

CAD Translation Services

Artwork Conversion Software can translate your DXF or AutoCAD DWG file into Gerber quickly and efficiently. We can also convert Gerber back to DXF, GDSII, IGES, and HPGL as needed for documentation purposes.

We work closely with printed circuit board fabricators, photoplot shops and designers who need to either import or export a variety of CAD formats. Our ten years of experience in writing and translating CAD database enables our customers to concentrate on their expertise and leave the translation to us.

- ◆ AutoCAD to Gerber Conversions
- ◆ PCBs, Hybrids, MCMs, Microwave
- ◆ RS274D, RS274X, MDA output
- ◆ Fast turnaround time
- ◆ Experienced Personnel
- ◆ Data via Modem, FTP, email

“Thank you for supplying LaserFilm Technologies with conversions from AutoCAD to Gerber. Your service has been excellent and our jobs processed in a timely manner, which has helped us tremendously to deliver to our customers on time, every time...”

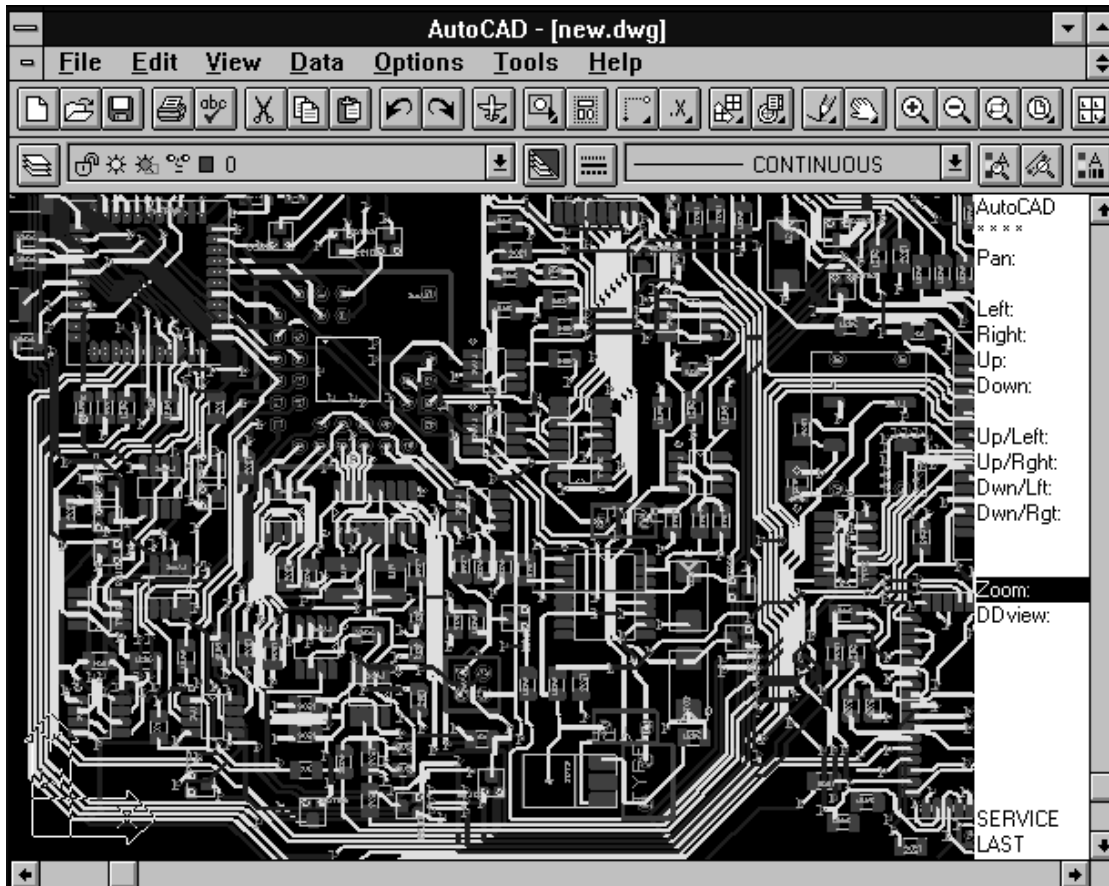
Gus Sevilla
LaserFilm Technologies

“We have been using Artwork’s conversion service for the last four years and have been extremely satisfied with it - and even more so with the support”

