

## Weaving Software

By Nancy Alegria

One of the great joys of weaving in the 21<sup>st</sup> century is the ability to create something beautiful and unique with tools that have been in use since the dawn of civilization. So what can today's technology add to this joyous experience?

### Speed

So you've found a promising looking draft in a book, but the illustration is in black and white, and you're wondering what it will look like in color. You could pull out the graph paper and colored pencils and eraser, sit back in your favorite comfy chair with a cup of tea and work it out. We don't always have the luxury of time. With even the most rudimentary (and possibly even free) weaving program and a computer, you can visualize that draft in a matter of minutes.

### Creativity

What if you add a color? Subtract a color? Move a warp thread to a different shaft? Make up something out of thin air? With graph paper and pencils, you better have lots of paper and pencils and a pretty big eraser on hand to check out several ideas for variations of the draft. With weaving software, you can make all the modifications you want, and if you don't like them, you can just click "Undo." If you love them, you can click "Save." Of course, the drawback to weaving software is that you may end up spending all day and night working out endless possibilities.

### Resources

The Internet is a pretty big place—and it's full of information. Repositories like [www.Handweaving.net](http://www.Handweaving.net) (see page 226), and websites run by weaving guilds all over the world contain thousands of weaving drafts that you can download to your computer where you can customize them to your heart's content.

### Sharing

With weaving software, you can create and share drafts with anybody else who has a computer, either via email, the internet, or on disc. You can send drafts to anyone with an email account just by attaching the file to an email message, the same way you would a photo or any other file. You can even contribute to online repositories of weaving drafts and share them with weavers all over the world.

### Calculate

You can get that warp on the loom faster with weaving software. Many programs offer a feature that automatically counts heddles and warp threads for you. You can also use weaving software (or spreadsheet programs) to easily calculate yardage requirements.

## Expand

Are you interested in weaving on more than 8 shafts? Wish for 24? Not even a centipede has enough feet to control that many shaft combinations. But a computer with a computer assisted loom can do it without even breaking a sweat. You will need to buy weaving software with a loom-control interface to accomplish this job. It is included in the basic software for some programs, but is an additional purchase for others. Read more in the Loom Control section, below.

## Weaving Information Files

The thing that makes all this lovely information sharing possible is the Weaving Information File (or WIF) format. It was developed as part of a collaboration among programmers working on many commercial weaving software packages. Thanks to their generous efforts, weavers all over the world can share weaving drafts across platforms and across oceans as well.

Each program writes drafts in its own format. WIF files are used when sending or receiving drafts to different programs (e.g., Weaveit to Weavepoint, etc). When deciding on a weaving program, make sure that you choose one that both reads and writes files in WIF format, as it has become the *lingua franca* of high-tech weaving.

### What's in a WIF File?

The reason that the WIF format is so portable across programs, platforms, and computer systems is that it's a very simple and straightforward set of definitions. It's a text file, so it's readable by any computer, past or future. In fact, if you open a WIF file in a text editing program, you'll see a list of attributes as shown in Figure 463a.

But when you open it in a weaving program, you'll see a weaving draft. See Figure 463b.

Your weaving program takes all those definitions in the WIF file and translates them into a draft that you can view and manipulate. Not all features of the WIF format are supported in all weaving programs, and each program works a little differently, but if a program supports the WIF format, you can at the very least manipulate threading, tie-ups, treadling, and colors.

