektdaten zur Verfügung stellen.
- 3.4 Der Kunde erkennt an, dass die Software samt der Bedienungsanleitung und weiterer Unterlagen auch in künftigen Versionen urheberrechtlich geschützt ist. Insbesondere Quellprogramme sind Betriebsgeheimnisse des Anbieters. Der Kunde trifft zeitlich unbegrenzt Vorsorge, dass Quellprogramme ohne Zustimmung des Anbieters Dritten nicht zugänglich werden. Die Übertragung von Quellprogrammen bedarf der Einwilligung des Anbieters, die nicht gegen Treu und Glauben verweigert werden darf. Quellprogramme hat der Anbieter nur aufgrund ausdrücklicher Vereinbarung zu liefern.
- 3.5 Der Kunde darf nichts unternehmen, was einer unberechtigten Nutzung Vorschub leisten könnte. Insbesondere darf er nicht versuchen, die Programme zu dekompilieren, außer er ist nach Ziffer 1.2 Absatz 2 dazu berechtigt. Der Kunde wird den Anbieter unverzüglich unterrichten, wenn er Kenntnis davon hat, dass in seinem Bereich ein unberechtigter Zugriff droht oder erfolgt ist.

- 3.6 Das Urheberrecht von verwendeten Normen und Richtlinien bleibt unberührt und ist nicht Vertragsgegenstand. Zur Wahrung dieser Rechte muss der Kunde im Besitz der entsprechenden Norm oder Richtlinie, in der vom Urheber vorgeschriebenen Form und Anzahl, sein.
- 3.7 In einigen Programmversionen sind TRY-Daten enthalten. Diese Klimadaten unterliegen den Lizenzbedingungen des Deutschen Wetterdienstes DWD und dürfen ausschließlich in Verbindung mit diesen Programmen verwendet werden.
- 3.8 Die Software enthält Bestandteile, die als Open Source Software lizenziert sind. Die davon betroffenen Bestandteile und die dazu gehörenden Lizenz-Bedingungen sind diesem Lizenztext angefügt. Der Lizenznehmer erhält an der verwendeten Open Source Software von den jeweiligen Rechteinhabern ein einfaches Nutzungsrecht unter den Bedingungen, die die dafür jeweils gültigen Lizenzbedingungen vorsehen.

Die vorliegenden Lizenzbedingungen gelten nur für die proprietären Bestandteile, die nicht als Open Source Software oder anderen Bedingungen lizenziert sind.

# 4. Mängelansprüche des Kunden

4.1 Der Anbieter gewährleistet, dass die Software bei vertragsgemäßem Einsatz den Vereinbarungen gemäß Ziffer 1.1. entspricht.

Die Verjährungsfrist für Ansprüche wegen Mängeln beginnt mit der Ablieferung oder – wenn der Anbieter installiert – mit Abschluss der Installation. Eine Erweiterung des Einsatzumfangs (Ziffer 2.1. Absatz 3) hat keinen Einfluss auf den Verlauf der Verjährung.

Für Rechtsmängel gilt ergänzend Ziffer 5 der mh-software AGB.

Für Sachmängel gilt ergänzend Ziffer 4 der mh-software AGB nach Maßgabe der nachfolgenden Regelung in Ziffern 4.2 – 4.4.

- 4.2 Der Kunde hat Mangelansprüche nur, wenn gemeldete Mängel reproduzierbar oder anderweitig durch den Kunden nachweisbar sind. Für die Mittelung von Mängeln gilt insbesondere Ziffer 2.3 der mh-software AGB.
- 4.3 Stehen dem Kunden Mängelansprüche zu, hat er zunächst nur das Recht auf Nacherfüllung innerhalb einer angemessenen Frist. Die Nacherfüllung beinhaltet nach Wahl des Anbieters entweder Nachbesserung oder die Lieferung einer Ersatzsoftware. Die Interessen des Kunden werden bei der Wahl angemessen berücksichtigt.
- 4.4 Schlägt die Nacherfüllung fehl oder ist sie aus anderen Gründen nicht durchzuführen, kann der Kunde unter den gesetzlichen Voraussetzungen die Vergütung vermindern, vom Vertrag zurücktreten und/oder im Rahmen von Ziffer 6 der mh-software AGB Schadens oder Aufwendungsersatz verlangen.

