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Subsurface Divelog

User Manual

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Software License

Documentation License

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About Subsurface Divelog

Subsurface Divelog is an open source divelog program for recreational, technical and free divers that runs on Windows, Mac, Linux, Android and IOS.

Subsurface Divelog enables the download or import of dive logs from a variety of dive computers, dive log programs and dive log websites. Subsurface Divelog also supports import using files formatted using comma-separated values (CSV) and the ability to manually create and save dive logs directly.

Subsurface Divelog provides a visual dive planner module that makes dive planning easy and intuitive using a choice of Bühlmann ZH16 or Varying Permeability Model (VPM-B) decompression algorithms.

Subsurface Divelog offers both local and cloud storage options. Using the Subsurface Divelog cloud storage option, makes it it possible for you to access your dive log data from different computers and mobile devices in both online and offline modes.

A Bit of History

In fall of 2011, when a forced lull in kernel development gave him a chance to start a new project, Linux creator Linus Torvalds decided to tackle his frustration with the lack of decent divelog software on Linux.

Linus worked with a team of developers, and Subsurface Divelog is the result. It now supports Linux, Windows and MacOS and allows data import from many dive computers and several existing divelog programs.

Subsurface Divelog provides a quick and easy way to see the key information provided by a modern dive computer and lets users track a wide variety of data about their dives. In fall of 2012 Dirk Hohndel took over as Subsurface maintainer.

Using this Manual

Conventions used in this Manual

The following typographical conventions are used in this manual.

Typographic Conventions

Menu choices	Select File → New
Keyboard Key Combinations	Press **Ctrl**+**N**
Mouse Actions	Click the Left button (Left click).
	Click the Right button (Right click).
Commands	**ls** `-lash`
Screen Outputs	

```
total 80K
4.0K drwxrwxr-x  6 sean sean 4.0K Jan  3 18:12 .
4.0K drwxr-xr-x 51 sean sean 4.0K Jan  3 15:35 ..
4.0K drwxrwxr-x  3 sean sean 4.0K Jan  3 18:13 cloudst
40K drwxrwxr-x  2 sean sean  36K Jan  3 20:24 googlema
4.0K -rw-rw-r--  1 sean sean   16 Jan  3 18:12 hashes
4.0K drwxrwxr-x  3 sean sean 4.0K Jan  3 18:13 printir
4.0K -rw-rw-r--  1 sean sean  119 Dec 31 12:50 testing
4.0K drwxrwxr-x  2 sean sean 4.0K Dec 24 13:55 thumbna
```

Notes, Tips, Important Information, Warnings, and Examples

Tip

Tips are represented like this, and contain information helpful to the user, like showing an easier way to do something.

Note

Notes are represented like this, and contain information to take note of, as it may affect what the user does.

Important

Important information is represented like this. Typically, these show extra steps the user may need to take.

Warning

Warnings are represented like this, and contain information warning about possible damage if the instructions are not followed. This damage may be physical, to the hardware or the user, or it may be non-physical, such as the inadvertent deletion of important files.

Example 1. A Sample Example

Examples are represented like this, and typically contain examples showing a walkthrough, or the results of a particular action.

Structure of this Manual

The general organisation of this manual has been structured as follows:

Getting Help

The User Forum

The User Forum [http://subsurface-divelog.org/user-forum/] is a pulically accessible Google Group where anyone can ask questions, post comments or make suggestions. You can access the User Forum [http://subsurface-divelog.org/user-forum/] using a web browser, or you can subscribe to it via email; simply check the corresponding box when joining the forum.

Note

The preferred language is English, but we will make an effort to answer questions in other languages as well (not everyone is comfortable posting in English …).

The Mailing List

The Mailing List [http://lists.subsurface-divelog.org/cgi-bin/mailman/listinfo/subsurface] is for developers and users of Subsurface Divelog. If you intend Contributing to the Project it is a good idea to join the mailing list.

Note

Conversation there is in English -- even though this site (and Subsurface Divelog itself) are available in many languages, the shared language we all communicate in is English. Actually "Broken English" is just fine… :-)

IRC Freenode

There are developers and users hanging out in the #subsurface channel on freenode.net [http://freenode.net/].

While there is a freenode webchat, use of an IRC Client application is recomended.