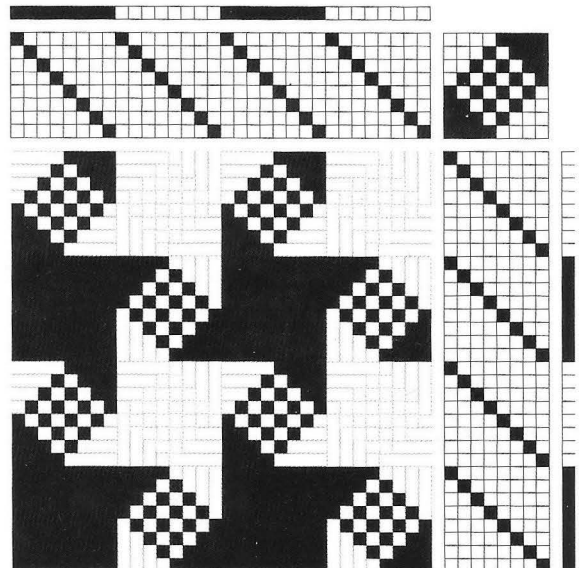


```

chocolatemint.wif - Notepad
File Edit Format View Help
[WIF]
Version=1.1
Date=1/3/2008
Developers=info@pixeLoom.com
Source Program=pixeLoom
Source Version=5.0.3
[CONTENTS]
COLOR PALETTE=true
WARP SYMBOL PALETTE=false
WEFT SYMBOL PALETTE=false
TEXT=true
WEAVING=true
WARP=true
WEFT=true
NOTES=false
TIEUP=true
COLOR TABLE=true
WARP SYMBOL TABLE=false
WEFT SYMBOL TABLE=false
THREADING=true
WARP THICKNESS=false
WARP THICKNESS ZOOM=false
WARP SPACING=false
WARP SPACING ZOOM=false
WARP COLORS=true
WARP SYMBOLS=false
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LIFTPLAN=false
WEFT THICKNESS=false
WEFT THICKNESS ZOOM=false
WEFT SPACING=false
WEFT SPACING ZOOM=false
WEFT COLORS=true
WEFT SYMBOLS=false
PRIVATE PIXELOOM=true
[WEAVING]
Shafts=8
Treadles=8
Rising Shed=true
  
```

WIF attributes

Fig. 463a



Weaving draft

Fig. 463b



## Deciding on a software package

There are several weaving programs available for computers that run Microsoft Windows. At the time of this writing, choices are fewer for Apple Macintosh or Linux users. With the growing popularity of both Mac and Linux systems, we can hope that there will be more weaving programs available for these platforms in the future. The new Mac with Intel chip can easily run Windows programs with appropriate software, such as Parallels, installed. See where to find weaving software on page 224.

### What do you need?

Not all weaving software packages are the same. Each one has a unique set of features; consequently, a program that is perfect for one person may not be the best choice for another. The best way to determine what program will best suit your needs is to try it out. For this reason, most (if not all) weaving software packages are available on a demo basis, so that you can give them a try.

Probably the first thing you need to ask yourself is how much you want to spend. Weaving software packages cost anywhere from free to several hundred dollars, with most programs somewhere in between. If all you want to do is view and print WIF files, or just replace pencil, paper, and eraser, then a very basic program will likely be sufficient. If you're using a Windows PC, it's quite likely that a free program will meet your needs.

At the time of this writing, there aren't many free programs available for the Mac or for Linux. For the Mac, the free program—WinWeave will not read WIF files. The shareware program, WeaveDesign, will read many WIF files but not all. For Linux there is a demo version of ArahWeave that will read and write WIF files. You might start with the free/shareware programs if you are not sure you will use weaving software.

## Design and manipulate

If you think you would like to take advantage of some more advanced features, you might want to look into spending a little money. Some of these features include the ability to manipulate or turn drafts, view a more accurate simulation of the finished fabric (warp- or weft-faced, doubleweave, thick and thin, etc.), calculate warp and weft requirements, or count heddles. Some programs will even let you design in the drawdown, automatically figuring out the threading and treadling. Others allow you to import a graphic file or photo, and will automatically translate it into a draft either minimizing the number of shafts or threading on a straight draw.

## Loom control

If you have a multi-shaft loom that requires a computer to select the shafts, you may need to contact your loom manufacturer to find out if there is a recommended program for your specific loom. Many of the more popular weaving programs offer drivers for specific looms, at an additional cost.

## Where to find weaving software

The easiest way to find weaving software packages is over the Internet. A quick Google search for “weaving software” will give you several places to look.