Ist die Nacherfüllung verzögert, gilt für Schadens- und Aufwendungsersatz des Anbieters Ziffer 3.4. der mh-software AGB.

Der Kunde übt ein ihm zustehendes Wahlrecht bezüglich dieser Mängelansprüche innerhalb einer angemessenen Frist aus, in der Regel innerhalb von 14 Kalendertagen ab Möglichkeit der Kenntnisnahme von Wahlrecht durch den Kunden.

# 5. Vertragslaufzeit und Ende des Vertragsverhältnisses

- 5.1 Die Erbringung der vertraglich vereinbarten Leistung erfolgt ab dem im Vertrag bezeichneten Datum zunächst für die Dauer der im Vertrag vereinbarten Laufzeit.
  - a) "Kauf-Modell"

Der Kauf-Vertrag läuft auf unbestimmte Zeit. Das Nutzungsrecht an der Software ist unbefristet (Einsatz auf Dauer).

b) "ABO-Modell"

Der ABO-Vertrag endet frühestens nach einer Laufzeit von 18 Monaten mit dem Ende des folgenden Kalenderjahres. Die Mindestlaufzeit liegt somit, abhängig vom Vertragsbeginn, zwischen 18 und 24 Monaten, sie endet grundsätzlich mit dem Kalenderjahr. Während dieser Mindestlaufzeit ist eine vorzeitige ordentliche Kündigung beidseitig ausgeschlossen. Der ABO-Vertrag kann mit einer Frist von 2 Monaten zum Ende des Kalenderjahres gekündigt werden, frühestens zum Ablauf der Mindestlaufzeit. Geschieht dies nicht, verlängert sich der Vertrag jeweils um ein weiteres Kalenderjahr, sofern er nicht mit einer Frist von 2 Monaten zum Ablauf des jeweiligen Verlängerungszeitraums ordentlich gekündigt wurde. § 545 BGB findet keine Anwendung. Das Nutzungsrecht an der Software ist befristet auf die Laufzeit des ABO-Vertrags (Einsatz auf Zeit).

c) "Miet-Modell"

Der Miet-Vertrag endet nach einer festen Laufzeit von 6 Monaten. Während dieser Laufzeit ist eine vorzeitige ordentliche Kündigung beidseitig ausgeschlossen. Das Nutzungsrecht an der Software ist befristet auf die Laufzeit des ABO-Vertrags (Einsatz auf Zeit). Die Nutzungsdauer kann vom Kunden durch einen neuen Miet-Vertrag um weitere 6 Monate verlängert werden.

d) "Überlassungs-Modell" und "Test/Demoversionen"

Das Nutzungsrecht an der Software ist befristet auf die vereinbarte Überlassungs-Zeit (Einsatz auf Zeit) und berechtigt ausschließlich zum nichtkommerziellen Einsatz der Software, wie z.B. zum Erstellen wissenschaftlicher Arbeiten, zur Ausbildung oder zu Test-Zwecken. Die erzielten Ergebnisse und Auswertungen dürfen zu keinem Zeitpunkt einer kommerziellen Verwendung zugeführt werden.

# 6. Ende des Nutzungsrechts und Rückgabe

- 6.1 Das Recht des Kunden zur Benutzung der Software erlischt automatisch ohne Kündigung, wenn er eine Bedingung dieses Vertrages verletzt. Er ist in diesem Fall verpflichtet, unverzüglich die überlassenen Originaldatenträger, alle Kopien der Software einschließlich etwaiger abgeänderter Exemplare und Downloads, sowie das schriftliche Material zu vernichten und den Kopierschutz an den Anbieter zurückzugeben.
- 6.2 Bei vertragskonformer Beendigung des Vertrages hat der Kunde den überlassenen Kopierschutz (z.B. ein Schutzmodul / Dongel) innerhalb 14 Tage an den Anbieter zurück zu geben, soweit nichts anderes vereinbart ist.
- 6.3 Der Kunde trägt das Risiko und die Kosten der Rückgabe. Empfehlenswert ist die Verwendung einer stabilen Verpackung und die Wahl eines nachvollziehbaren Versandweges, wie z.B. per Einschreiben-Rückschein.

6.4 Geht der Kopierschutz (z.B. ein Schutzmodul / Dongel) nicht fristgerecht beim Anbieter ein, wird dem Kunde für den Ersatz eine Pauschale von 300,-- Euro berechnet, sofern es sich um eine Software für den Einsatz auf Zeit handelt.

