

**Subject: What is Autorun?**

## What is Autorun?

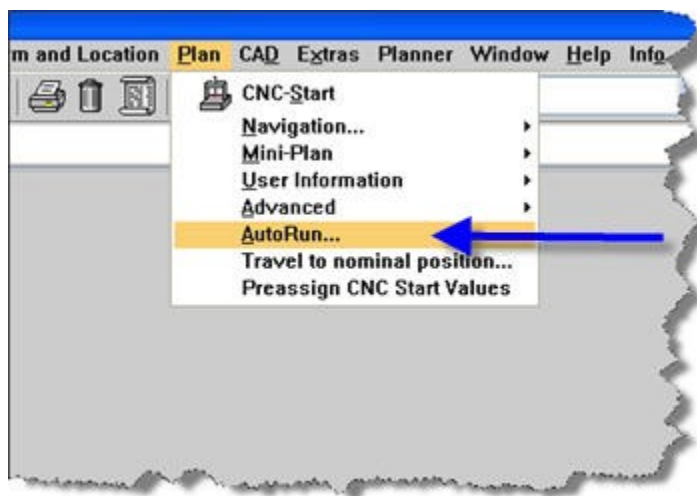
Autorun is a function within Calypso, which allows a pre-programmed part to be run by unskilled Calypso operators.

It provides an interface, which can be customized to have no resemblance to Calypso.

The functional aspects of the program can go from the basic level where simple parts are measured in batches, to the more advanced level where programs are selected from a pre-defined list and flow structure.

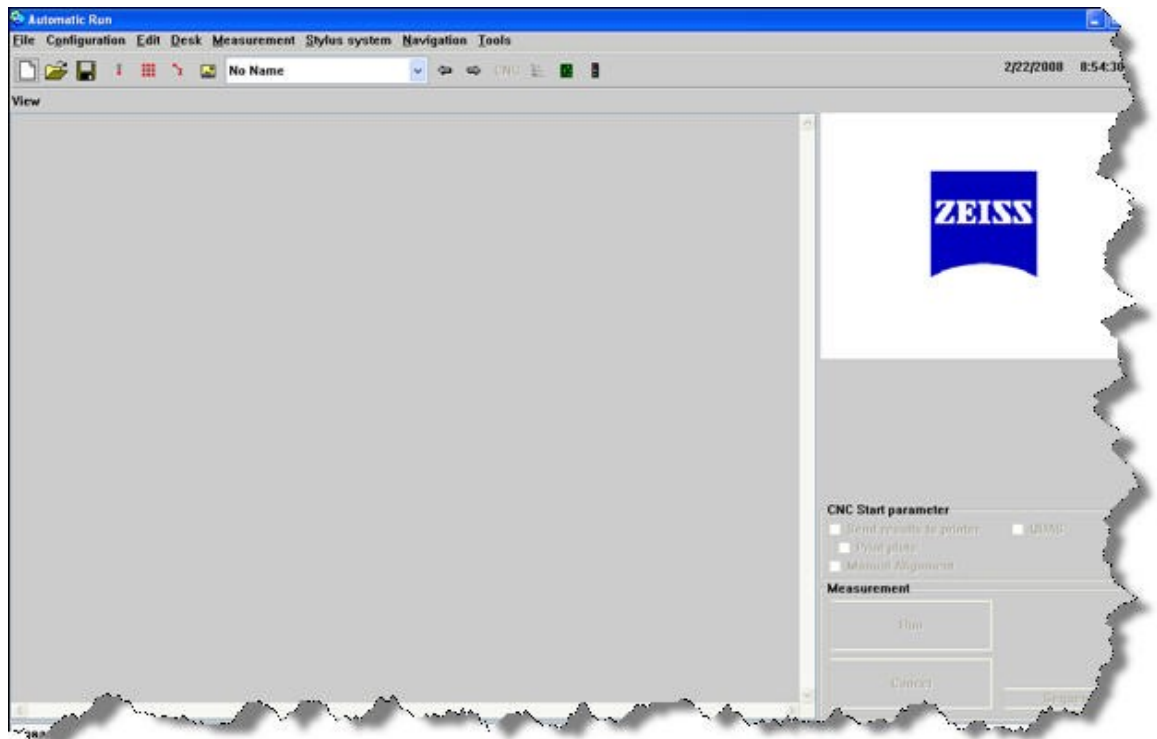
Let us have a look at the basic elements and explain why they are used and how they are created.

