ABSOLUTELY FREE: 
ADDRESSING THE MENC NATIONAL STANDARDS USING 
FREWARE, OPEN SOURCE AND SHAREWARE SOFTWARE, PT. 1

by Jay Dorfman and Marc Jacoby

You’ve budgeted for computers, keyboards and other MIDI devices, sound systems, etc., etc., but what about buying software? Buying commercial, shrink-wrapped software will bust your budget. That’s where Open Source, Freeware, or Shareware might help you provide solutions for integrating technology into your program without breaking the bank.

Before getting to the software, let’s sort out the terminology. Open Source, Freeware, and Shareware, each have their “free” value somewhere. But be forewarned—nothing is absolutely free! Using software in any of the categories addressed here may mean extra work; in correctly installing and configuring, in getting support when you have a problem, or in getting updates in the future.

In this series of articles, we will discuss the merits of free software, the “you-get-what-you-pay-for” downfalls, and the realities of how the software can be used in the classroom. Since most readers are familiar with the MENC Standards, we will use them as an organizing framework for discussing each software application. In this article we look at technology as a tool that helps meet our teaching objectives as suggested by the National Standards.

First, it is important to define each type of free software that will be discussed in this series of articles in greater detail.

Open Source

Open Source software has its roots in the 1960’s with the distribution of software in the early days of networked research anddevelopment for ARPANET-connected institutions. This idea of freely sharing software was codified in the late 1980’s and became known as Open Source Initiative. Open Source Software is made up of distributions that conform to an Open Source Definition of “free” and must meet twenty-one criteria. It controls how a compiled application and the software code used to create it are made available to the public.

Similar to the Open Source Initiative is the Free Software Definition. FSD grew out of UNIX development project begun in the early 1980’s by Richard M. Stallman. Stallman coined the term “GNU's not UNIX” or GNU for his operating system project that continues to this day.

The operating system called Linux is a good example. Many flavors of the Linux OS such as Red Hat, Susse, Ubuntu, Debian, etc. are available, each with unique feature sets. While working with Linux has traditionally been regarded as the domain of geeks, newer versions (distributions or “distributions” in Linux lingo) have become easier to install and configure, rivalling Windows or the Macintosh OS.

In the end, OSS and FSD both allow for the free and open distribution of software, access to the code used to make it, and the right to modify or change it for your needs. They therefore qualify as examples of Open Source software.

Freeware

Freeware, while not having a code of conduct like OSS or FSD under which to operate, is generally considered a class of software distribution that is available without mandated cost to the end user. With this, the developer retains all rights usually associated with proprietary “shrink wrapped” software and leaves it up to the end user to decide whether to pay for its use. This is similar to the band Radiohead’s recent release of their album In Rainbows where fans decided what to pay (or not to pay) for downloading the album’s tracks. Generally, freeware apps are small apps such as utilities and specialty or boutique programs. Freeware apps generally have no support other than informal, on-line user-communities.

Shareware

Distinct from “demo” versions of commercial applications, shareware is often disguised as freeware. Most shareware programs are downloadable for free with restrictions; that is, they can usually be used with a full feature set for a limited amount of time, or with a limited feature set. Payment will lift these restrictions, and can often provide access to additional technical support. Cost for shareware applications is usually minimal, and users should examine whether the limited version of the software is good enough for their purposes before paying the license fees. For example, later in this article series we will discuss The Amazing Slowdowner, which, in its limited form, is still quite usable.

With the definitions of Open Source, Freeware, and Shareware under our proverbial belts, we move to the uses of those types of software for enhancing music instruction. Again, our framework for categorizing software will be the MENC National Standards. However, simply because we list a piece of software within the confines of a particular Standard does not mean that it is usable only for teaching skills and knowledge associated with that Standard. Rather, these are examples of what software can do, and you should feel free to create new and interesting uses for software.

Standard 1. Singing, alone and with others, a varied repertoire of music.

Recording students performing is an incredibly beneficial endeavor that can be accomplished using audio edit-
ing software. Commercial audio editor applications such as Sony’s Sound Forge ($145), Adobe’s Audition ($140) or Bias’s Peak ($400) allow for capture of audio, and playback at various speeds, or playback of looped sections.

A low-cost alternative to these programs is Audacity1, an open source audio editor available for both Macintosh and Windows platforms. Audacity is already in use in many classrooms, and is a solid, stable program with many editing, importing and exporting capabilities.

It is important to note that, while free software may seem an excellent solution to budget issues, there are certain signs that “you get what you pay for.” This is indeed the case in all of the software categories that will be discussed in this article series. For example, Audacity has several drawbacks when compared to its commercial counterparts: 1) The number and quality of packaged plug-ins is less; 2) The number and quality of packaged effects is less (both of these can be remedied through clever use of the program’s plug-in architecture); 3) The types of files that Audacity is capable of importing and exporting is limited; and, 4) The program does not always communicate well with external sound hardware such as audio interfaces.

Continuing with Standard 1, it is also necessary to help students improve their aural skills to promote in-tune singing and playing. Several commercial ear training applications, including Practica Musica ($100), Auralia ($125), Musition ($125), and Alfred’s Essentials of Music Theory (prices vary by package) can help accomplish this. These applications usually contain an element of written theory, and allow teachers to manage and track student progress in a lab or class setting.

A freeware substitute for this category of software, available for Macintosh, is Aurallegrro2. This program has many of the sophisticated class management, aural and written skill training as in its commercial counterparts. What it lacks is some of the “bells and whistles” — for example, the type and quality of feedback that students receive for right or wrong answers is less clear and, frankly, less entertaining.

**Standard II—Performing on instruments, alone and with others, a varied repertoire of music.**

Among the types of software that may help students to “play on instruments, alone and with others, a varied repertoire of music” are applications for tuning, and those for recording or sequencing.

While not a tuner in the traditional sense, Freaky Tuner, a freeware application for the Mac provides students with reference pitches to which they can tune their instruments. It provides these pitches in three octaves on any concert pitch, and in many of the timbres found in the General MIDI specification. The application does not “listen” like a free-standing electronic tuner does, but it plays accurate, sustained pitches that may help students train their ears while learning to tune their instruments.

The second type of software in this category, sequencers, allow for the recording and playback of music. Many commercial sequencers are able to record both audio and MIDI; to have that functionality, we recommend purchasing a sequencer such as Digidesign’s ProTools or Apple’s Logic Express, or using GarageBand, which comes preinstalled on all new Macintosh computers (or can be purchased separately as part of the iLife package).

For simply learning the technique of sequencing—an essential skill for electronic musicians—it is possible to use a MIDI-only sequencer, several of which can be downloaded for free. An example is the free edition of Luna, a simple, track-based sequencer. In order to use Luna Free, you will also need to install a VST synthesizer instrument on your computer, many of which are also downloadable for free.

In the next article in our series on using free software to address the National Standards, we will address the next three Standards: Improvising; composing, and; reading and notating music.


2. Aurallegrro is downloadable from http://andyvn.ath.cx/?sect=tech&cat=soft&topic=au

---

Dr. Jay Dorfman is Assistant Professor of Music Education at Kent State University, and President of the TiME Ohio Chapter.

Dr. Marc Jacoby is Assistant Professor of Music and Technology Specialist at West Chester University of PA, and TiME treasurer.

Spring 2008 • www.ti-me.org, the TiMEs