Wird der Kopierschutz bei Software für den Einsatz auf Dauer nicht oder nicht rechtzeitig zurückgegeben, z.B. nach einer Vertragsverletzung nach Ziffer 6.1 oder nach einem Austausch des Kopierschutzes, besteht für den Kunde nach wie vor Zugriff auf die zugehörigen Lizenzen. In diesem Fall wird der Kunde für die nutzbaren Lizenzen der Listenpreis berechnet.

# 7. Geltung der AGB

Ergänzend gelten die Allgemeinen Vertragsbedingungen (AGB) der mh-software GmbH.

Ergänzend bzw. abweichend zu den oben aufgeführten Lizenzbedingungen gelten für die Freeware-Programme "mh-BIM Starter" "mh-BIM Viewer" "TGA-tools" und "mh-Viewer":

# 1. Vertragsgegenstand

1.1 Gegenstand der Ergänzung sind die oben genannten Freeware-Programme, deren Bedienungsanleitung, sowie sonstiges zugehörige schriftliche Material. Nicht Bestandteil dieser Ergänzung sind die kostenpflichtigen Programme aus dem Hause mh-software.

# 2. Umfang der Benutzung

- 2.1 Die oben genannten Freeware-Programme sind kostenlos. mh-software verzichtet auf eine Vergütung und räumt jedem Benutzer ein einfaches, nicht widerrufbares Nutzungsrecht ein.
- 2.2 Die kommerzielle Verwendung der Programme ist ausdrücklich gestattet, ebenso der Einsatz in Studium und Ausbildung.
- 2.3 Sofern der Anwender nicht über Kenntnisse der technischen Grundlagen der mit den Programmen durchgeführten Berechnungen verfügt, raten wir vom Einsatz ab.

# 3. Vervielfältigung, Weitergabe an Dritte

- 3.1 Sie können die oben genannten Freeware-Programme unentgeltlich nutzen und beliebig oft installieren.
- 3.2 Ein Verändern des Inhaltes der Installation ist jedoch nicht erlaubt.
- 3.3 Es ist verboten, die Lizenz, bzw. die zur Lizenz gehörigen Daten, zu verkaufen, zu vermieten, zu verschenken, zu verleihen oder zu vertreiben.

Karlsruhe, 01.11.2021 / hl

mh-software GmbH Greschbachstr. 3 76229 Karlsruhe HRB 105537, Amtsgericht Mannheim Geschäftsführer Dipl.-Ing. Martin Holzschuh, Heinz Lang www.mh-software.de 

### **OPEN SOURCE SOFTWARE**

mh-software verwendet die folgenden Open Source Bibliotheken, für die die jeweils angegebenen Lizenzbedingungen gelten.

### ClosedXML

MIT-Lizenz, Lizenztext siehe unten

Copyright (c) 2016 ClosedXML

## GMap.NET

MIT-Lizenz, Lizenztext siehe unten

Copyright (c) FLAT EARTH. This software can access some map providers and may viotile their Terms of Service, you use it at your own risk, nothing is forcing you to accept this;} Source itself is legal!

# **Lighty**

MIT-Lizenz, Lizenztext siehe unten

Copyright (c) 2016 minami\_SC

### **Live-Charts**

MIT-Lizenz, Lizenztext siehe unten

Copyright (c) 2016 Alberto Rodriguez & LiveCharts contributors

### The MIT License (MIT)

Copyright (c) <year> <copyright holders>

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.

### **WPF Native Folder Browser**

Microsoft Public License (MS-PL), Lizenztext siehe unten

# **Extended WPF Toolkit**

Microsoft Public License (MS-PL), Lizenztext siehe unten

# **DotNetZipLib**

 ${\it Microsoft\ Public\ License\ (MS-PL),\ Lizenztext\ siehe\ unten}$ 

### 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.

# NLog

https://github.com/NLog/NLog

 $Copyright \ (c) \ 2004-2016 \ Jaroslaw \ Kowalski < jaak@jkowalski.net >, \ Kim \ Christensen, \ Julian \ Verdurmen$ 

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.

