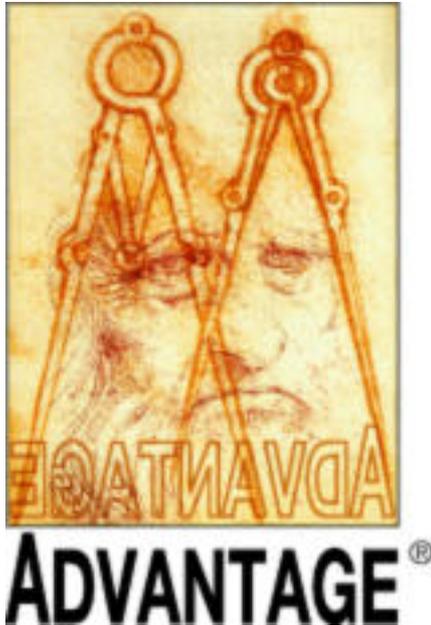


Welcome in Plug-ins' world!

for the Adobe Illustrator 5.5



written by Francesco Buzzigoli
2st revision
Dicember 1995

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This first collection of plug-ins has been developed to improve some Illustrator functions and to add some others which can be useful to C.A.D.-D.T.P. professional users.

Inside **ADVANTAGE Volume 1** there are 10 new plug-ins plus seven example files.

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Software Registration:

Don't wait! Fill in the registration card and mail it to the Advantage address or send it by fax.

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ADVANTAGE

Francesco Buzzigoli

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Introduction

Plug-in architecture is going to be an important feature to any kind of program. Using this technology the single program can be adapted to specific applications and, with few restrictions, improve original program functions. Since the plug-ins are not independent (they need a specific program to attach to) they are catalogued also with the name of extensions (i.e. the system's extensions).

The plug-in can be updated independently from the program releases and it can be added or removed by the end user.

Adobe Illustrator program supports the plug-in architecture. To use the specific function you have to drop the plug-in inside the folder named in accordance to the chosen language:

English: *Plug-ins*
French: *Dossier Modules Exteres*
German: *Zusatzmodule*
Italian: *Moduli aggiuntivi*
Spanish: *Módulos*
Dutch: *Insteekmodules*
Swedish: *Insticksprogram*



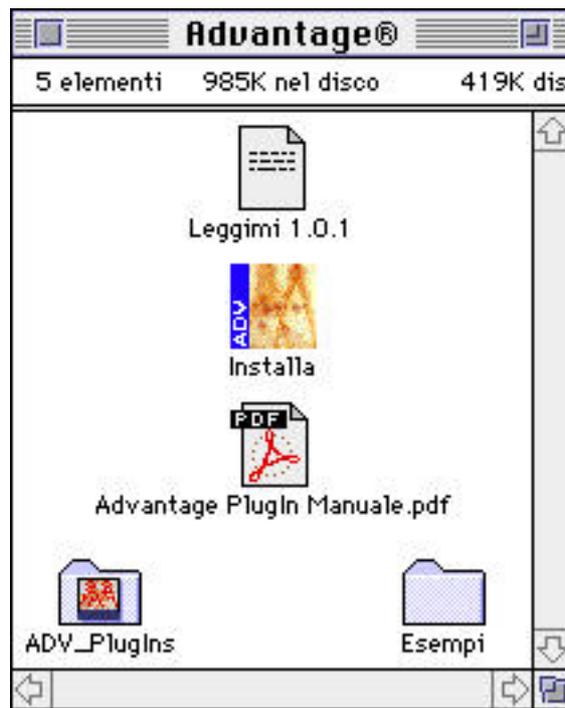
fig.1

After having launched Adobe Illustrator, the plug-in will be automatically inserted in the Filter Menu, inside the specific category (i.e. Advantage). Usually with a filter selection is showed a dialog window where you can digit the requested parameters. Pressing the OK button the plug-in applies the transformation to the work sheet objects (selected or not, depending upon the filter's features). During the execution the user can not interact with the program; his only faculty is to cancel the operation (if it needs too much time for the execution). Eventually the work sheet window is updated and the user can continue his job or undo the transformation (-Z).

How to install the plug-ins

Double click on the installer program ADV and initialize your personal licensee with the serial number insertion (check the registration card):

- 1) digit the Advantage serial number (if the number is wrong a new input is necessary) and your firm name.
- 2) choose the destination directory (remember that it must contain at least one plug-in of AI5.5).



Now you are ready to use the Advantage plug-ins; remember to mail the registration card (or send it by fax to the number showed in pag.2).