### The basic Autorun interface.



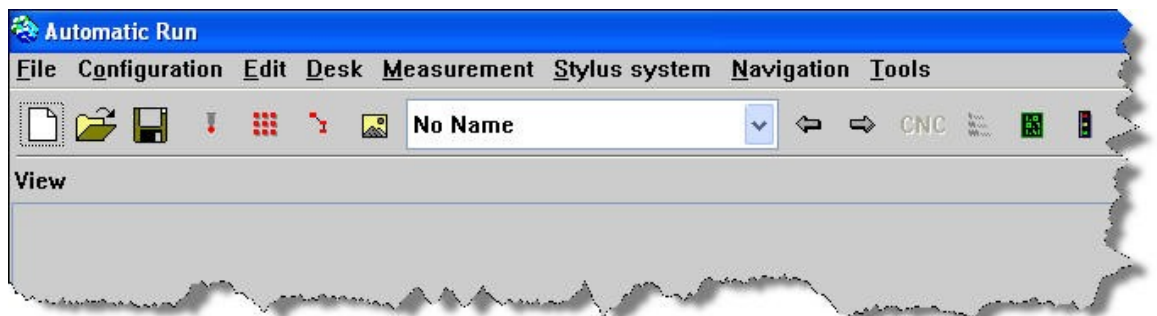
Autorun cannot be run if any programs are open in Calypso, before trying to access it, close all open programs.

Go to the Plan menu option, and select the “Autorun” option

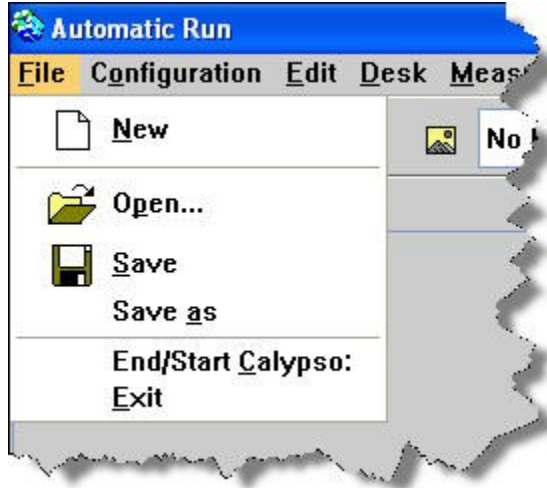


As you can see the graphical interface that is introduced has no apparent connection to Calypso, the interface is different and the appearance can also be changed to make no reference to Zeiss.

Lets take a little tour around the environment and see what some of the options are.



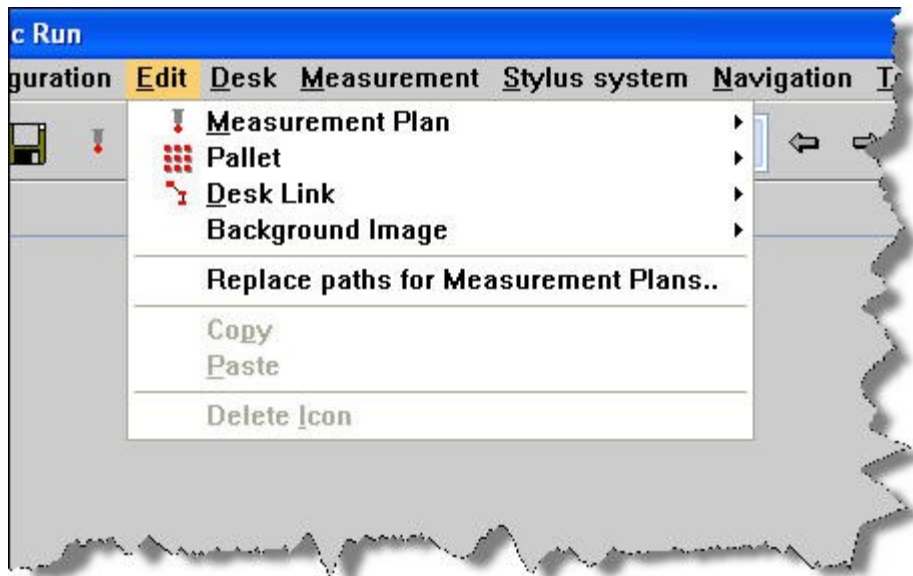
As you can see the menu options and icons which are available on the toolbar are different from those, which are displayed in Calypso.



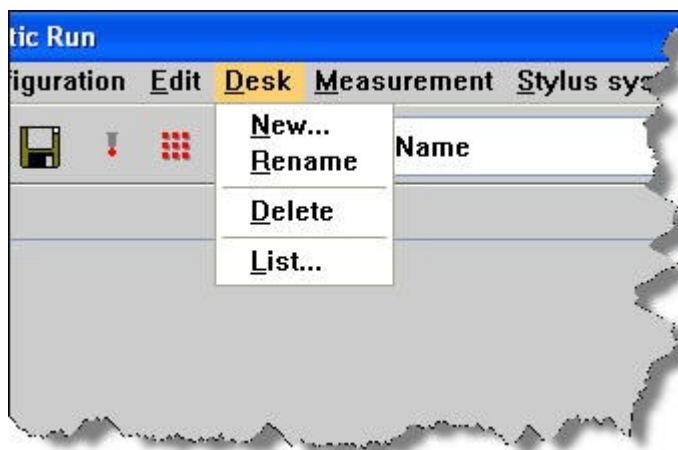
The File menu offers the file related options, that are available in Autorun.