### **Avalon Wizard**

http://avalonwizard.codeplex.com/

Apache License version 2.0

### TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

#### 1. Definitions.

"License" shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, "control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

## 2. Grant of Copyright License.

Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

### 3. Grant of Patent License.

Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, nocharge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

### 4. Redistribution.

You may reproduce and distribute copies of the Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

You must give any other recipients of the Work or Derivative Works a copy of this License; and

You must cause any modified files to carry prominent notices stating that You changed the files; and

You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and

If the Work includes a "NOTICE" text file as part of its distribution, then any Derivative Works that You distribute must include a readable copy of the attribution notices contained within such NOTICE file, excluding those notices that do not pertain to any part of the Derivative Works, in at least one of the following places: within a NOTICE text file distributed as part of the Derivative Works; within the Source form

or documentation, if provided along with the Derivative Works; or, within a display generated by the Derivative Works, if and wherever such third-party notices normally appear. The contents of the NOTICE file are for informational purposes only and do not modify the License. You may add Your own attribution notices within Derivative Works that You distribute, alongside or as an addendum to the NOTICE text from the Work, provided that such additional attribution notices cannot be construed as modifying the License.

You may add Your own copyright statement to Your modifications and may provide additional or different license terms and conditions for use, reproduction, or distribution of Your modifications, or for any such Derivative Works as a whole, provided Your use, reproduction, and distribution of the Work otherwise complies with the conditions stated in this License.

#### 5. Submission of Contributions.

Unless You explicitly state otherwise, any Contribution intentionally submitted for inclusion in the Work by You to the Licensor shall be under the terms and conditions of this License, without any additional terms or conditions. Notwithstanding the above, nothing herein shall supersede or modify the terms of any separate license agreement you may have executed with Licensor regarding such Contributions.

#### 6. Trademarks.

This License does not grant permission to use the trade names, trademarks, service marks, or product names of the Licensor, except as required for reasonable and customary use in describing the origin of the Work and reproducing the content of the NOTICE file.

### 7. Disclaimer of Warranty.

Unless required by applicable law or agreed to in writing, Licensor provides the Work (and each Contributor provides its Contributions) on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied, including, without limitation, any warranties or conditions of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A PARTICULAR PURPOSE. You are solely responsible for determining the appropriateness of using or redistributing the Work and assume any risks associated with Your exercise of permissions under this License.

### 8. Limitation of Liability.

In no event and under no legal theory, whether in tort (including negligence), contract, or otherwise, unless required by applicable law (such as deliberate and grossly negligent acts) or agreed to in writing, shall any Contributor be liable to You for damages, including any direct, indirect, special, incidental, or consequential damages of any character arising as a result of this License or out of the use or inability to use the Work (including but not limited to damages for loss of goodwill, work stoppage, computer failure or malfunction, or any and all other commercial damages or losses), even if such Contributor has been advised of the possibility of such damages.

# 9. Accepting Warranty or Additional Liability.

While redistributing the Work or Derivative Works thereof, You may choose to offer, and charge a fee for, acceptance of support, warranty, indemnity, or other liability obligations and/or rights consistent with this License. However, in accepting such obligations, You may act only on Your own behalf and on Your sole responsibility, not on behalf of any other Contributor, and only if You agree to indemnify, defend, and hold each Contributor harmless for any liability incurred by, or claims asserted against, such Contributor by reason of your accepting any such warranty or additional liability.

Aus CodeProject (https://www.codeproject.com) wurden die folgenden Codes verwendet:

# Multiple Window Interface for WPF

Tony Gordon

# <u>Circular Indeterminate Progress Indicator Control</u>

 ${\sf gggustafson}$ 

### WPF TaskDialog Wrapper and Emulator

Sean A. Hanley

# Math Parser .NET

icemanind

Für diese Bibliotheken gilt die Code Project Open License (CPOL) 1.02, die unter https://www.codeproject.com/info/cpol10.aspx a bgerufen oder von mh-software bezogen werden kann.

### **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.

### 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 an 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!

### **BSD 3-Clause License**

Copyright (c) 2015-16, Jan Karger (Steven Kirk), 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 ist 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.

# Zlib:

https://www.zlib.net/

https://github.com/libharu/libharu

Copyright (C) 1999-2006 Takeshi Kanno

Copyright (C) 2007-2009 Antony Dovgal

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.

### PNG Reference Library License version2:

http://www.libpng.org/pub/png/libpng.html

COPYRIGHT NOTICE, DISCLAIMER, and LICENSE

PNG Reference Library License version 2

- Copyright (c) 1995-2018 The PNG Reference Library Authors.
- Copyright (c) 2018 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 even 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:

- 1. The origin of this softw are 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 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.
- 3. 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.