The #subsurface channel requires that users have a registered nickname in order to join. Please see the freenode Nick Registration [https://freenode.net/kb/answer/registration] page for details.

Note

While people may be always logged in to the freenode channel, they but not always around - please be patient and stay around when asking questions - or try The User Forum.

Contributing to the Project

As an open source project, Subsurface Divelog always needs and welcomes contributions from the wider community. There are many opportunities for community contributions, for more information on the opportunities for contribution we highly recomend reading the Contribution Guidelines.

Chapter 1. Introduction

Subsurface can plan and track single and multi-tank dives using Air, Nitrox or TriMix. Subsurface allows tracking of dive locations including GPS coordinates (which can also conveniently be entered using a map interface), logging of equipment used and names of other divers, and lets users rate dives and provide additional notes.

You can tag dives and filter a dive list based on criteria including tags, locations and people with whom you were diving. You can group the dive list into trips, and edit multiple dives at the same time, making it easy to support a large number of dives.

One of the major strengths of Subsurface is its wide range of Supported Dive Computers. Subsurface can also use existing dive logs from several Supported Dive Software.

Another strength is its ability to visualize the depth profile (and, if available, the tank pressure curve) in innovative ways that give the user additional information on relative velocity, and momentary air consumption, during a dive. Users who dive with multiple dive computers can combine the data from each of their dive computers into one dive – allowing visualization of the data collected from multiple sources.

Subsurface also calculates a wide variety of statistics of the user's diving and tracks information like the SAC rate, partial pressures of O2, N2 and He, calculated deco information, and many more.

Multiple divers can share one instance of Subsurface using different preferences and settings.

The program is localized in about 20 languages and well supported by an active developer community.

Product Variants

Subsurface Divelog software is available as desktop, mobile and web application variants. Each of these has been named as follows:

Subsurface-desktop	The full program. An executable program installed on a desktop computer.
Subsurface-mobile	A mobile application installed on a smart phone.
Subsurface-cloud	A web application installed on the cloud and accessible by web browser.

Each variant of the software is not only designed to run on a different target hardware and environments, but also consistant of slight differences in functionality.

Subsurface-desktop

Subsurface-desktop is the name given to the full program that can be downloaded and installed on a computer desktop operating system such as Micoroft Windows, MacOS or Linux. Subsurface-desktop is fully featured and serves as the main program for recording and managing divelogs when using a desktop or laptop computer. While many features of Subsurface-desktop are also available in Subsurface-mobile, some features are not. The Dive Planning module is only available in Subsurface-desktop.

Subsurface-mobile

Subsurface-mobile is the name given to the modile version of Subsurface. It can be downloaded and installed on a smart phone device and is partially featured. It serves as a more limited mobile version of Subsurface Divelog aimed at Android and iOS smartphone and tablet devices, allowing viewing, entering, sharing, and storage of dive information at dive sites where a larger computer is not useful.

While the desktop version of Subsurface Divelog shows much more detailed information for each dive, Subsurface-mobile allows dive logs to be more accessible on a dive trip, where it is useful for providing proof of dive experience to dive shops or to review dives. Subsurface-mobile also allows the gathering of GPS locations where dives are performed using the GPS modem that is an integral part of most mobile devices.

Users of Subsurface-mobile typically use the mobile app as a companion to the desktop version, sharing dive information between the mobile and the desktop versions via the Subsurface-cloud service. However, Subsurface-mobile can also be used independently of the desktop version and does not require the use of cloud storage.

These items are discussed in greater detail in the following text. Subsurface-mobile does not support download of dive data from all the dive computers that Subsurface-desktop can. This limitation is mainly caused by the ability to access different type of devices on the two mobile platforms. On Android, a subset of dive computers that use a FTDI USB interface or a Bluetooth/Bluetooth LE interface are accessible by Subsurface-mobile. On iOS, only Bluetooth LE based dive computers are supported.

Subsurface-cloud

Subsurface-cloud is the name given to the Subsurface Divelog web-application and cloud service. It is not possible to download or install Subsurface-cloud because it is a web service that may be utilised by Subsurface Divelog and Subsurface-mobile to backup, store and exchange divelogs between Subsurface Divelog and Subsurface-mobile. It is accessible by a web browser. The web-based application interface of Subsurface-cloud provides a read-only reporting interface.