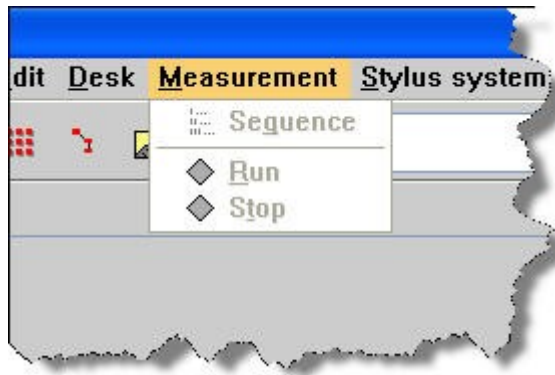
The Configuration settings give you access to various areas where changes need to be made. The "CMM", "Measurement" and "Environment" options place you into the Calypso configuration settings for the CMM, Measurement and Environment. The User settings allow you access to creating new users and assigning their privileges.



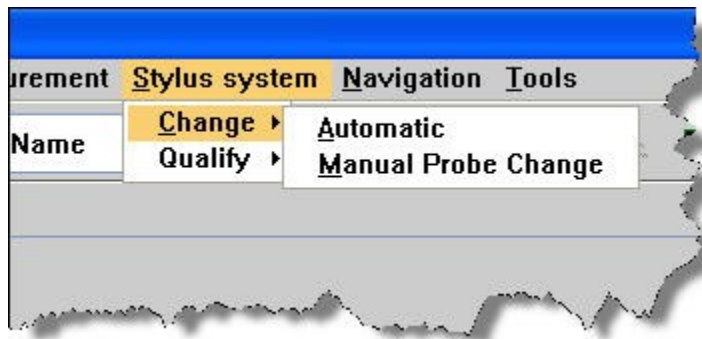
The Edit menu option allows you to modify settings within the Autorun environment.



The "Desk" is the screen or interface that you are viewing in Autorun, these options allow you to define new visual screens.



The Measurement option gives you control over the way in which the program will run.



The Stylus System options give you access to the stylus related functions for changing and qualification of the styli.



The Tools that are made available to you are various functions that help you under certain circumstances.

As can be seen from the options which are available, control is supplied to the user to use and modify run parameters. Let us now look at a series of applications which will utilize the various options available to us.

## **Case Study 1**

### **Requirement.**

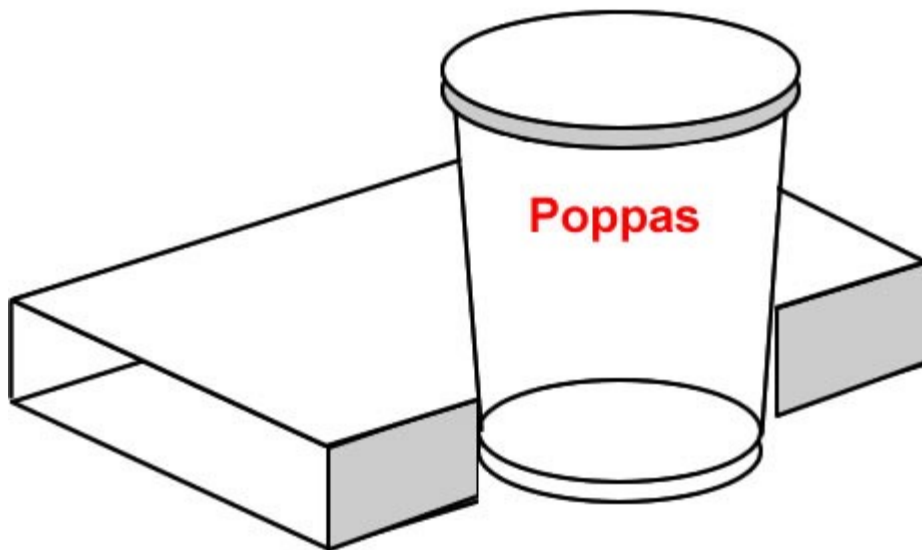
We manufacture a very simple part, a cup, and we wish to constantly monitor its quality. What is available within Autorun to help me?

### **Solution.**

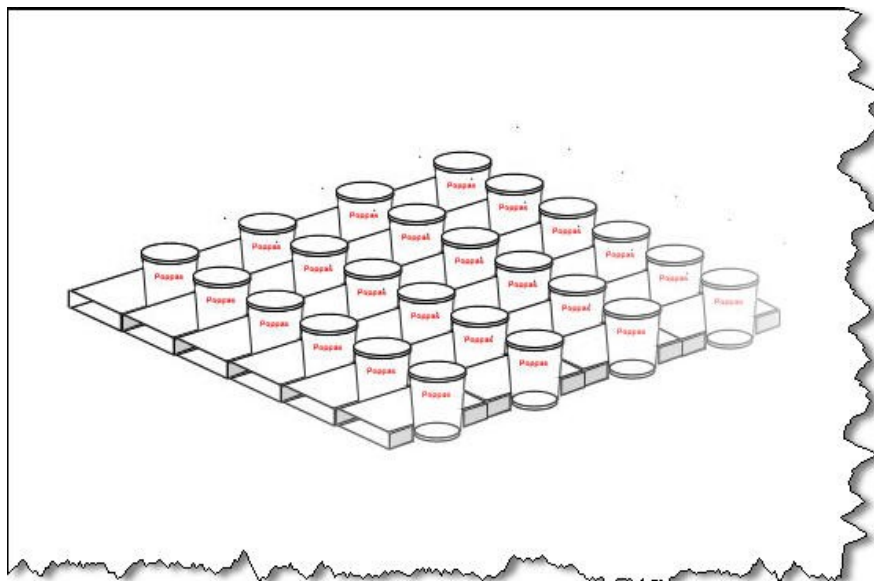
The first step is to create a Calypso program that is going to be used within Autorun, in this instance it would be a full inspection on all of the supplied parts.

