

AAMOT OLE 19780220 NTNU 20240630 MSc MCT  
Public Voice Communication Software for Radio and Music Recording Software  
GNOME Voice (gnome-voice) version 0.1.0 (20240624)  
<http://www.gnomevoice.org/thesis.pdf>

# GNOME Gingerblue 2.0.1

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Thesis submitted for the degree of  
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30 credits

Department of Musicology  
Faculty of mathematics and natural sciences

UNIVERSITY OF OSLO

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# **GNOME Gingerblue 2.0.1**

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<http://www.duo.uio.no/>

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# Abstract

In this thesis I wrote Free Voice Communication Software for GTK+/GNOME.

GNOME Voice is Free Software available under GNU General Public License version 3 (or later) that supports voice communication.

The Apple/HP-tested Source package of GNOME Voice 0.1.0 is available from <http://DOWNLOAD.GNOME.ORG/sources/gnome-voice/0.1/gnome-voice-0.1.0.tar.xz> and a Binary package is available for MacPorts (<https://www.macports.org/>) on Apple macOS (<https://ports.macports.org/port/gnome-voice/>):

```
sudo port install gnome-voice
```

# Software Implementation

## Source Code

- <http://www.gnomevoice.org/src/gnome-voice-0.1.0.tar.xz>
- <https://download.gnome.org/sources/gnome-voice/0.1/gnome-voice-0.1.0.tar.xz>

## Fedora Core 35

## Ubuntu 21.04

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# Introduksjon

Du kan følge prosjektene på <http://www.gnomevoice.org/> og <http://wiki.gnome.org/Apps/Voice> i videre utvikling.

Ole Kristian Aamot, Trondheim, 24. juni 2024

# Preface

**Part I**  
**Introduction**

# Chapter 1

## Background

Communication in modern day society has been greatly enhanced by mans ability to reproduce sound. Inventions such as telegraph, telephone, phonograph, gramophone, radio, and later, television have benefited from the basic concept of reproduction and preservation of the human voice. The act of recording therefore is best comprehended within the context of broadcasting, telecommunication, and entertainment. (Nmungwun, 1989)

# **Part II**

## **The project**

## **Chapter 2**

# **Planning the project**

# GNOME Gingerblue 2.0.1

Ole Kristian Aamot

24 June 2024

# Chapter 3

## Historic Notes

### 3.1 History of Voice Communication

#### 3.1.1 `gnome-voice-0.1.0/src/gnome-voice.c`



# Chapter 4

## Specification

GNOME Voice 0.1.0 is well-specified in C and XML.

**Part III**  
**Conclusion**

GNOME Voice 0.1.0 can be configured and compiled with the GNU C Compiler (GCC.GNU.ORG), GNU Autoconf and GNU Automake on macOS 11.6 with MacPorts 2.7.1 (MACPORTS.ORG) and is capable of voice communication from the built-in microphone on Apple MacBook Air M1 (2020) (APPLE.COM).

The communication can be achieved manually with the following statements:

- Install MacPorts 2.7.1 from <https://www.macports.org/>
- Install binary package from [macports.org](https://www.macports.org)

```
sudo port install gingerblue  
  
gingerblue
```

- Install dependencies from [macports.org](https://www.macports.org)

```
sudo port install git desktop-file-utils geoclue2 geocode-glib  
sudo port install glib2 gstreamer1 libxml2 pango  
sudo port install gstreamer1-gst-plugins-base gtk3  
sudo port install gstreamer1-gst-plugins-bad  
sudo port install gstreamer1-gst-plugins-good  
sudo port install gstreamer1-gst-plugins-ugly zlib xz  
sudo port install adwaita-icon-theme libchamplain  
sudo port install autoconf automake clang-9.0 geoclue2  
sudo port install geocode-glib gnome-common gtk-doc  
sudo port install intltool itstool  
sudo port install p5.28-xml-sax-expat pkgconfig yelp-tools
```

- Install latest source from [gitlab.gnome.org](https://gitlab.gnome.org)

```
git clone http://gitlab.gnome.org/ole/gnome-voice.git  
  
cd gnome-voice/  
  
./configure --prefix=/usr/local  
  
make  
  
sudo make install  
  
[ENTER PASSWORD]  
  
/usr/local/bin/gnome-voice
```

# Chapter 5

## Results

The formal proof is the audio file that was recorded running GNOME Gingerblue 2.0.1 on Apple MacBook Air M1 (2020) running macOS 11.6 with MacPorts 2.7.1 (MACPORTS.ORG) at Universitetsbiblioteket, a public library at University of Oslo and uploaded to <https://api.perceptron.stream:8000/56.ogg> and it follows the optimal environment where this thesis and the software was written and explored.

# Chapter 6

## Patents Cited

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# Application Letter

To whom it may concern,

I have studied Computer Science (Object-oriented programming) and Mathematics (Linear Algebra) at University of Oslo since 1997 in my home city Oslo.

I have been building a network, maintaining network connectivity at Fjellbirkeland at University of Oslo since 1998-1999 and worked at Norwegian Computer Center (NR -- [www.nr.no](http://www.nr.no)) in 2001-2004.

I have worked on building a commercial 400.000 domain network in Norway since 2003 (Domainnameshop -- [www.domainnameshop.com](http://www.domainnameshop.com)) with Ståle Schumacher, Dag Fredrik Øien, and Jan Ingvoldstad.

My plans for advanced studies at University of Copenhagen is to complete my Bachelor of Science degree at University of Oslo in 2024 with 60 study points of Mathematics-Economics, Mathematics or Computer Science at a top Danish university in Copenhagen, where Hans Christian Ørsted worked on electricity in 1820.

I hope to further perfect my work at the Gingerblue project ([www.gingerblue.org](http://www.gingerblue.org)) before June 24, 2024.

Ole Kristian Aamot  
[www.gnomeradio.org](http://www.gnomeradio.org)  
[www.gingerblue.org](http://www.gingerblue.org)  
[www.gnomevoice.org](http://www.gnomevoice.org)

GNOME Radio: <http://www.oleaamot.no/omu/bachelor/Aamot,2020.pdf>  
Gingerblue: <http://www.oleaamot.no/uio/bachelor/Aamot,2022.pdf>  
GNOME Voice: <http://www.oleaamot.no/ntnu/bachelor/Aamot,2024.pdf>