# The Modified (3-clause) BSD License

# https://github.com/libjpeg-turbo

Copyright (C)2009-2019 D. R. Commander. All Rights Reserved. Copyright (C)2015 Viktor Szathmáry. 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 libjpeg-turbo 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 COPYRIGHT HOLDERS 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.

# **Independent JPEG Group License**

### https://sourceforge.net/projects/libjpeg/

README for release 6b of 27-Mar-1998

This distribution contains the sixth public release of the Independent JPEG Group's free JPEG software. You are welcome to redistribute this software and to use it for any purpose, subject to the conditions under LEGAL ISSUES, below.

Serious users of this software (particularly those incorporating it into larger programs) should contact IJG at jpeg-info@uunet.uu.net to be added to our electronic mailing list. Mailing list members are notified of updates and have a chance to participate in technical discussions, etc.

This software is the work of Tom Lane, Philip Gladstone, Jim Boucher, Lee Crocker, Julian Minguillon, Luis Ortiz, George Phillips, Davide Rossi, Guido Vollbeding, Ge' Weijers, and other members of the Independent JPEG Group.

IJG is not affiliated with the official ISO JPEG standards committee.

### DOCUMENTATION ROADMAP

This file contains the following sections:

OVERVIEW General description of JPEG and the IJG software.

LEGAL ISSUES Copyright, lack of warranty, terms of distribution.

REFERENCES Where to learn more about JPEG.

ARCHIVE LOCATIONS Where to find newer versions of this software.

RELATED SOFTWARE Other stuff you should get.

FILE FORMAT WARS Software \*not\* to get.

TO DO Plans for future IJG releases.

Other documentation files in the distribution are:

User documentation:

install.doc How to configure and install the IJG software.

usage.doc Usage instructions for cjpeg, djpeg, jpegtran, rdjpgcom, and wrjpgcom.

\*.1 Unix-style man pages for programs (same info as usage.doc).

wizard.doc Advanced usage instructions for JPEG wizards only.

change.log Version-to-version change highlights.

Programmer and internal documentation:

libjpeg.doc How to use the JPEG library in your own programs.

 $example.c \qquad \text{Sample code for calling the JPEG library}.$ 

 $structure.doc \quad Overview \ of the \ JPEG \ library's \ internal \ structure.$ 

filelist.doc Road map of IJG files.

coderules.doc Coding style rules --- please read if you contribute code.

Please read at least the files install.doc and usage.doc. Useful information can also be found in the JPEG FAQ (Frequently Asked Questions) article. See ARCHIVE LOCATIONS below to find out where to obtain the FAQ article.

If you want to understand how the JPEG code works, we suggest reading one or more of the REFERENCES, then looking at the documentation files (in roughly the order listed) before diving into the code.

# OVERVIEW

This package contains C software to implement JPEG image compression and decompression. JPEG (pronounced "jay-peg") is a standardized compression method for full-color and gray-scale images. JPEG is intended for compressing "real-world" scenes; line drawings, cartoons and other non-realistic images are not its strong suit. JPEG is lossy, meaning that the output image is not exactly identical to the input image. Hence you must not use JPEG if you have to have identical output bits. However, on typical photographic images, very good compression levels can be obtained with no visible change, and remarkably high compression levels are possible if you can tolerate a low-quality image. For more details, see the references, or just experiment with various compression settings.

This software implements JPEG baseline, extended-sequential, and progressive compression processes. Provision is made for supporting all variants of these processes, although some uncommon parameter settings aren't implemented yet. For legal reasons, we are not

distributing code for the arithmetic-coding variants of JPEG; see LEGAL ISSUES. We have made no provision for supporting the hierarchical or lossless processes defined in the standard.

We provide a set of library routines for reading and writing JPEG image files, plus two sample applications "cjpeg" and "djpeg", which use the library to perform conversion between JPEG and some other popular image file formats. The library is intended to be reused in other applications.

In order to support file conversion and viewing software, we have included considerable functionality beyond the bare JPEG coding/decoding capability; for example, the color quantization modules are not strictly part of JPEG decoding, but they are essential for output to colormapped file formats or colormapped displays. These extra functions can be compiled out of the library if not required for a particular application. We have also included "jpegtran", a utility for lossless transcoding between different JPEG processes, and "rdjpgcom" and "wrjpgcom", two simple applications for inserting and extracting textual comments in JFIF files.