### **Question 1**

How are we going to mount the part?



Our solution is to mount the part in a simple fixture such as the one shown above. However, this only handles one part, we want to handle several.



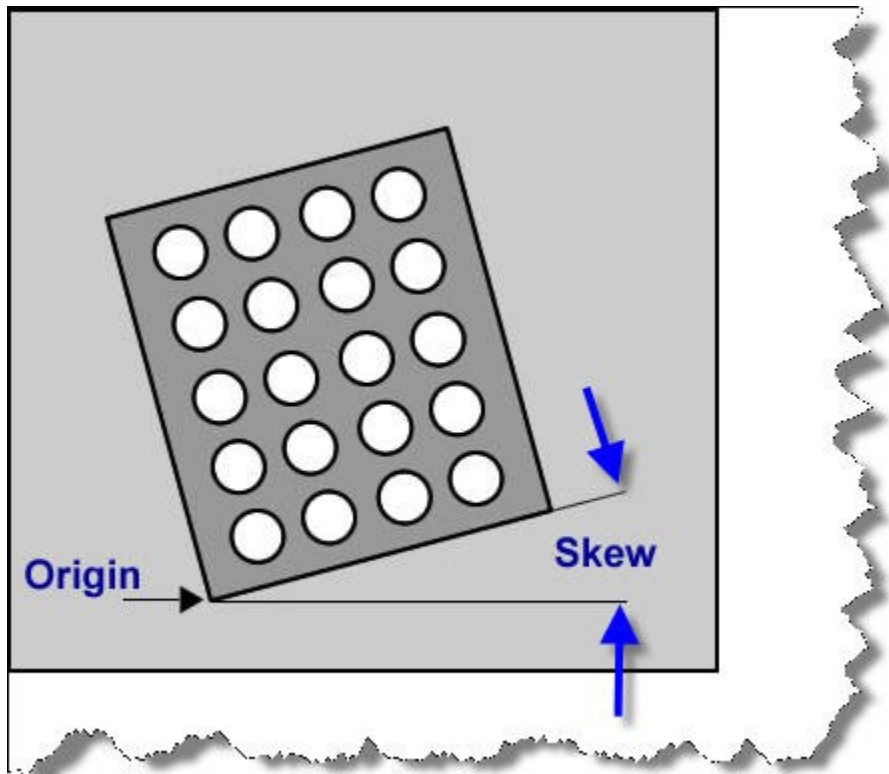
Our new fixture positions the cups in the required orientation but now does it with 24 cups a much quicker method of measuring.



## Question 2

How do we tell Autorun what we have done?

The first step is to create an alignment of the fixture relative to the machine volume, this tells Calypso the orientation of the fixture carrying the parts.



This is called the Pallet alignment

The second step is to define the base alignment for the parts that sit inside the pallet. This is the alignment that was assigned to the inspection plan for the part, which we had previously created.

**Pallet Parameters**

Pallet Name:  
No Name

Comment:

Pallet Alignment:  
 Regular  
 Parts referring to pallet  
Lab\_1

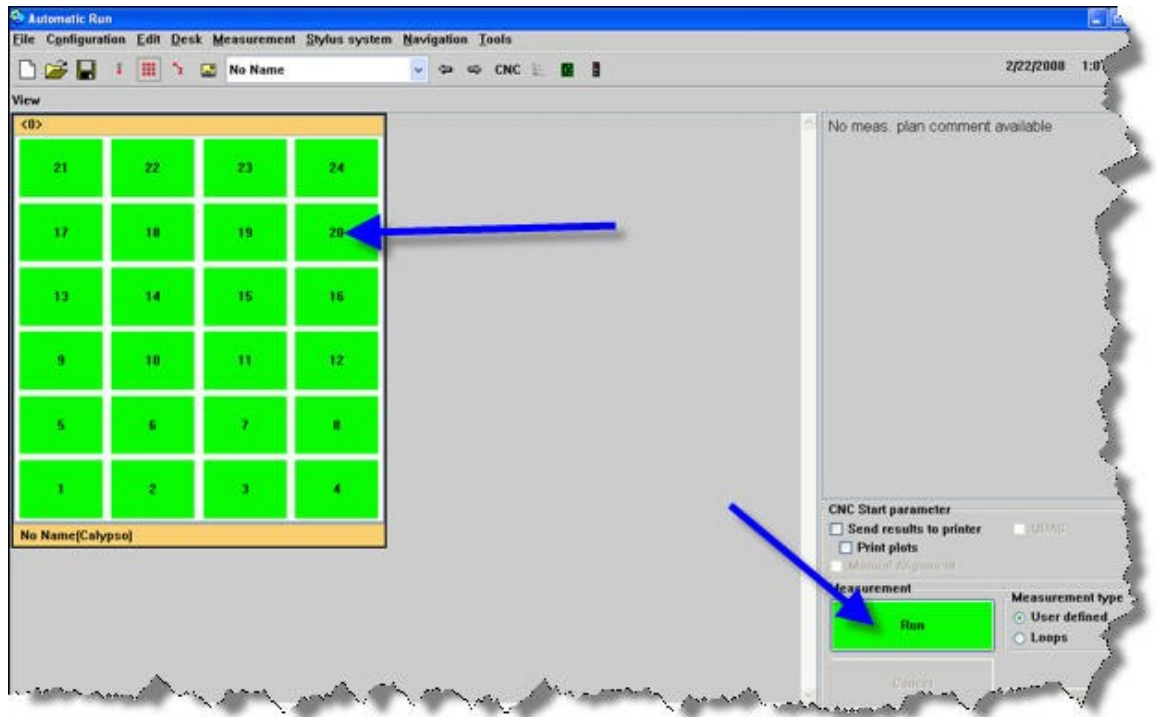
Part Alignment:  
 Base Alignment  
 Start Alignment  
Cylinder alignment

Group Columns  
Distance: 100.0000  
Number: 4

Group Rows  
Distance: 100.0000  
Number: 6

Printout header data

As can be seen from the dialog box shown above, we enter the values in the Pallet parameters that tell Calypso what the misalignment of the plate to the machine is and the maximum number of parts that could be in the plate.



When the program is run at these settings, the program will measure each cup at the 24 locations.



However if we only select certain areas to measure, Calypso will be able to skip over the unmarked positions because it knows the necessary parameters to miss these locations.

## Case Study 2

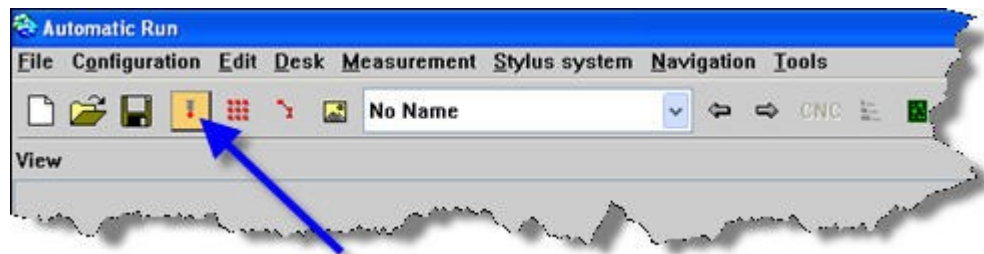
### Requirement

We have a full program that has been separated into mini plans and we need to set it up so that our operators can go on the machine and select the correct program without knowing where the programs are stored.

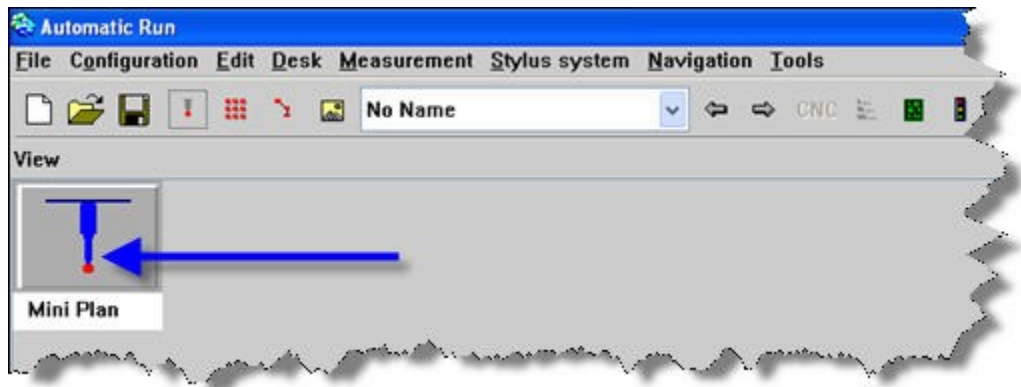
### Solution

Our program has been created which contains 3 mini plans called, Front Face, Top Face and Side Face.