Plug-in: Area Computation

Did you ever try to calculate the area of an irregular, hand drawn surface? It's not an easy job. Now you can compute it directly from the Illustrator program. You can choose the area unit measure among mmq, mq, ha, sq inch and you can also choose the scale of your drawing:

1:1 if the dimensions are the real ones;

1:x (x>1) if the dimensions are smaller of x times (x integer number);

When more than one object is selected the filter returns the sum of all items. By activating the wished layers, without any object selection, you are able to know the area values layer by layer (in the selected measure unit and in percent of total area). The value returned is always written in the center of the working area and in the center of the object(s) inside the first level: this means that the first level must always be active and visible.

FEATURES:

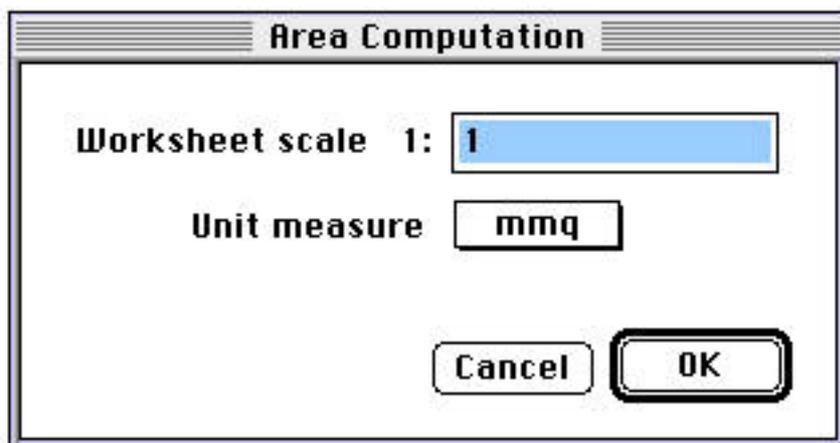
Object's area: select the object and run the filter;

Sum of objects' areas: select the objects and run the filter;

Layers'area: make sure that no objects are selected (-shift-A), activate the wished levels and run the filter.

Result's visualization: It will be a decimal number with two fractional digits, plus the chosen current unit.

Error: Maximum relative error $\pm 0.02\%$; an overflow error is visualized by the Overflow string: the chosen scale is not valid in that selected unit measure.



NOTE: After having calculated the levels'areas you can make a statistic graph. Copy all of the text returned by the filter in the clipboard, paste it in the electronic sheet of Illustrator, press the transpose button and play with the graph!

Compound objects are computed by subtracting the values of these 'within areas', so that the filter returns the right value.

Plug-in: Special Duplicate

-D, -D, -D..... after having pressed for the twentieth time, or more, these keyboard keys you'll terminate the hard object duplication, which, at the beginning, was executed by the Move function...and moreover, if you make a mistake in this first operation you have to start again with -D, -D, -D.....

Now make all the duplications using the Special Duplicate filter.

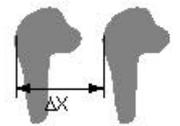
You can duplicate up to 255 times a single object or a group of selected objects. You have to specify the distance between the duplications (from axis to axis or bounding), their numbers (#X or #Y for linear duplication, #X and #Y for matrix) and go!

Bounding options: they specify whether the X, Y values are relative to the distance between the axes or between the bounding boxes. (see fig.1 and fig.2);

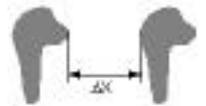
FEATURES:

Linear duplication: select the desired object(s), digit the X and Y fields (mm, cm, pt measure units will be converted to the work sheet unit), use the Bounding options if necessary, specify the number of the requested copies inside the X or Y fields and run the filter (see fig.3);

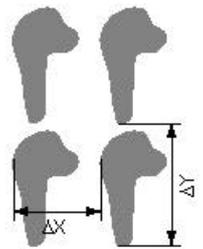
Matrix duplication: select the desired object(s), digit the X and Y fields (mm, cm, pt measure units will be converted to the work sheet unit), use the Bounding options if necessary, specify the number of the requested copies inside the X and Y fields and run the filter (see fig.4);



1 - axis to axis



2 - bounding



3 - matrix

Special Duplicate

ΔX :	20 mm	<input checked="" type="checkbox"/> Bounding	#x: <input style="width: 40px;" type="text" value="2"/>
ΔY :	3.63 mm	<input type="checkbox"/> Bounding	#y: <input style="width: 40px;" type="text" value="1"/>

NOTE: The selected parameters are held in memory; no object selection returns a system alarm sound; you must convert text objects into outlines.