A good place to seek information is from the weaving groups and lists online and your local weaving guild. See below.

An online magazine is at [www.weavezine.com](http://www.weavezine.com).

Judie Eatough has her own web site where she updates and lists weaving software currently available. Her site has a lot of information, is comprehensive, and updated frequently.

**Judie Eatough**

[www.weavenotes.net](http://www.weavenotes.net)

[www.eatough.net](http://www.eatough.net)

## Interweave Press

Interweave Press offers a wealth of information on their websites. You will also find a buyer's guide for weaving software written by Judie Eatough in their *Weaving Resources* pages. This guide includes information about weaving software in general, and provides a comparison of several weaving programs.

**Interweave Press**

[www.interweave.com](http://www.interweave.com)

[www.interweave.com/weave/weaving\\_resources.asp](http://www.interweave.com/weave/weaving_resources.asp) or,

[www.interweave.com/weave/weaving\\_equipment.asp](http://www.interweave.com/weave/weaving_equipment.asp)

## Handweaving.net

Under the **Help** topic on [Handweaving.net](http://Handweaving.net) or at [www.handweaving.net/WeavingSoftware.aspx](http://www.handweaving.net/WeavingSoftware.aspx), you can find a list of weaving programs, along with links to the sites where you can download them.

## Weaving groups and lists

There are several very active weaving groups and email lists on the Internet. Yahoo! Groups is a good place to find some very lively discussion groups for weavers. The two biggest groups are Weaving and WeaveTech. They are also good places to find recommendations for different software packages. You can join these online groups by visiting: [groups.yahoo.com](http://groups.yahoo.com). If you do not already have a Yahoo! account, follow the instructions on-screen to sign up. All Yahoo! Groups allow you to view messages either on the Web or delivered to you in email messages. For more information, see Yahoo! Also, see Weavolution—[www.weavolution.com](http://www.weavolution.com) and Ravelry—[www.ravelry.com](http://www.ravelry.com).

## Demo programs

Many weaving programs come in a demo version that you can download for free and try out. Some of these demo programs are limited by time—they will work for a relatively short period of time, say 30 days, after which they will no longer function unless you buy the program. Other demo programs have limited features, or will allow you to edit but not save, or save but not print. Nonetheless, a demo program will give you the ability to try out the software before spending any money, so you can decide if it meets your needs.

## Safety of downloading software

The media is full of horror stories about destructive computer viruses lurking in the back alleys of the Internet, and many people are scared to do anything but the most innocuous of tasks online. If you are downloading a program from a reputable, known website that caters to weavers, there is little to no chance of “catching” a computer virus. If you are concerned about computer viruses in general, you should be running virus protection software. Most computer manufacturers these days pre-install virus prevention software on new computers, although you need to make sure that if it’s on a subscription basis, you need to pay a renewal fee yearly to keep it up to date.

## Basic computer resources

If you feel uncomfortable using a computer and/or the Internet, there are a variety of resources available to help you learn more about using today’s computers and the Internet. If you are using a computer running Microsoft Windows, visit Microsoft’s help website. If you’re using an Apple Macintosh computer, you can find help at Apple’s help website. See websites listed at the right. Other helpful web sites are also shown here.

If you need additional help, you can find many beginner-friendly computer and Internet books at your local library or bookstore.

**Microsoft Windows website:**

[www.windowshelp.microsoft.com](http://www.windowshelp.microsoft.com)

**Apple Help website:**

[www.apple.com/findouthow/mac](http://www.apple.com/findouthow/mac)

**Other websites:**

[www.jegsworks.com/Lessons](http://www.jegsworks.com/Lessons)

[www.comptechdoc.org/basic/basicitut](http://www.comptechdoc.org/basic/basicitut)

## Learning how to use weaving software

Most weaving software packages come with either a tutorial or a manual (or a link to documentation on the Internet). Take some time to learn how to use the software by opening sample drafts that come with the program or by creating your own basic drafts and playing with them. The controls in most weaving programs are quite similar – they typically have copy, cut, and paste options. Many programs allow you to *turn* a draft, in other words, swap the warp threading and the treadling to rotate the design 90°. If possible, try several programs before you buy, so that you can get an idea what features and controls best fit your needs.

