

WriteDie

Extract Die Data to Package Design

WriteDie™ extracts all of the data needed by a package designer directly from the Cadence® database.

It saves this data in a simple ASCII format that can be imported into a variety of package design tools.

WriteDie enables the device designer to send his chip's pad ring information directly to the package designer easily, quickly and without the need for either designer to manipulate the data manually.

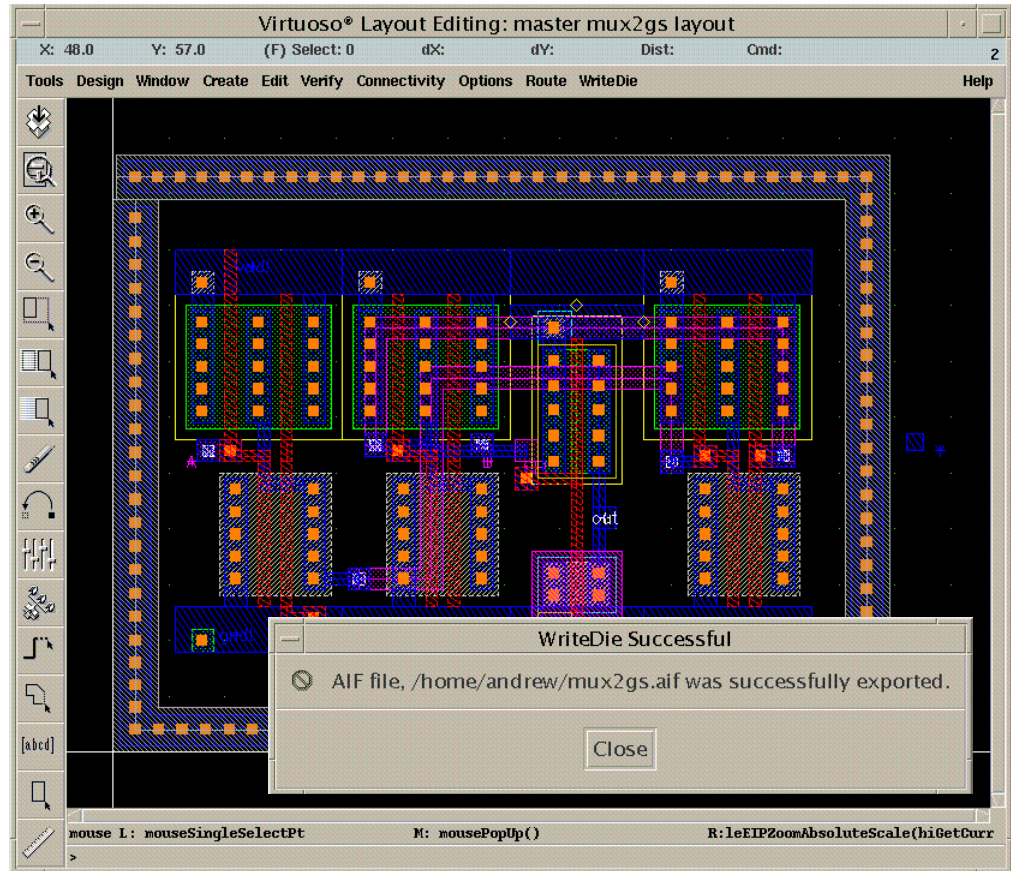


Figure 1- **WriteDie** runs inside of the Virtuoso® layout tool.

