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## **MB-System Copyright, Licensing and Caveat:**

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This file contains the copyright and licensing terms for the MB-System open source software package for the processing and display of swath sonar data. This file is located at the top of the MB-System source code distribution directory structure.

Last Updated January 22, 2024

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### **MB-System Copyright (C) 1993-2024 by**

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MB-System was created by Caress and Chayes in 1992 at the  
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### **License**

The MB-System source code is distributed under the GNU General Public License, version 3, as formulated by the GNU Project. Early MB-System distributions were described as "public domain", which meant there was no restriction whatsoever on the use of the code. For over a decade we have adopted the more restrictive GNU GPL license in order to insure that anyone who distributes software based in whole or in part on MB-System also distributes their modified MB-System source code and any additional source code.

The file "GPL.md", also located at the top of the MB-System source code distribution directory structure, contains the text of the GNU GPL version 3. This text and associated explanations are available at the GNU Project website <https://www.gnu.org/licenses/gpl-3.0.en.html>

The MB-System distribution includes some source code derived from packages that are distributed separately and have been authored by programmers other than the MB-System team. This includes:

- The Generic Sensor Format (GSF) library source located in `mbsystem/src/gsf`  
The GSF package is maintained and distributed by Leidos Corporation under contract to the United States Naval Oceanographic Office. The current source code can be downloaded from <https://www.leidos.com/products/ocean-marine> and is licensed using the LGPLv2.1 open source license.
- The SURF API (SAPI) library source located in `mbsystem/src/surf`  
The SAPI package was released under the GNU General Public License by Atlas Hydrographic in 2001; Atlas Hydrographic has since been acquired by Teledyne Marine Technologies Inc.
- The MR1PR library source located in `mbsystem/src/mr1pr`  
This package was primarily developed by Roger Davis of the Hawaii Mapping Research Group (HMRG) at the University of Hawaii. The MR1PR source code was released without restriction by HMRG in 2000. This code is licensed as part of MB-System under the GNU General Public License (version 3).
- The `mb_beaudoin()` function found in `mbsystem/src/mbio/mb_angle.c`  
This important function that calculates beam angles for multibeam sonars was contributed by Jonathan Beaudoin of CCOM/JHC University of New Hampshire and John Hughes Clarke of the Ocean Mapping Group, University of New Brunswick. This code is licensed as part of MB-System under the GNU General Public License (version 3).
- The `mb_mergesort()` function found in `mbsystem/src/mbio/mb_esf.c`  
This implementation of the merge sorting algorithm derives from the GNU-Darwin Distribution. This code is released under both the Apple Public Source License Version 1.1 and the BSD license, with original copyright by the Regents of the University of California.
- The Terrain Relative Navigation (TRN) algorithm and related software  
The TRN software included in MB-System derives from software developed by Steve Rock of Stanford University, many of Steve Rock's graduate students from 2000 through 2020, and Rob McEwen, Rich Henthorn, and Kent Headley of MBARI. The integration of TRN into MB-System was done by Kent Headley and David Caress, and the relevant source files are found in `mbsystem/src/mbtrn`, `mbsystem/src/mbtrnav`, `mbsystem/src/mbtrnframe`, and `mbsystem/src/mbtrnutils`. This code is licensed as part of MB-System under the GNU General Public License (version 3).

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**Caveat**

The MB-System source code and any associated documentation does not come with any warranties, nor is it guaranteed to work on your computer or to do anything useful. The user assumes full responsibility for the use of this system. In particular, David W. Caress, the Monterey Bay Aquarium Research Institute, the Lamont-Doherty Earth Observatory of Columbia University, or any other individuals or organizations involved in the design and maintenance of the MB-System software package are NOT responsible for any damage that may follow from correct or incorrect use of these programs.

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