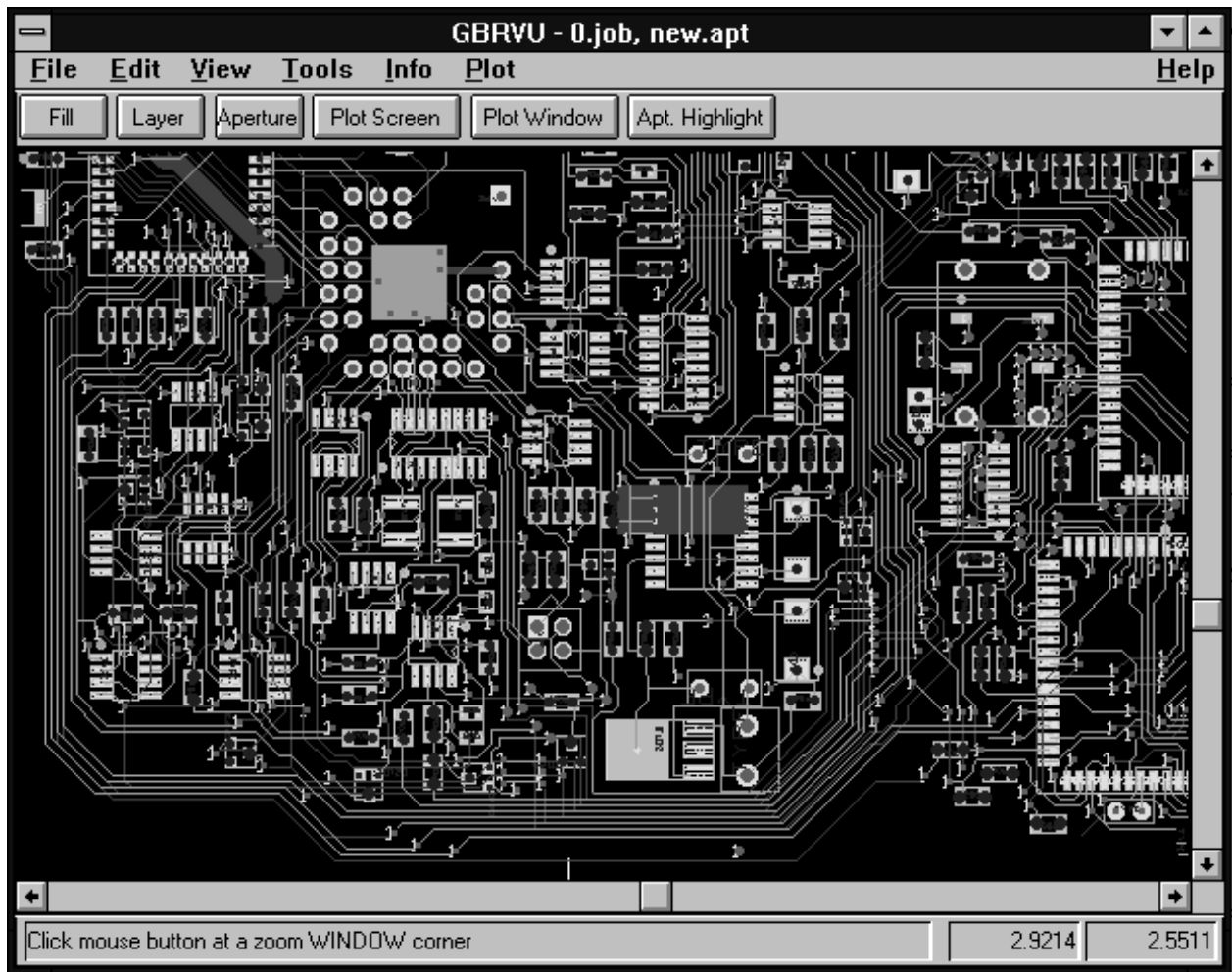
Ayala Yona
Artnet

“We are very pleased with your service. You complete the file translations and send them back within a short period of time. Your response to any concerns has been very good...”

Samantha Osuka
Hybrid Circuits, Inc.



Artwork regularly translates complex digital and analog boards designed on AutoCAD into Gerber format



Display of the Gerber file generated from the AutoCAD file shown on the cover.

Special Services

CAD Editing

We can edit existing drawings or create new drawings from a print. Our specialty is layout data for PCBs, hybrid, RF circuits, chemically milled parts or other high precision masks.

HPGL to DXF

We can take HPGL or HPGL/2 output from virtually any source and convert it into AutoCAD. Clean up as needed.

Check Plotting

We can produce small or large check-plots - small ones on our 600 dpi HP LaserJet 5Si and large ones, up to 36 inches wide on our HP Design Jet. Color or Monochrome

Bitmap to Vector

We can convert bitmapped logos and symbols in BMP, TIF, EPSI, and GIF into vector data such a Gerber or DXF by either manually tracing it or using a variety of autotracing programs. If you want to convert your scanned logo into Gerber to place on your board contact us.

Modem

Put your instructions for the translation into a readme.txt file along with your name, address and fax/tel/email. ZIP the data files and the readme.txt file into a single file.

Send to our BBS at:

(408) 426-3825

The BBS will ask for your name and password - you can use any password you want but once you've set it the next visit you should use the same password. We recommend the **Z-modem** protocol although many others are supported.

Do **not** send self-extracting .exe files. This is a very good way to give us a virus...