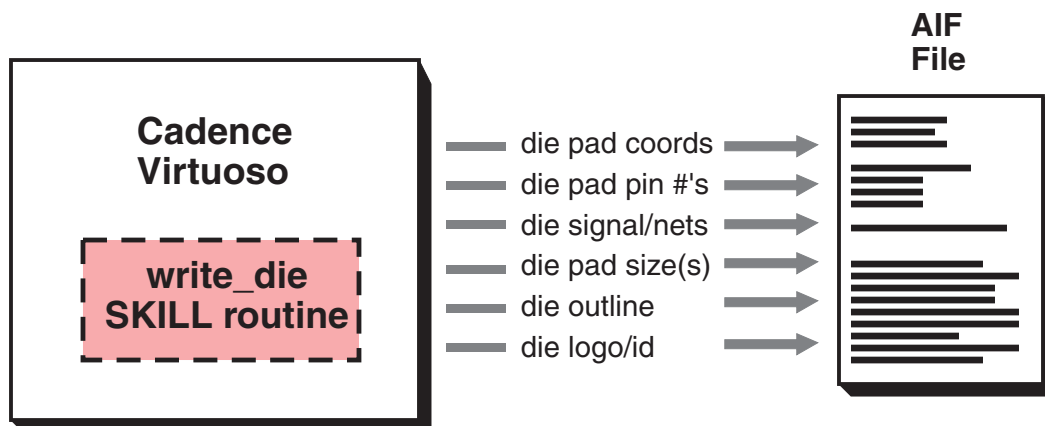
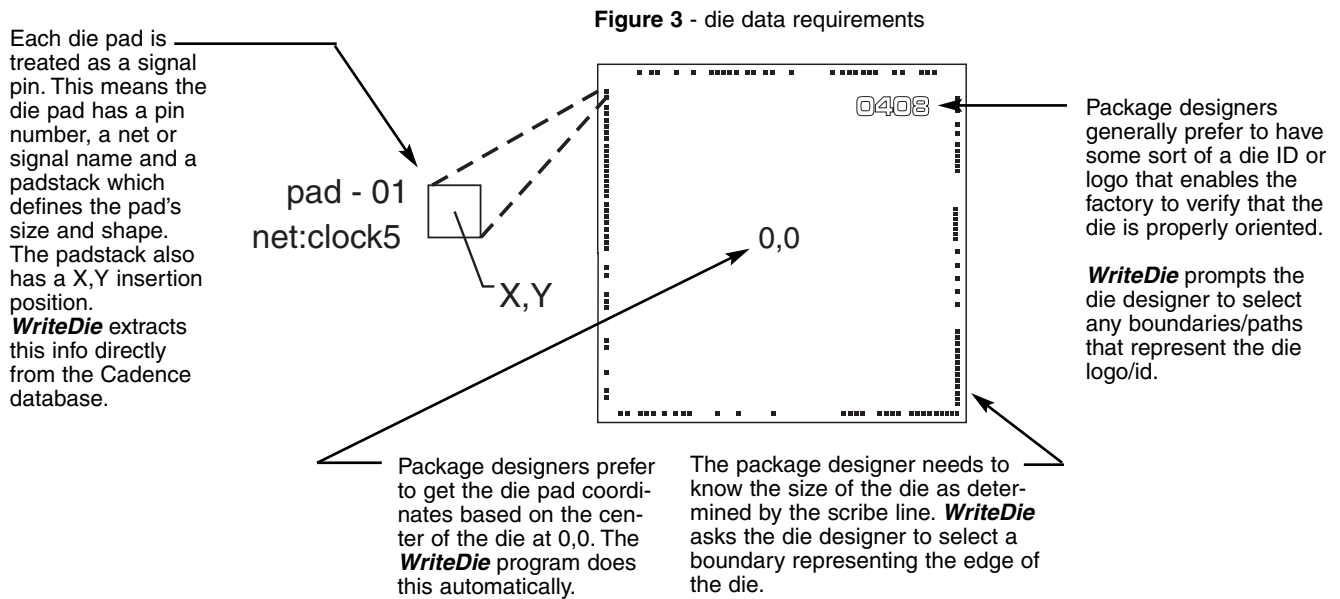


Figure 2 - WriteDie is a Skill program running inside of Virtuoso. By extracting the pins, pad openings and nets directly from the design database it creates the data required by the package designer in seconds - almost no input from the designer is required. Since the output file is a simple ASCII one, it becomes very simple to convert the data to the specific format required by the package designer's design tools - specifically a die component and a netlist.

Package Designer's Data Requirements

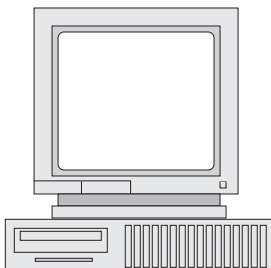
A package designer needs to get the die information into his design tool as a library element. To build this library element he needs both physical and logical information.



Interface to Package Design Tools

Package designers use several different design programs; each has its own library and input file formats. The AIF file format was developed as a "neutral file" that contains the information needed by all of the major design softwares.

IC Layout Cadence Virtuoso



WRITE_DIE

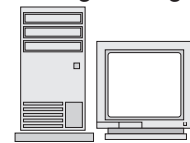
AIF

netlist
die package

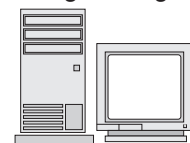
netlist
die package

netlist
die package

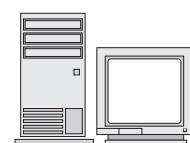
Avanti(Xynetix)
Encore
IC Package Designer