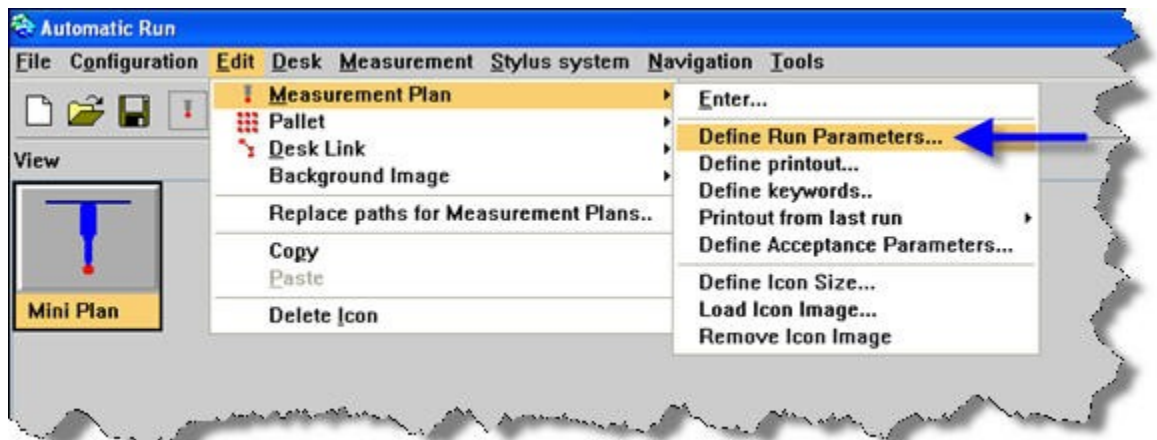
These are the names we will use in our example, but the popular way of structuring this is OP10, OP20 and OP30 detailing different levels of the manufacture of the part.



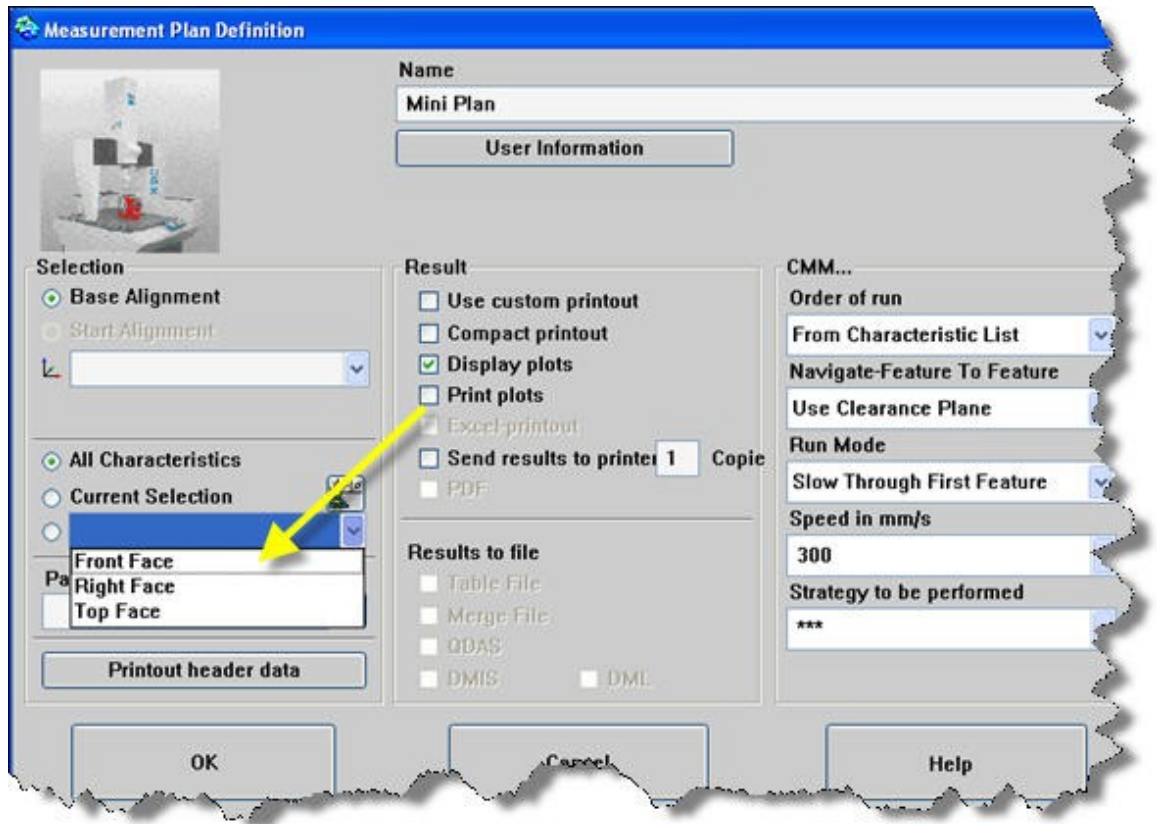
Within Autorun, we will use different parameters to choose our programs, we will use an icon. Select the icon that is shown above.



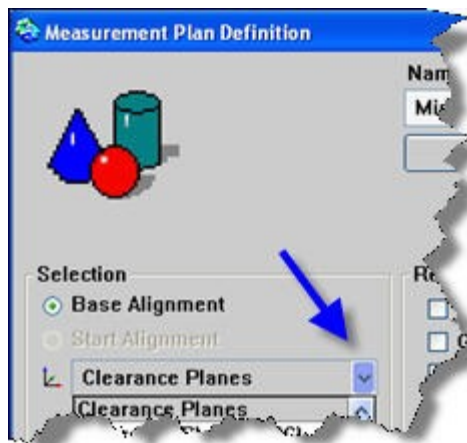
When requested, point it to the program that contains the mini plans.