The emphasis in designing this software has been on achieving portability and flexibility, while also making it fast enough to be useful. In particular, the software is not intended to be read as a tutorial on JPEG. (See the REFERENCES section for introductory material.) Rather, it is intended to be reliable, portable, industrial-strength code. We do not claim to have achieved that goal in every aspect of the software, but we strive for it.

We welcome the use of this software as a component of commercial products. No royalty is required, but we do ask for an acknowledgement in product documentation, as described under LEGAL ISSUES.

**LEGAL ISSUES** 

In plain English:

- 1. We don't promise that this software works. (But if you find any bugs, please let us know!)
- 2. You can use this software for whatever you want. You don't have to pay us.
- 3. You may not pretend that you wrote this software. If you use it in a program, you must acknowledge somewhere in your documentation that you've used the IJG code.

In legalese:

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) 1991-1998, Thomas G. Lane. 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 nowarranty 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.

ansi2knr.c is included in this distribution by permission of L. Peter Deutsch, sole proprietor of its copyright holder, Aladdin Enterprises of Menlo Park, CA. ansi2knr.c is NOT covered by the above copyright and conditions, but instead by the usual distribution terms of the Free Software Foundation; principally, that you must include source code if you redistribute it. (See the file ansi2knr.c for full details.) However, since ansi2knr.c is not needed as part of any program generated from the IJG code, this does not limit you more than the foregoing paragraphs do.

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, Itconfig, Itmain.sh). Another support script, install-sh, is copyright by M.I.T. but is also freely distributable.

It appears that the arithmetic coding option of the JPEG spec is covered by patents owned by IBM, AT&T, and Mitsubishi. Hence arithmetic coding cannot legally be used without obtaining one or more licenses. For this reason, support for arithmetic coding has been removed from the free JPEG software. (Since arithmetic coding provides only a marginal gain over the unpatented Huffman mode, it is unlikely that very many implementations will support it.) So far as we are aware, there are no patent restrictions on the remaining code.

The IJG distribution formerly included code to read and write GIF files. To avoid entanglement with the Unisys LZW patent, 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.

We are required to state that

"The Graphics Interchange Format(c) is the Copyright property of CompuServe Incorporated.

GIF(sm) is a Service Mark property of CompuServe Incorporated."

#### REFERENCES

We highly recommend reading one or more of these references before trying to understand the innards of the JPEG software.

The best short technical introduction to the JPEG compression algorithm is

Wallace, Gregory K. "The JPEG Still Picture Compression Standard",

Communications of the ACM, April 1991 (vol. 34 no. 4), pp. 30-44.

(Adjacent articles in that issue discuss MPEG motion picture compression, applications of JPEG, and related topics.) If you don't have the CACM issue handy, a PostScript file containing a revised version of Wallace's article is available at

ftp://ftp.uu.net/graphics/jpeg/wallace.ps.gz. The file (actually a preprint for an article that appeared in IEEE Trans. Consumer Electronics) omits the sample images that appeared in CACM, but it includes corrections and some added material. Note: the Wallace article is copyright ACM and IEEE, and it may not be used for commercial purposes.

A somewhat less technical, more leisurely introduction to JPEG can be found in "The Data Compression Book" by Mark Nelson and Jean-loup Gailly, published by M&T Books (New York), 2nd ed. 1996, ISBN 1-55851-434-1. This book provides good explanations and example C code for a multitude of compression methods including JPEG. It is an excellent source if you are comfortable reading C code but don't know much about data compression in general. The book's JPEG sample code is far from industrial-strength, but when you are ready to look at a full implementation, you've got one here...