Cadence
Advanced
Package Designer

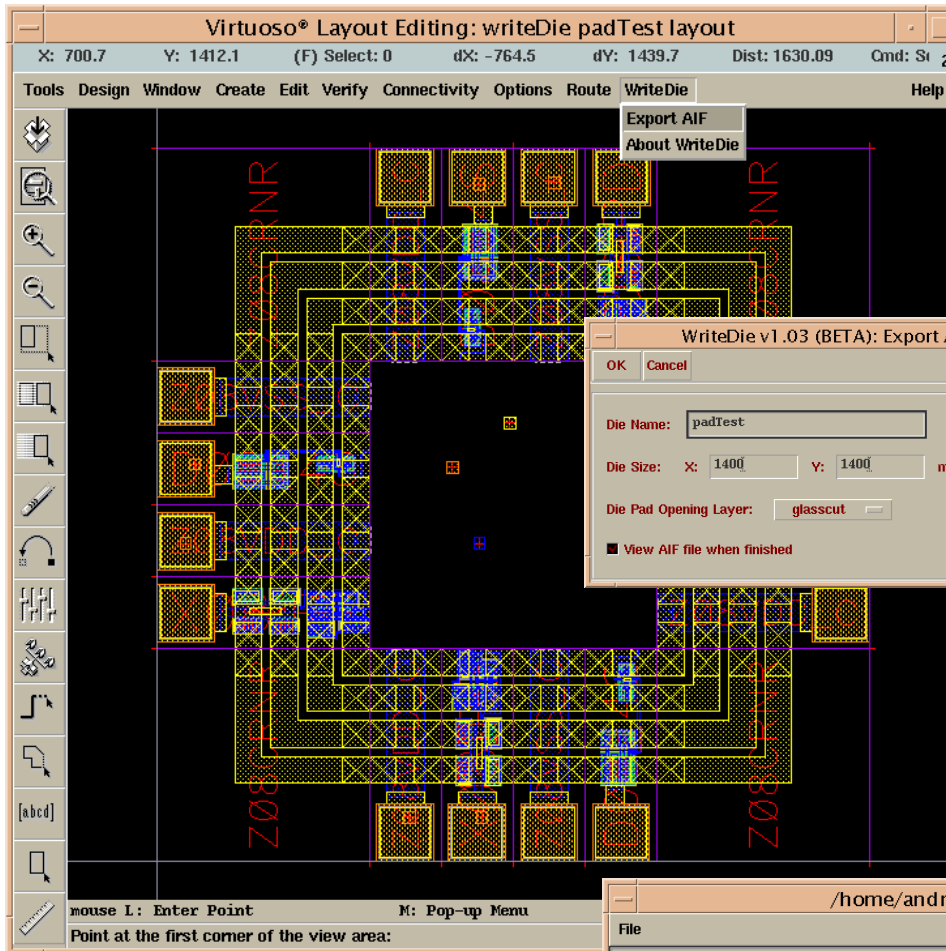


PADS
Power BGA



Artwork has already written processors to convert AIF into native formats for several of the design programs and will support all of them in the near future.

Easy to Use - Menu Driven



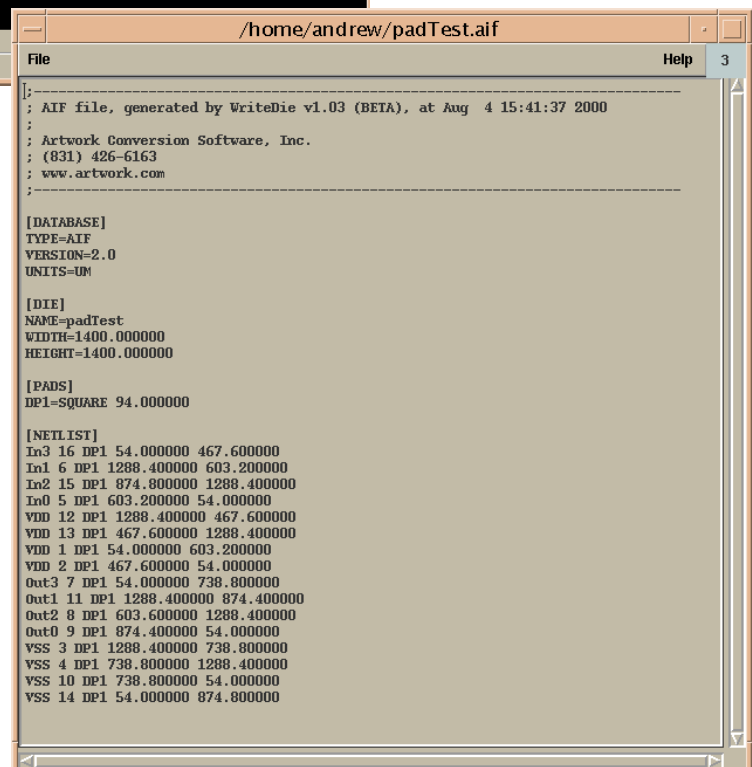
Step 1 - first make sure you are at the top level cell view and can see your die pads. From the **WriteDie** pulldown select **Export AIF**. A dialog box as shown below will pop open.