Plug-in: Resize & Move

OK, the magazine cover drawing is done! Now you want to produce a poster 70 x 100 cm large. Instead of making boring calculations in order to determine exactly the percent value of Scale factor you can use this filter.

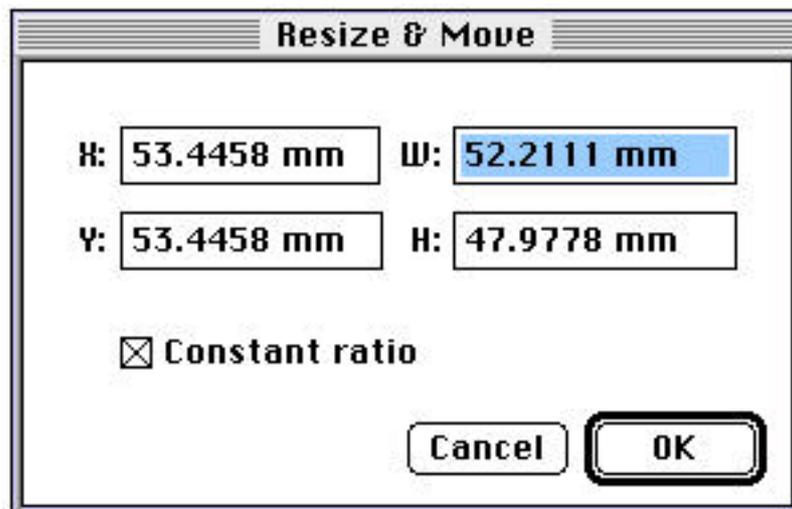
To resize an object or a group of objects you need only to set the new width and height parameters (cm, mm, pt). When a group is selected the two dimensions are relative to the boundingBox. You can keep the ratio (by setting one of them the other one automatically changes) or one of the other, or both of the two dimensions to new values. Eventually you are able to move the object(s) in a definite position inserting the coordinates of the bottom-left boundingBox vertex.

FEATURES:

Resize with constant ratio: select the object(s) and set the new width (W) or height (H) dimensions; be sure that the constant ratio check box is selected;

Resize with variable ratio: select the object(s) and set the new width (W) and height (H) dimensions; be sure that the constant ratio check box is not selected;

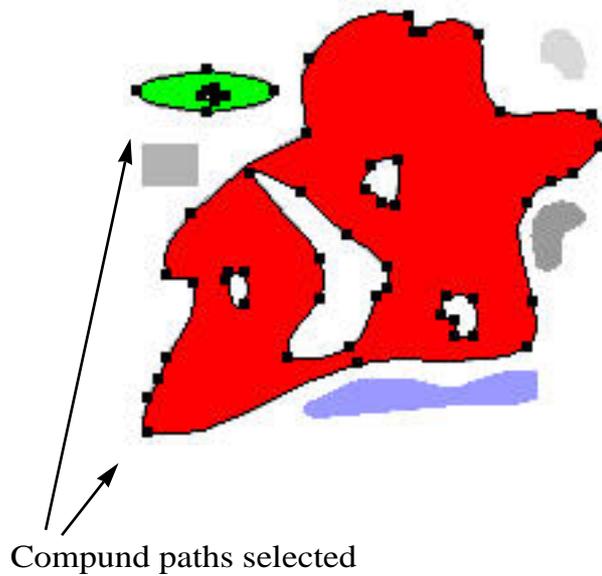
Move: select the object(s) and set the new vertex coordinates;



NOTE: no object selection returns a system alarm sound; the input window is showed also with last filter command (-shift-E). You must convert the text objects into outlines.

Plug-in: Select Compound

Having the possibility of making a particular selection may be a great advantage (!!!). Using this plug-in function you can only select the compound paths but they can also belongs to different layers (active and visible). After the selection is done you can, for example, lock, hide or group compound objects to move them to specific layers....



Plug-in: Find duplicate paths

Another useful selection is the one which allows you to find duplicate path overlapped (sometimes more than two). Often the user creates them accidentally or unavoidably by using again and again PathFinder™ filters. For example, if you need to compute the area sum you have to be sure that no duplicate paths are present in the worksheet, otherwise you get incorrect results. The plug-in selects all the duplicate paths, so the user has to choose the one to delete. Practically the filter lets you see where they are located. For example, after the filter selection you can copy them into a new layer, check them there one by one and make the right decision about the original path. After the correction is done, you throw away the layer holding the path copies.