The best full description of JPEG is the textbook "JPEG Still Image Data Compression Standard" by William B. Pennebaker and Joan L. Mitchell, published by Van Nostrand Reinhold, 1993, ISBN 0-442-01272-1. Price US\$59.95, 638 pp. The book includes the complete text of the ISO JPEG standards (DIS 10918-1 and draft DIS 10918-2). This is by far the most complete exposition of JPEG in existence, and we highly recommend it

The JPEG standard itself is not available electronically; you must order a paper copy through ISO or ITU. (Unless you feel a need to own a certified official copy, we recommend buying the Pennebaker and Mitchell book instead; it's much cheaper and includes a great deal of useful explanatory material.) In the USA, copies of the standard may be ordered from ANSI Sales at (212) 642-4900, or from Global Engineering Documents at (800) 854-7179. (ANSI doesn't take credit card orders, but Global does.) It's not cheap: as of 1992, ANSI was charging \$95 for Part 1 and \$47 for Part 2, plus 7% shipping/handling. The standard is divided into two parts, Part 1 being the actual specification, while Part 2 covers compliance testing methods. Part 1 is titled "Digital Compression and Coding of Continuous-tone Still Images, Part 1: Requirements and guidelines" and has document numbers ISO/IEC IS 10918-1, ITU-T T.81. Part 2 is titled "Digital Compression and Coding of Continuous-tone Still Images, Part 2: Compliance testing" and has document numbers ISO/IEC IS 10918-2, ITU-T T.83

Some extensions to the original JPEG standard are defined in JPEG Part 3, a newer ISO standard numbered ISO/IEC IS 10918-3 and ITU-T T.84. IJG currently does not support any Part 3 extensions.

The JPEG standard does not specify all details of an interchangeable file format. For the omitted details we follow the "JFIF" conventions, revision 1.02. A copy of the JFIF spec is available from:

Literature Department

C-Cube Microsystems, Inc.

1778 McCarthy Blvd.

Milpitas, CA 95035

phone (408) 944-6300, fax (408) 944-6314

A PostScript version of this document is available by FTP at ftp://ftp.uu.net/graphics/jpeg/jfif.ps.gz. There is also a plain text version at ftp://ftp.uu.net/graphics/jpeg/jfif.txt.gz, but it is missing the figures.

The TIFF 6.0 file format specification can be obtained by FTP from ftp://ftp.sgi.com/graphics/tiff/TIFF6.ps.gz. The JPEG incorporation scheme found in the TIFF 6.0 spec of 3-June-92 has a number of serious problems. IJG does not recommend use of the TIFF 6.0 design (TIFF

Compression tag 6). Instead, we recommend the JPEG design proposed by TIFF Technical Note #2 (Compression tag 7). Copies of this Note can be obtained from ftp.sgi.com or from ftp://ftp.uu.net/graphics/jpeg/. It is expected that the next revision of the TIFF spec will replace the 6.0 JPEG design with the Note's design. Although IJG's own code does not support TIFF/JPEG, the free libtiff library uses our library to implement TIFF/JPEG per the Note. libtiff is available from ftp://ftp.sgi.com/graphics/tiff/.

### ARCHIVE LOCATIONS

The "official" archive site for this software is ftp.uu.net (Internet address 192.48.96.9). The most recent released version can always be found there in directory graphics/jpeg. This particular version will be archived as ftp://ftp.uu.net/graphics/jpeg/jpegsrc.v6b.tar.gz. If you don't have direct Internet access, UUNET's archives are also available via UUCP; contact help@uunet.uu.net for information on retrieving files that way.

Numerous Internet sites maintain copies of the UUNET files. However, only ftp.uu.net is guaranteed to have the latest official version.

You can also obtain this software in DOS-compatible "zip" archive format from the SimTel archives (ftp://ftp.simtel.net/pub/simtelnet/msdos/graphics/), or on CompuServe in the Graphics Support forum (GO CIS:GRAPHSUP), library 12 "JPEG Tools". Again, these versions may sometimes lag behind the <a href="ftp.uu.net">ftp.uu.net</a> release.

The JPEG FAQ (Frequently Asked Questions) article is a useful source of general information about JPEG. It is updated constantly and therefore is not included in this distribution. The FAQ is posted every two weeks to Usenet newsgroups comp.graphics.misc, news.answers, and other groups. It is available on the World Wide Web at <a href="http://www.faqs.org/faqs/ipeg-faq/">http://www.faqs.org/faqs/ipeg-faq/</a> and other news.answers archive at rtfm.mit.edu: <a href="http://rtfm.mit.edu/pub/usenet/news.answers/ipeg-faq/">http://rtfm.mit.edu/pub/usenet/news.answers/ipeg-faq/</a>. If you don't have Web or FTP access, send e-mail to <a href="mail-server@rtfm.mit.edu">mail-server@rtfm.mit.edu</a> with body

send usenet/news.answers/jpeg-faq/part1

send usenet/news.answers/jpeg-faq/part2

### **RELATED SOFTWARE**

Numerous viewing and image manipulation programs now support JPEG. (Quite a few of them use this library to do so.) The JPEG FAQ described above lists some of the more popular free and shareware viewers, and tells where to obtain them on Internet.