Step 2 - give your output file a die name.

Step 3 - Enter the scribe size of your die. This cannot be derived directly from the database.

Step 4 - select the layer containing the pad openings. This is usually a "glass" layer.

Step 5 - Click on OK.



The ASCII Output

The **WriteDie** program scans the pad opening layer identifying the pad locations and sizes. Under each pad it drills down to identify a "pin" which is associated with a netname.

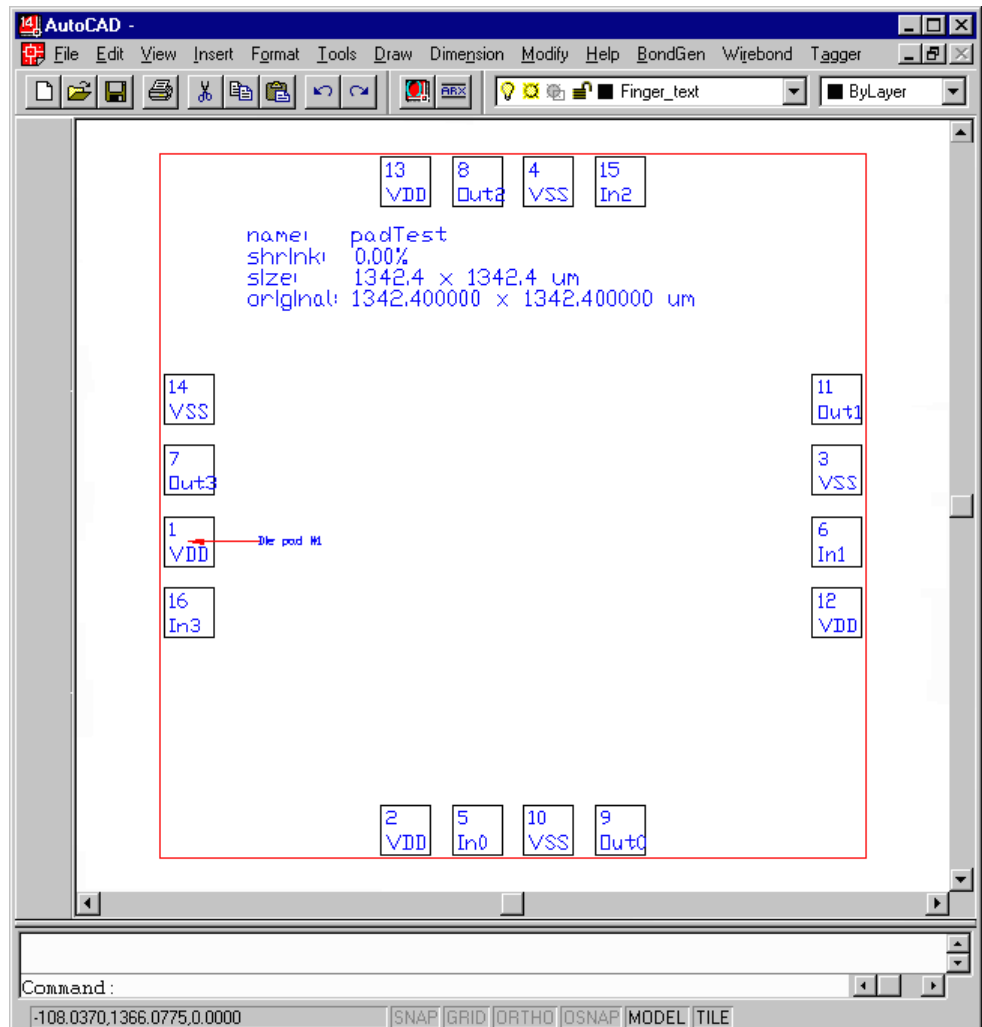
It then builds the output AIF file (or other formats) which consists of some basic header information and the die netlist.

Nets as Text

There is also an option to have **WriteDie** drill down for **text** and grab the string of text under the pad as the net name. Depending on your design methodology either the pin or the text will contain the link to the net name.

Loading into AutoCAD

For creating bond wire drawings you can use Artwork's WIREBOND program to load this AIF file directly into AutoCAD and bond the device into an existing drawing. Below you can see the AutoCAD drawing of the die - imported using the AIF file format.



Evaluation and WEB Support

Write_Die is available for download from Artwork's WEB site at:

www.artwork.com/package/write_die/index.htm

To evaluate the program go to the page, download it and send an email as instructed on the download page to Artwork. You will be provided a temporary key to evaluate the program.

The latest version of **WriteDie** is always available for download from the WEB site as well as documentation, a revision history and price information.

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