Feature Comparison

Table 1.1. Product Variants Feature Comparison

Feature	Desktop	Mobile	Cloud
Download divelogs direct	Yes	Yes	No
Store divelogs locally	Yes	Yes	No
Store divelogs on cloud	Yes	Yes	No
View divelogs	Yes	Yes	Yes
Manually create divelogs	Yes	Yes	No
Edit data fields	Yes	Yes	No
Record GPS Coordinates	Yes	Yes	No
Viewing recorded GPS locations on a map	Yes	Yes	Yes
Dive Planning	Yes	No	No

Chapter 2. Managing Logbooks

You can create and maintain a single logbook or multiple different logbooks. You can choose to store logbooks on your local hard drive, on the cloud storage or work with a combination of both.

Creating New Logbooks

To create a new logbook:

1. Select File → New logbook.

   Any open logbook is closed and a new empty logbook is displayed.

Note

If there are unsaved changes in the current open logbook, you will be prompted whether or not to save before a new logbook is created.

Important

If you have enabled Subsurface-cloud storage you will receive a message at the bottom of the screen advising you "Don't save an empty log to the cloud.". You will therefore not be able to save the new empty logbook to the cloud until at least one dive log has been addded to the logbook.

Saving a Logbook

While working in a logbook changes are not automatically saved. Instead you must decide when and where you want to save a logbook.

Logbooks can be saved to the following locations:

Local storage	You local hard drive or shared drive on your local network.
Cloud storage	The Subsurface-cloud storage service

Saving Logbooks to Local Storage

To save a logbook to local storage:

1.

Saving Logbooks to Cloud Storage

Important

For this feature to work you must have a Subsurface-cloud account (see setup-cloud-storage-service.

Note

New empty logbooks cannot be saved cloud until at least one dive log has been addded to the logbook.

Warning

To save a logbook to cloud storage:

1. Ensure the Cloud storage online checkbox is checked File → Cloud storage online

   Any unsaved changes in the logbook will be saved and pushed to the cloud storage.

2. Select File → Save for any further times you want to save.

Note

While the Cloud storage online checkbox is checked. Both the File → Save and the File → Save to online cloud menu items will push changes to the cloud.

Opening Existing Logbooks

Opening Locally Stored Logbooks

To open a logbook from local storage:

1. Select File → Open logbook.

   The Open file dialog is displayed.

2. Navigate to and select the log file you want to open.

3. Click theOpen button.

   The selected logbook will be opened and displayed.

Opening Cloud Stored Logbooks

Important

For this feature to work you must have a Subsurface-cloud account (see setup-cloud-storage-service.

To open a logbook from cloud storage:

1. Select File → Open cloud storage.

   The logbook stored in the cloud will be opened and displayed.

Chapter 3. Managing Dive Logs

Subsurface Divelog supports the following methods of adding dive data to a logbook. Dive logs can be:

Created manually	Dives recorded in written logbooks can be manually entered by hand.	
Imported from external sources including:	Spreadsheets or CSV Files	Dives recorded using spreadsheet programs can be exported to CSV file format. Provided that each record in the spreadsheet represents a single dive, it may be possible to import the dive logs assuming the delimetered fields can be mapped.
	Dive Computers	
	Third Party Software	Proprietary software distributed by dive computer manufacturers

Manually Creating Dive Logs

This approach works well for dives done with without a dive computer. The basic record of information within Subsurface is a dive. While Subsurface can store much more information for each dive, the most important information in a simple dive logbook usually includes:

- dive type
- date
- time
- duration
- depth
- name of your dive buddy
- name of the divemaster or dive guide
- remarks about the dive

There are two main tasks to perform when manually creating divelogs:

1. Edit the Dive Profile
2. Edit the Dive Profile

Enter Dive Information

Entering dive information is as simple as completing the fields on the the Dive Info panel Notes and Equipment tabs.

To add a new dive to a logbook:

1. Open the logbook you want to add the dive to.
2. Select Log → Add dive from the Main Menu.

   A new dive is started and is in edit mode.
3. In the Dive Info panel complete the fields in the Notes tab.
4. In the Dive Info panel complete the fields in the Equipment tab.
5. Click the Apply changes button to update the dive information in memory.