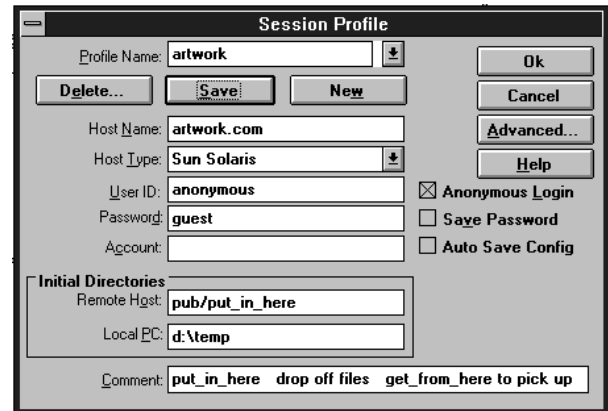
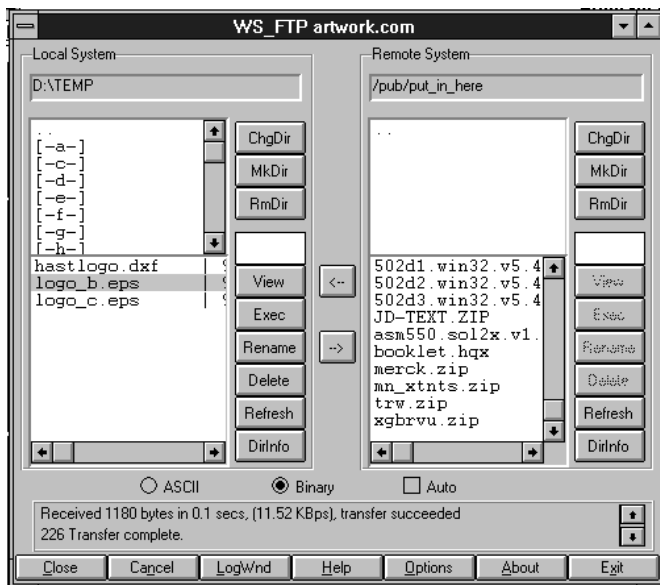
How to Send us Your Files

EMAIL

Put your instructions for the translation in the body of the message. ZIP your data files and attach the zip file to your email. Send it to:

trans@artwork.com

This email address will go directly to our workstation assigned for data translation.



If you have an Internet connection using Windows we can recommend the wf_ftp program which makes it very easy to send and receive files to our anonymous ftp server. Once you've configured a profile for artwork then connection is just a click away.

UNIX users can connect manually via ftp directly from their command line.

The important thing to remember when connecting to our site is that under the **pub** directory are two sub-directories:

put_in_here
put your files into here.

get_from_here
get your files from here.

FTP Manual - dropping off a file

```
ftp artwork.com
login: anonymous
password:
> cd pub/put_in_here

> binary
> put filename.zip
> bye
```

FTP Manual - picking up a file

```
ftp artwork.com
login: anonymous
password:
> cd pub/get_from_here
> binary
get filename.zip
>> bye
```

```
IP = 205.179.74.1
only anonymous login is allowed
your_email_address
we've set up a special directory
to put stuff to us
set transfer protocol to binary
put the desired file zip file
sign off
```

```
IP = 205.179.74.1
only anonymous login is allowed
your_email_address
files for pickup are located here.
set transfer protocol to binary
get your file.
sign off.
```

In House Tools

We've written quite a few specialized tools to handle the hundreds of files per month that pass through our CAD department. These tools enable us to quickly identify and correct drawing errors. Many of these tools are written in AutoLisp, AutoCAD's internal programming language. Some tools are written in C and some using awk, a UNIX program for manipulating text files.

BBPro

BBpro is an AutoLisp program that builds closed polylines from lines and arcs. We use it whenever we receive a dwg file where boundaries must be filled by the translator and where the boundaries weren't drawn cleanly. On some jobs it reduces editing time from an hour to one minute.

Commercially Available: YES

PolyO

PolyO is an AutoLisp program that converts polylines with width into zero width closed polylines. It even handles those nasty stepped and tapered polylines. We use it when we need to edit fat polylines. You can't snap to the "corners" on polylines with width and sometimes it is necessary to move the corners around.

Commercially Available: YES

BFLAT

BFLAT is a C program that reads/writes DXF. It essentially flattens every block in the DXF file and creates a new file with no hierarchy. We use this when we need to edit a drawing that has lots of nested blocks - otherwise it is very difficult to edit deeply nested blocks. We also use it when the user has inserted blocks with different X and Y scales: BFLAT can explode such blocks while AutoCAD cannot.

Commercially Available: YES

ASC2FLASH

C program that reads an ASCII list of coordinates and converts them into circles. This is ideal for importing a list of drill holes (generally for probe cards) and getting them into AutoCAD.

Commercially Available: No

ASC2PL

C program that reads an ASCII list of X,Y coordinates and creates DXF polylines. The first line is the number of vertices and then the vertex pairs follow.

Commercially Available: No

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