Highlight the logo and click on the Edit menu option. Select Measurement Plan and then Define Run Parameters.

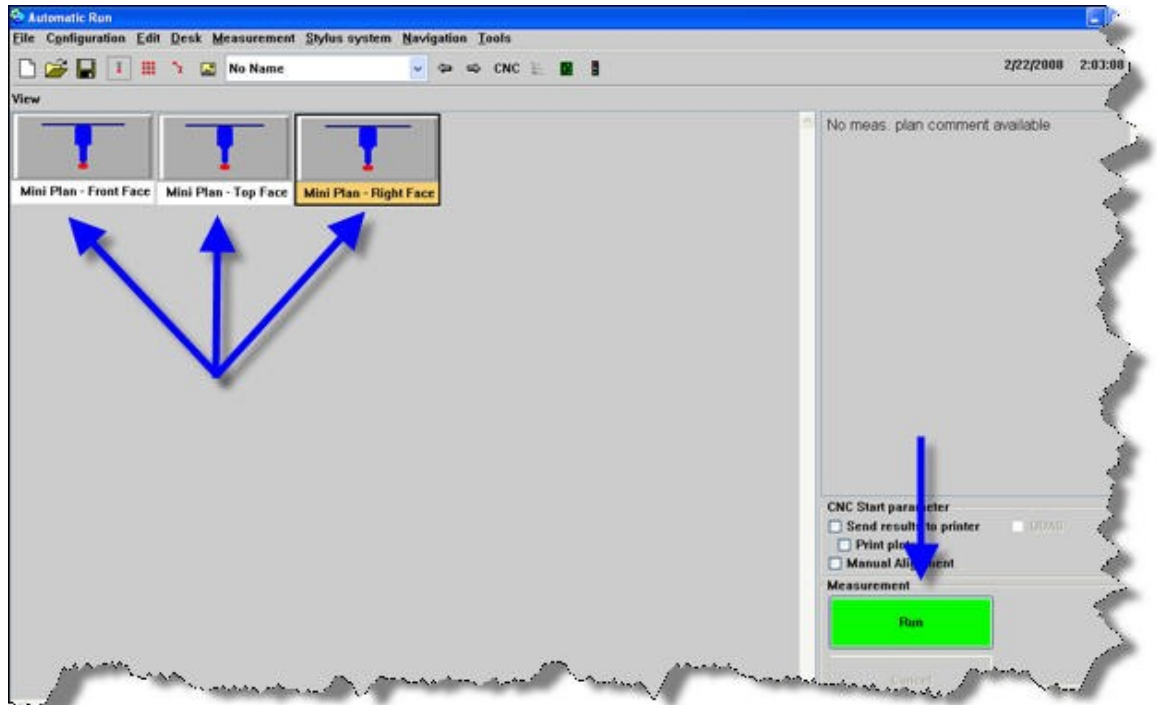


Click on the Mini Plan that you wish to assign to this icon.



Also the alignment that will be used in the measurement program.

Repeat this for the other operations until you have three icons available.



To run a particular file select is from the list and click on “Run”.

### Case Study 3

#### Requirement

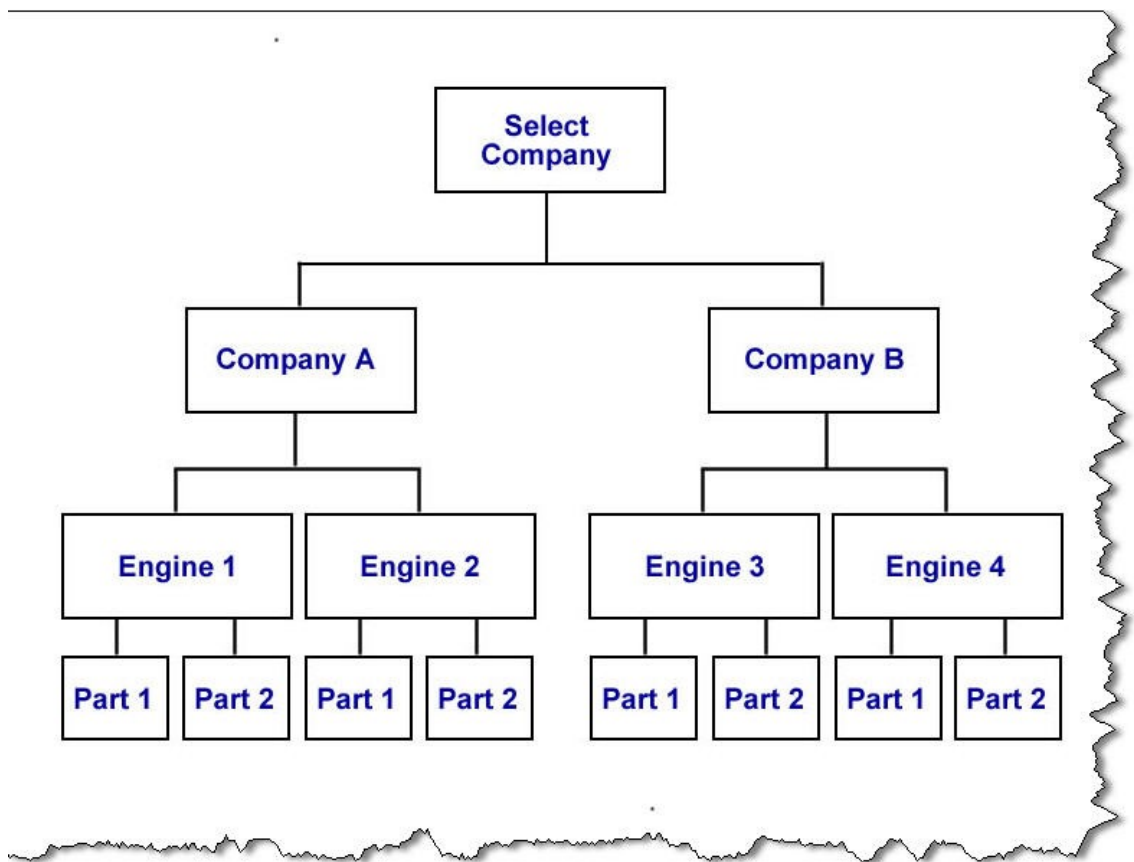
I produce parts for a series of competing companies and I need a way to be able to make sure that my operator picks the correct program but do not wish to give him complete access to my files.