Edit the Dive Profile

Importing Dive Logs

Importing from a Dive Computer

Importing from Dive Log Software

Importing from CSV Files

Viewing Dive Logs

The Dive List panel lists the dive logs in an open logbook. Each dive log is a record in the Dive List. Dive logs can selected using the mouse pointer and clicking a record or using the **UP** and **DOWN** keys on the keyboard.

Selecting Multiple Dive Logs

It is possible to select multiple records, consecutively and non-consecutively, using the mouse or keyboard.

Selecting multiple consecutive records using the mouse:

1. Point and click a record.

   The record will be highlighted showing it is selected.
2. Hold down the **Shift** key on the keyboard.
3. Point and click a record above or below the currently selected record.

   The records between and including the clicked records will be highlighted showing they are selected.

Selecting multiple non-consecutive records using the mouse:

1. Point and click a record.

   The record will be highlighted showing it is selected.
2. Hold down the **CTRL** key on the keyboard.

3. Point and click a record above or below the currently selected record.

   Only the records you click on will be highlighted showing they are selected.

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Working with Dive Trips

Creating Dive Trip

Adding Dives to a Dive Trip

Removing Dives from a Dive Trip

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Chapter 4. Planning Dives

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Appendix A. Installation

Executable installation programs and source archives of the lastest version are available from the Project Downloads [https://subsurface-divelog.org/download/] page.

Following installation a number of setup tasks will be required in order to prepare the software for use. Please see appendix-setup-and-configuration for more detailed instructions.

Important

Install of software on a computer may require administrative priviledges.

Supported Target Devices

Subsurface Divelog runs on the following hardware platforms:

Intel and AMD based Personal Computers
Intel Macintosh
Smart Phone
iPhone

Supported Operating Systems

The latest version has been tested on the following operating systems and versions.

Supported Operating Systems

Windows (32 - 64 bit)	Windows 7, Windows 8 and Windows 10.
MacOS (64bit Intel)	MacOS 10.10 or later
Ubuntu Linux	Xenial 16.04, Bionic 18.04
Debian Linux	Debian Stretch
Linux Mint	Linux Mint 18
Fedora	???
OpenSUSE	???
Android	Android 5.0 Lollipop, Android 6.0 Marshmallow
iOS	iOS 10, iOS 11, iOS 12

Installation on Windows

Use the Windows installer to install. During installation the Start Menu Folder is created and a short-cuts are added to the folder which enabled starting and to uninstalling of the program.

Procedure A.1. To install on Windows:

1. Download the installer [https://subsurface-divelog.org/download/subsurface-4.8.2.exe].
2. Execute the installer.
3. Click Yes to allow the installation.

4. Accept the software license.
5. Choose the install path (default should be reasonable in most cases).

Installation on MacOS

Procedure A.2. To install on MacOS:

1. Download the installer [https://subsurface-divelog.org/download/Subsurface-4.8.2.dmg].
2. Execute the installer.
3. Locate the Subsurface.app file in the Finder Sidebar.
4. Drag the application into the `/Applications` folder to install.

Installation on Linux

The project makes dedicated binaries available for a number of Linux flavours as well as a generic AppImage that should work on most any Linux distributions.

Installation on DEB-based Systems

The project maintains a Personal Package Archive (PPA) repository.

ppa:subsurface/subsurface

Procedure A.3. To install on DEB-based systems:

1. Add the repository.

   sudo apt-add-repository ppa:subsurface/subsurface
2. Update the software list.

   sudo apt-get update
3. Install the program.

   sudo apt-get install subsurface

Important

Make sure you are getting a current version with all its Qt5 dependencies.

Procedure A.4. To install on older DEB-based systems:

Installation on older DEB-based systems is possible but required changing the release name of the distribution.

1. Add the repository.

   sudo apt-add-repository ppa:subsurface/subsurface
2. Update the software list.

   sudo apt-get update
3. Install the program.

sudo apt-get install subsurface

Installation on RPM-based Systems

The project maintains a build service project page from which it is possible to download and install.

Procedure A.5. To install on RPM-based systems:

1. Click Here to display the build service project page.
2. Click Cancel to by-pass the Search settings dialog.
3. Select your Operating System.
4. Choose your installation method:

   Add a repository and install manually.
   Grab binary packages directly.

Installation on other 64bit Linux Systems

Installation on Android Devices

Subsurface Divelog is available on Google Play Store [https://play.google.com/store/apps], where it is known as Subsurface-mobile [https://play.google.com/store/apps/details?id=org.subsurfacedivelog.mobile].