If you are on a Unix machine, we highly recommend Jef Poskanzer's free PBMPLUS software, which provides many useful operations on PPM-format image files. In particular, it can convert PPM images to and from a wide range of other formats, thus making cjpeg/djpeg considerably more useful. The latest version is distributed by the NetPBM group, and is available from numerous sites, notably <a href="mailto:the.wustl.edu/graphics/graphics/packages/NetPBM/">the latest version is distributed by the NetPBM group, and is available from numerous sites, notably <a href="mailto:the.wustl.edu/graphics/graphics/packages/NetPBM/">the latest version is distributed by the NetPBM group, and is available from numerous sites, notably <a href="mailto:the.wustl.edu/graphics/graphics/packages/NetPBM/">the latest version is distributed by the NetPBM group, and is available from numerous sites, notably <a href="mailto:the.wustl.edu/graphics/graphics/graphics/packages/NetPBM/">the latest version is distributed by the NetPBM group, and is available from numerous sites, notably <a href="mailto:the.wustl.edu/graphics/graphics/graphics/packages/NetPBM/">the latest version is distributed by the NetPBM group, and is available from numerous sites, notably <a href="mailto:the.wustl.edu/graphics/graphics/graphics/packages/NetPBM/">the latest version is distributed by the NetPBM group, and is available from numerous sites, notably <a href="mailto:the.wustl.edu/graphics/grap

A different free JPEG implementation, written by the PVRG group at Stanford, is available from ftp://havefun.stanford.edu/pub/jpeg/. This program is designed for research and experimentation rather than production use; it is slower, harder to use, and less portable than the IJG code, but it is easier to read and modify. Also, the PVRG code supports lossless JPEG, which we do not. (On the other hand, it doesn't do progressive JPEG.)

## FILE FORMAT WARS

Some JPEG programs produce files that are not compatible with our library. The root of the problem is that the ISO JPEG committee failed to specify a concrete file format. Some vendors "filled in the blanks" on their own, creating proprietary formats that no one else could read. (For example, none of the early commercial JPEG implementations for the Macintosh were able to exchange compressed files.)

The file format we have adopted is called JFIF (see REFERENCES). This format has been agreed to by a number of major commercial JPEG vendors, and it has become the de facto standard. JFIF is a minimal or "low end" representation. We recommend the use of TIFF/JPEG (TIFF revision 6.0 as modified by TIFF Technical Note #2) for "high end" applications that need to record a lot of additional data about an image. TIFF/JPEG is fairly new and not yet widely supported, unfortunately.

The upcoming JPEG Part 3 standard defines a file format called SPIFF. SPIFF is interoperable with JFIF, in the sense that most JFIF decoders should be able to read the most common variant of SPIFF. SPIFF has some technical advantages over JFIF, but its major claim to fame is simply that it is an official standard rather than an informal one. At this point it is unclear whether SPIFF will supersede JFIF or whether JFIF will remain the de-facto standard. IJG intends to support SPIFF once the standard is frozen, but we have not decided whether it should become our default output format or not. (In any case, our decoder will remain capable of reading JFIF indefinitely.)

Various proprietary file formats incorporating JPEG compression also exist. We have little or no sympathy for the existence of these formats. Indeed, one of the original reasons for developing this free software was to help force convergence on common, open format standards for JPEG files. Don't use a proprietary file format!

### TO DO

The major thrust for v7 will probably be improvement of visual quality. The current method for scaling the quantization tables is known not to be very good at low Q values. We also intend to investigate block boundary smoothing, "poor man's variable quantization", and other means of improving quality-vs-file-size performance without sacrificing compatibility.

In future versions, we are considering supporting some of the upcoming JPEG Part 3 extensions --- principally, variable quantization and the SPIFF file format.

As always, speeding things up is of great interest.

Please send bug reports, offers of help, etc. to <a href="mailto:ipeg-info@uunet.uu.net">ipeg-info@uunet.uu.net</a>.

### CefSharp

https://github.com/cefsharp/CefSharp/blob/master/LICENSE

Copyright © The CefSharp 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 name Chromium Embedded Framework nor the name CefSharp 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.