The weave draft generated by your computer program is divided into four quadrants just as on printed drafts in American hand weaving journals and books and as described in the chapter on drafting, beginning on page 195. In that chapter you learned that threading drafts in most American publications are read from right-to-left and the treadling drafts are read from the top-to-bottom. However, some programs read the threading and treadling drafts in the opposite directions: from left-to-right and from bottom-to-top. You’ll recognize all the parts of weaving drafts when you are exploring various software and should easily recognize how the threading and treadling drafts are oriented.



In addition, most programs have separate bars for warp and weft color—a bar above the threading quadrant to indicate the colors of the warp threads and another along the side of the treadling draft to indicate the weft colors. This can be seen in the drafts on page 232.

### Downloading weaving drafts

Once you've installed a weaving program on your computer, and your computer is connected to the Internet, you can download weaving drafts in the form of WIF files. There are several places online where you can find weaving drafts.

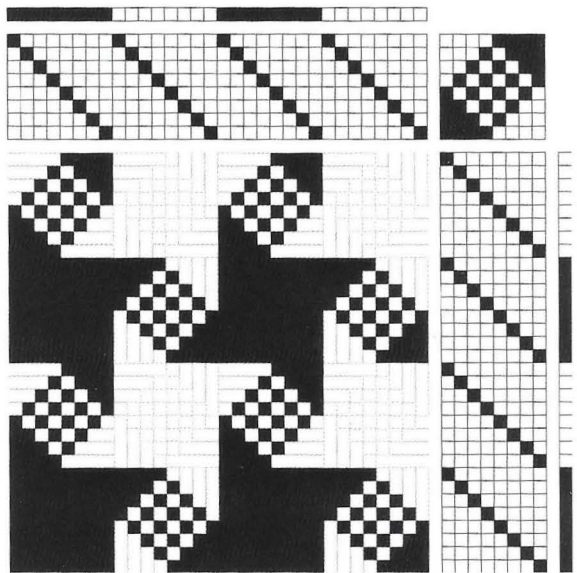
#### Handweaving.net

The largest online repository of weaving drafts is Handweaving.net ([www.handweaving.net](http://www.handweaving.net)). This site was created by Kris Bruland in 2004. Users all over the world can contribute drafts to the site; consequently, drafts are being added all the time.

Many of the drafts on the site are taken from out-of-print and out-of-copyright sources, including G. H. Oelsner's *A Handbook of Weaves* and the vast collection of drafts compiled by Ralph E. Griswold.

On the site, you can browse drafts by collection, or based on category, number of shafts, or source. Once you've found a draft you like, you can view it in several different ways—you can change the size, move the tie-up orientation, and even turn the draft. To download it, simply click on the link to the WIF file and save it on your computer the same way you would any other file. See Figure 463b (repeated here).

If you'd like to contribute drafts to the site, you need to register and follow the instructions for contributors.



### Specialty software

If you are interested in other forms of weaving, such as tablet or card weaving, or kumihimo (traditional Japanese braiding), there are specialty programs available. For more information about tablet weaving or kumihimo software, see the Weavershand website at [www.weavershand.com](http://www.weavershand.com), or [www.weavenotes.net](http://www.weavenotes.net).

### **The Experts**

I am proud of the experts who have contributed to this chapter.

***Nancy Alegria*** was a student in my beginning weaving class. It soon became apparent that she was weaving at home because nearly every week she had something new to show in class. It was also apparent that she was using the computer to design her assignments and gathering ideas for her own projects from the internet. I mentioned at our weaving guild that I was going to ask someone to write the chapter on computers and weaving. Nancy volunteered and also mentioned, casually, that she was a professional technical writer.