Procedure A.6. To install on Android devices:

1. Start the Play Store application on your phone.
2. Search for "Subsurface-mobile".
3. Click the Install button.

Installation on iOS Devices

????

Building from Sources

Subsurface Divelog can be built from source but makes use of a number of source libraries and frameworks. The most important ones include libdivecomputer, Qt, libxml2, libxslt, libsqlite3, libzip, libgrantlee5 and libgit2.

The best place to start looking for information on building from source is in the `INSTALL` [https://github.com/Subsurface-divelog/subsurface/blob/master/INSTALL] file located in the project Subsurface Divelog Github Repository [https://github.com/Subsurface-divelog/subsurface].

Appendix B. Setup and Configuration

Setup Cloud Storage Service

Subsurface-cloud provides cloud-based services for storage of dive logs created in Subsurface-desktop and Subsurface-mobile when these editions are configured to use Subsurface-cloud services. In doing so Subsurface-cloud is able to facilitate not only the storage of dive logs on the cloud but also serves as a means to exchange divelogs between editions.

The setup of either edition is easy, quick to do and secure. All you need is an email address and the ability to access your email inbox during the setup process.

To create a cloud storage account:

1. From the Main Menu, select File → Preferences.

   The Preferences dialog is displayed.

2. Select the Network options group.

3. Enter your email address in the Email address field.

4. Enter a password in the Password field.

5. Click the Apply button.

   After a second or two a message will be displayed at the bottom of the screen.

   ```
   Cloud account verification required, enter PIN in preferences.
   ```

6. Check your email inbox for a an email from "do_not_reply__@subsurface-divelog.org" with subject "Subsurface Cloud Account PIN".

   This message will contain the PIN number you require in order to verify your Subsurface-cloud account.

7. Enter the PIN to the Verification PIN field, then click the Apply button.

   If the verification task is successful the options group lable will display the works "(credentials verified)".

Important

Congratulations you have sucessfully created your Subsurface-cloud account. Remember to write down the email address and password used so that you can recall it in the event that you should forget.

To change you cloud storage account password:

1. From the Main Menu, select File → Preferences.

   The Preferences dialog is displayed.

2. Select the Network options group.

3. Enter a password in the New password field.

4. Click the Save button.

5. Select File → Open cloud storage to check that you still have access to the cloud storage.

Note

When changing password the current correct password must be entered to thePassword field.

Warning

At time of writing there is no way for a user to reset a Subsurface-cloud account password without manual intervention from one of the developers.

Please remember your email and password authentication combination, even write it down somewhere.

In the event that you did not heed this warning, please read this thread on the user forum [https://groups.google.com/forum/#!topic/subsurface-divelog/JM4etEKIeWk].

Setup Support for Video Thumbnails

Subsurface Divelog provides support for associating videos taken during a dive with a dive log. When a video is associated with a dive log, Subsurface will display the video in the Dive profile panel or in the Dive Info panel Media tab. To make this possible Subsurface needs to generate and display a video thumbnail from the associated video.

By default the video thumbnail is a nonspecific placeholder. To see thumbnails that represent individual videos, Subsurface uses an external program called FFMPEG [https://www.ffmpeg.org/].

To enable thumbnails for videos you need to:

1. Download FFMPEG [https://www.ffmpeg.org/download.html].
2. Install FFMPEG
3. Enable Extract video thumnails.

Note

Windows	Put the ffmpeg.exe file in the directory containing the Subsurface executable.
Mac and Linux	Ensure sure the ffmpeg command is in the environment path. This should be the case when installed from official packages.

To configure video thumbnail settings:

1. From the Main Menu select File → Preferences.

   The Preferences is displayed.

2. Select the General options group.
3. Under Video thumbnails check the Extract video thumbnails checkbox.
4. Click the Save to store these settings.
5. Select a record from the Dive List that has a video associated with it.
6. Inspect the Dive profile panel and Dive Info panel Media tab to verify that the settings are working.

Note

If Subsurface fails to load the FFMPEG executable, the Extract video thumbnails checkbox will be unchecked. After successfully installing FFMPEG check the checkbox to re-enable Extract video thumbnails.