NOTE: Usually you wish to lock the compound path before using this filter, so that the ‘within path’ of the relative compound and its exact path copy won’t be selected. See the example file Check Duplicate paths inside the Example folder.

Plug-in: Smart Join

Making a join between two paths could Sometimes be disappointing, first of all because it is necessary to change the arrow type (from normal to direct-selection kind) and moreover if the two points to be joined are near. Besides, if a lot of anchor points are near to the endpoints you usually get the error message: *“To join, you must select two open endpoints.....”*.

Using this filter you can directly join the two closest endpoints of two selected paths also with the normal arrow tool.

If the two paths are polylines the filter adds a line between the endpoints, see fig.1 (overlapping endpoints don't add any line). If the two paths are Bezier curves the filter keeps the in and out direction points of the endpoints (fig.2,3).

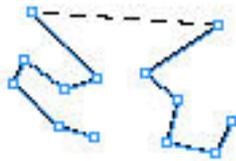


fig.1



fig.2



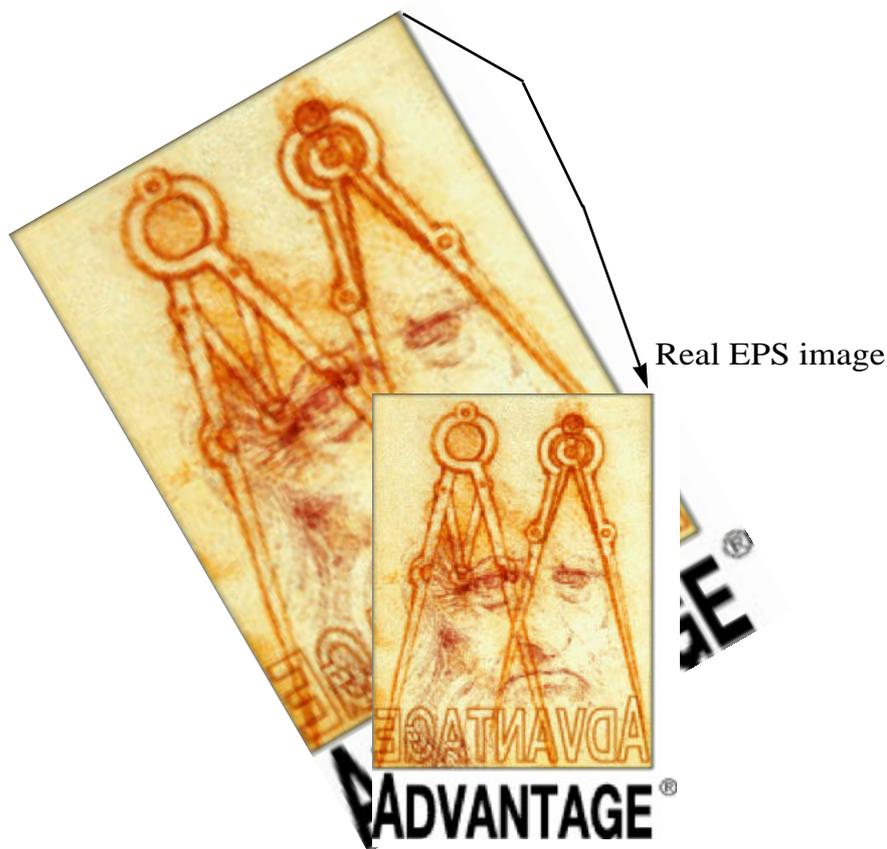
fig.3

NOTE: no object selection, or more than two, returns a system alarm sound.

Plug-in: Real Dimension

When you place an EPS image inside your worksheet you are able to apply any kind of transformation to it: scale, rotate, skew... Rescaling the image could put you in troubles by decreasing the original resolution: an 300DPI image enlarged by 200% goes down to 150DPI; if wasn't you who made it maybe this tricky things cause you to print a bad image on the printer. Now using this filter you can check it: it puts the image in the same position without all the transformations. In this way you can quickly see whether the enlargement could be a problem or not.

To delete all transformations it is no longer necessary to replace the image from the disk.



NOTE: no object selection returns a system alarm sound.

Plug-in: Area Selection

This is another selection tool. If you want to group or put all the paths in special categories having the area value greater or smaller than a specified value, use this filter.

You can choose the area unit among mmq, mq, ha, sq inch and you can also digit the scale of the drawing and the area value (decimal number with two fractional digits).