Appendix C. Supported Dive Computers

Aeris	500 AI, A300, A300 AI, A300CS, Atmos 2, Atmos AI, Atmos AI 2, Compumask, Elite, Elite T3, Epic, F10, F11, Manta, XR-1 NX, XR-2
Apeks	Quantum X
Atomic Aquatics	Cobalt, Cobalt 2
Beuchat	Mundial 2, Mundial 3, Voyager 2G
Citizen	Hyper Aqualand
Cochran	Commander, EMC-14, EMC-16, EMC-20H
Cressi	Drake, Edy, Giotto, Leonardo, Newton
Dive Rite	NiTek Q, NiTek Trio
Divesoft	Freedom
DiveSystem	Orca, iDive DAN, iDive Deep, iDive Easy, iDive Free, iDive Pro, iDive Reb, iDive Stealth, iDive Tech, iDive X3M, iX3M Deep, iX3M Easy, iX3M Reb, iX3M Tec
Genesis	React Pro, React Pro White
Heinrichs Weikamp	Frog, OSTC, OSTC 2, OSTC 2C, OSTC 2N, OSTC 3, OSTC 3+, OSTC 4, OSTC Mk2, OSTC Sport, OSTC cR
Hollis	DG02, DG03, TX1
Mares	Airlab, Darwin, Darwin Air, Icon HD, Icon HD Net Ready, M1, M2, Matrix, Nemo, Nemo Air, Nemo Apneist, Nemo Excel, Nemo Steel, Nemo Titanium, Nemo Wide, Nemo Wide 2, Puck, Puck 2, Puck Air, Puck Pro, Smart, Smart Apnea
Oceanic	Atom 1.0, Atom 2.0, Atom 3.0, Atom 3.1, Datamask, F10, F11, Geo, Geo 2.0, OC1, OCS, OCi, Pro Plus 2, Pro Plus 2.1, Pro Plus 3, VT 4.1, VT Pro, VT3, VT4, VTX, Veo 1.0, Veo 180, Veo 2.0, Veo 200, Veo 250, Veo 3.0, Versa Pro
Reefnet	Sensus, Sensus Pro, Sensus Ultra
Scubapro	Chromis, Mantis, Mantis 2, Meridian, XTender 5
Seabaer	T1, H3, HUDC
Seemann	XP5
Shearwater	Nerd, Perdix, Petrel, Petrel 2, Predator
Sherwood	Amphos, Amphos Air, Insight, Insight 2, Vision, Wisdom, Wisdom 2, Wisdom 3
Subgear	XP Air, XP-10, XP-3G, XP-Air
Suunto	Cobra, Cobra 2, Cobra 3, D3, D4, D4i, D6, D6i, D9, D9tx, DX, EON Steel, Eon, Gekko, HelO2, Mosquito, Solution, Solution Alpha, Solution

	Nitrox, Spyder, Stinger, Vyper, Vyper 2, Vyper Air, Vyper Novo, Vytec, Zoop, Zoop Novo
Tusa	Element II (IQ-750), IQ-700, Zen (IQ-900), Zen Air (IQ-950)
Uemis	Zürich SDA
Uwatec	Aladin 2G, Aladin Air Twin, Aladin Air Z, Aladin Air Z Nitrox, Aladin Air Z O2, Aladin Prime, Aladin Pro, Aladin Pro Ultra, Aladin Sport, Aladin Sport Plus, Aladin Tec, Aladin Tec 2G, Aladin Tec 3G, Galileo Luna, Galileo Sol, Galileo Terra, Galileo Trimix, Memomouse, Smart Com, Smart Pro, Smart Tec, Smart Z
Zeagle	N2iTiON3

Appendix D. Supported Dive Software

Subsurface can also read the XML files that can be exported by:

Divinglog [https://divinglog.de/]
JDivelog [http://jdivelog.org/about/]
MacDive [http://www.mac-dive.com/]
divelogs.de [https://en.divelogs.de/]
Suunto Dive Manager 3 and 4

Appendix E. Contribution Guidelines

Where to Start

We assume that you already sucessfully downloaded, installed Subsurface Divelog and have been using it to log your dives. Now you are looking for a way to contribute to the project. There are many opportunities for community contributions, including:

Submiting The User Survey.
Answering questions on The User Forum.
Reporting Bugs and Issues.
Testing by running the Latest Builds to ensure stuff works as it should.
Developing features and enhancements.
Localising the User Interface.
Improving the documentation.
Translating the documentation.

How you decide to contribute will depend largely on what skills and expertise you have. The list above gives you an ordered approach to getting started.

For the Impatient

Software License	https://www.gnu.org/licenses/gpl-2.0.en.html
Documentation License	https://tdg.docbook.org/tdg/5.0/gfdl.html
Github Repository	https://github.com/Subsurface-divelog/subsurface
Bug Tracker	https://github.com/Subsurface-divelog/subsurface/issues
Mailing List	http://lists.subsurface-divelog.org/cgi-bin/mailman/listinfo/subsurface
IRC	freenode #subsurface

The User Survey

In order to develop Subsurface Divelog to serve its users in the best possible way, it’s important to have user information. After using the software for a week or so, a one-box user survey pops up. It is entirely optional and the user controls what, if any, data are sent to the project. All data the user sends is useful, and will only be used to steer future development and to customize the software to fit the needs of the Subsurface Divelog users. If you complete the survey, or click the option not to be asked again, that should be the last communication of this type you receive. However, if your diving and/or subsurface habits change and you wish to fill in another survey, just launch Subsurface Divelog with the **--survey** option on the command line.

Bugs and Issues

Just as there are many things right with Subsurface Divelog, there are also many things wrong with Subsurface Divelog. If bugs and issues are not reported we will not necesarily get to know about them. We encourage the community to report bugs and issues.

Before Reporting Bugs or Issues

That said, not all problems are necesarily a bug or an issue and some problems are "known" bugs and issues. We therefore ask that before reporting a bug/issue that you do the following:

1. Search The User Forum to see whether anyone else has encountered the same problem. There may be a solution already discussed and solved that may save you from frustration or moving forward with using Subsurface Divelog.

2. Search the Bug and Issue Tracker [https://github.com/Subsurface-divelog/subsurface/issues] for an existing report on the subject/topic.

When searching The User Forum and Bug and Issue Tracker [https://github.com/Subsurface-divelog/subsurface/issues] comes up empty handed, then we ask that you:

1. Post a question on The User Forum and discuss with the community. It may well be that something was missed and you have helped uncover a bug or an issue, in which case

2. you will generally be ask to report your discovery to the Bug and Issue Tracker [https://github.com/Subsurface-divelog/subsurface/issues].

Note

While a bug or issue may irritate you. Not all bugs and issues are equal. Some bugs are more equal than others and will therefore take precedence over those that are less equal.

Community contributions are done on a volunteer basis. The pace at which fixes or enhancements happen is therefore subject to "doing it yourself" or waiting for somebody else wanting to "scratch an itch".

Reporting Bugs and Issues

Be precise	Keep it short and on topic.
Try reproduce	Try to reproduce your bug using a recent version of the software, to see whether it has already been fixed.
Give context	Specify what operating system you are using and what version of Subsurface Divelog you are using. Specify what dive computer you are using or what is the source of your divelogs.
Be clear	Explain how to reproduce the problem, step by step, so others can reproduce the bug, or understand the request.
Be specific	Include only one problem per task.

Testing

Latest Release

If you want the sources for the latest release, the archives and precompiled binaries are available from Latest Release Tag [https://github.com/Subsurface-divelog/subsurface/releases/latest] on Github.

Test Versions

Test versions of Subsurface Divelog are available from the Dev/Test Builds [http://subsurface-divelog.org/downloads/test/] page.

These are builds of the HEAD of origin/master (plus some other random files), uploaded roughly "whenever Dirk remembers to do so".

Warning

Test Versions are intended primarily for the Subsurface Divelog testers - use at your own risk.

Latest Builds

If you want the latest pre-release release build, the archives and precompiled binaries are available from Continuous Tag [https://github.com/Subsurface-divelog/subsurface/releases/tag/continuous] on Github.

Developing

If you would like to contribute patches that fix bugs or add new features, that is of course especially welcome. If you are looking for places to start, look at the open bugs in our Bug and Issue Tracker [https://github.com/Subsurface-divelog/subsurface/issues].

Note

You will need to know something about working with Git and Github. The sections below are just to give you some hints on how to proceed and what is expected when submitting source contributions.