Area Selection

Worksheet scale 1:

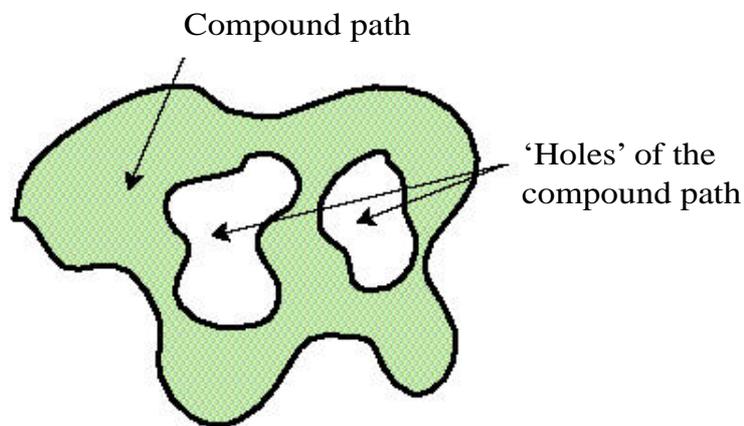
Area > Unit:

<

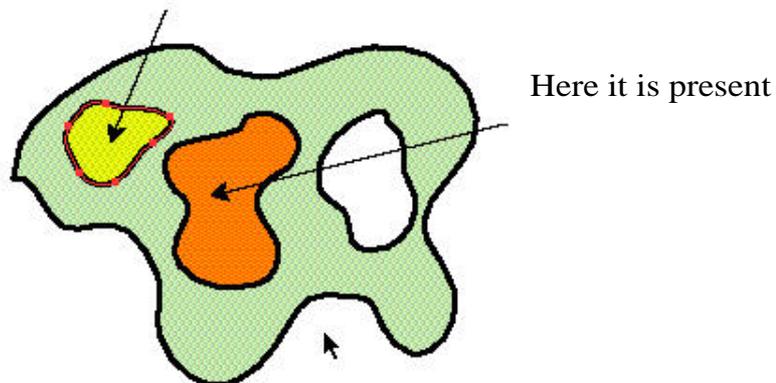
Plug-in: Check Compound Path

This plug-in has got two features. The first one is to see if all the paths having smaller ones inside them are compound paths with their relative 'within paths'; if it is not so, the area calculation plug-in will return an incorrect value.

The second one is to check if some paths are covered by others. Sometimes these problems could emerge using Bring To back and Bring to front functions (see the Check Compound Path example).

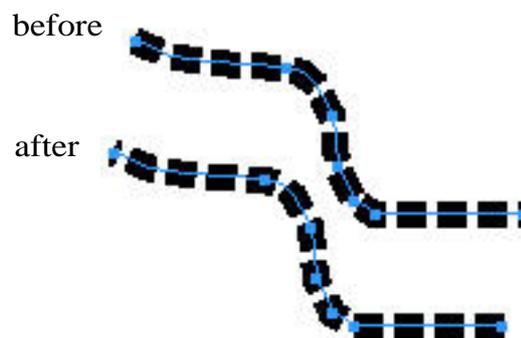
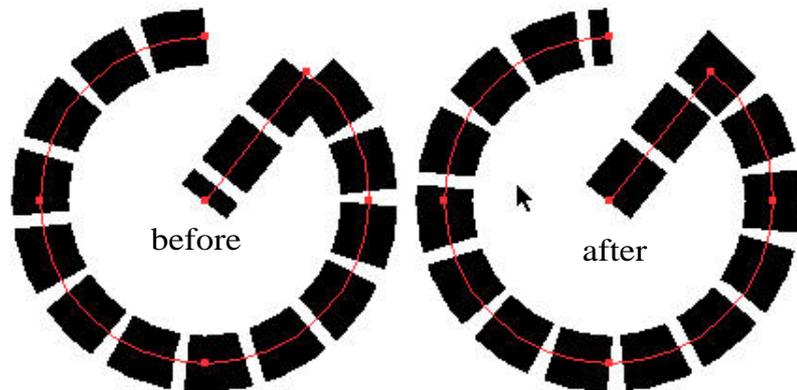


The path is selected because is not present the relative 'hole' path



Plug-in: Invert Direction

This function is present in other drawing programs. It allows you to change direction on a drawn path. You can use it when you want to decide where a dashed stroke has to start.



NOTE: At the moment with AI5.5, to see the changes done you have to go to the artwork view and back to the preview. No object selection returns a system alarm sound.

Plug-in: Miscellaneous

To make the plug-ins more friendly you can use a system extension like NowUtility. With NowMenu you can assign a keyboard combination, including the function keys, to each ADVANTAGE plug-in.

Now it's time to go to work, have fun!!!