Getting the Source

You can get the latest development version (origin/master) from the project git repository.

```
$ git clone https://github.com/Subsurface-divelog/subsurface.git
```

Creating a Working Branch

You will need to create a working branch in which you can keep your development. You can name your working branch anything you like. We recommend keeping the name short, simple and related; that way the name will mean more and give a hint as to what the intent of the work is about.

At the command line use the commands below to create a working branch. The example commands below use **my-branch-name** as the name of the working branch. Replace **<my-branch-name>** with a name of your own.

```
$ cd subsurface
$ git checkout master
$ git pull
$ git checkout -d my-branch-name
Switched to a new branch 'my-branch-name'
```

Now we can check that our branch has been created and we have switch to our new working branch.

```
$ git branch
* my-branch-name
  master
```

Creating a Commit

Once you have edited the source and you are happy that it compiles and that you have satisfactory tested, you can create a commit. Feel free to break your changes into multiple smaller commits.

The following command starts a commit using your systems default editor. Usually you can define which by setting the environment variable `GIT_EDITOR`. The *`-s`* option will help you add Signed-off-by line by the committer at the end of the commit log message. The *`-a`* option tells the command to automatically stage files that have been modified and deleted, but new files you have not told Git about are not affected.

```
$ git commit -s -a
```

When creating the commit there are some expectations. The commit must have:

header line
: The first line of the commit is the subject or title. Keep it brief and to the point.

  That header line really should be meaningful, and really should be just one line. The header line is what is shown by tools like gitk and shortlog, and should summarize the change in one readable line of text, independently of the longer explanation.

  The preferred way to write a commit message is using imperative mood [https://en.wikipedia.org/wiki/Imperative_mood].

  Example E.1. Example of Imperitive Mood

  "Make foo do xyz" instead of "This patch makes foo do xyz" or "I made foo do xyz", as if you are giving commands or requests to the code base.

body description
: A few lines of text, explaining things in more detail, possibly giving some background about the issue being fixed, etc etc. The body of the commit message can be several paragraphs, and please do proper word-wrap and keep columns shorter than about 74 characters or so. That way "git log" will show things nicely even when it is indented.

Reported-by
: If working on an existing issue report, provide the name of the person who reported.

Signed-off-by
: Your Name followed by Your Email Address.

Important

If your commit is not signed, it will not be accepted. For more information about the sign-off and what it means, please see developercertificate.org [http://developercertificate.org/].

Following is a minimal example of how a commit may look.

```
Create user manual file

Created the main user manual file in docbook5 xml.

Reported-by: some-reporter
Signed-off-by: someuser <someuser@example.com>
```

```
On branch my-branch-name
  Changes to be committed:
    new file:   Documentation/en/subsurface-divelog.xml
```

Important Behaviour Changes

When important changes are made to behaviors, fixes or new features are introduced an entry must be added to `CHANGELOG.md` file. Always add new entries at the very top of the file above other existing entries. Use this layout for new entries:

Area — Details about the change [reference thread / issue].

Area1/Area2 — When multiple areas are affected list the areas separated with a /

Here is a (non exhaustive) list of Areas that can be used:

- Bluetooth
- Cloud-storage
- Desktop
- Dive pictures
- Import
- Libdivecomputer
- Map-widget
- Mobile
- Planner
- Printing
- Profile

Submitting your Contribution

At this point there are two ways you can go:

Pull Request — This entails pushing your branch to GitHub and creating a pull requests on GitHub.

Patch File — This entails creating `commit.patch` files and sending them to the Mailing List.

Creating a Pull Request

To use this method you must first push your changes to Github and then create a Pull Request at the Project GitHub [https://github.com/Subsurface-divelog/subsurface/pulls].

Creating Patch Files

Patch files are text files that consists of a list of differences. In this case the difference between the origin/master branch and your working branch.

At the command line use the command below to create patch files. The example below used **my-branch-name** as the name of the working branch. Replace **<my-branch-name>** with a name of your own.

```
git format-patch master.."my-branch-name"
```

After running this command you will have a number of files with names like `0001-Commit-title.patch`. These files can be archived and send to the Mailing List.

Browsing and Forking

You can browse the sources and fork from the Github Repository [https://github.com/Subsurface-divelog/subsurface]

Localising

Localisations are centrally handled at Transifex [https://www.transifex.com/]. Please sign up for an account there and then request to join the Subsurface Team [https://www.transifex.com/subsurface/subsurface/].

Documenting

Translating