#### Solution

This is a little more difficult to explain, but it involves the creation of a series of levels. A level is a new screen that can be called in navigation. In our example we will need:

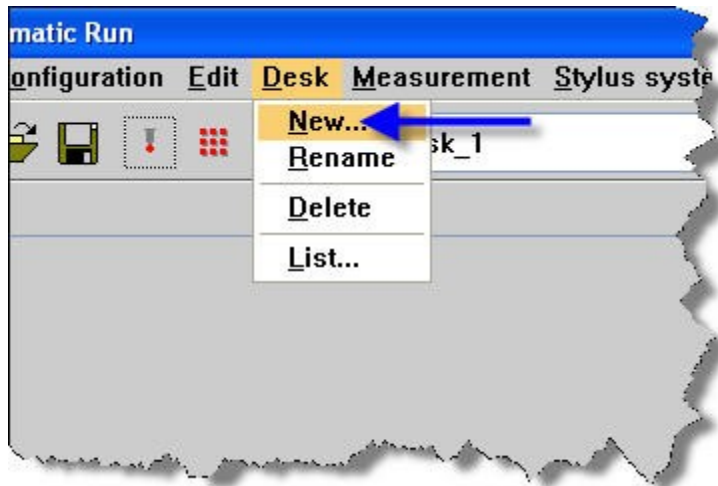


1. An opening screen
2. A screen to select the company
3. A screen to select the engine (for each company)
4. A screen to select the part type (for each company)
5. A screen that actually defines the programs to be run for the selected part (for each company).



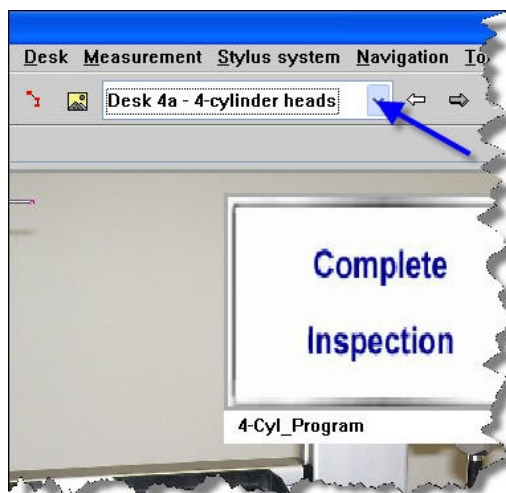
Our basic structure will look something like this, obviously in your case the divisions and separations would be different, but this is the general flow.



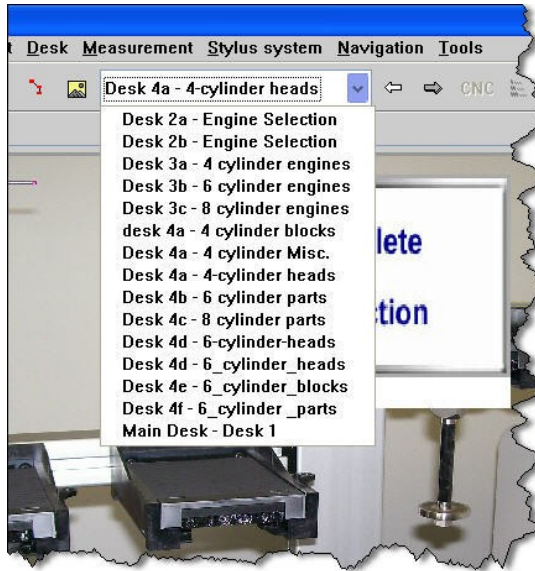


Each new screen that is displayed is called a “Desk”.

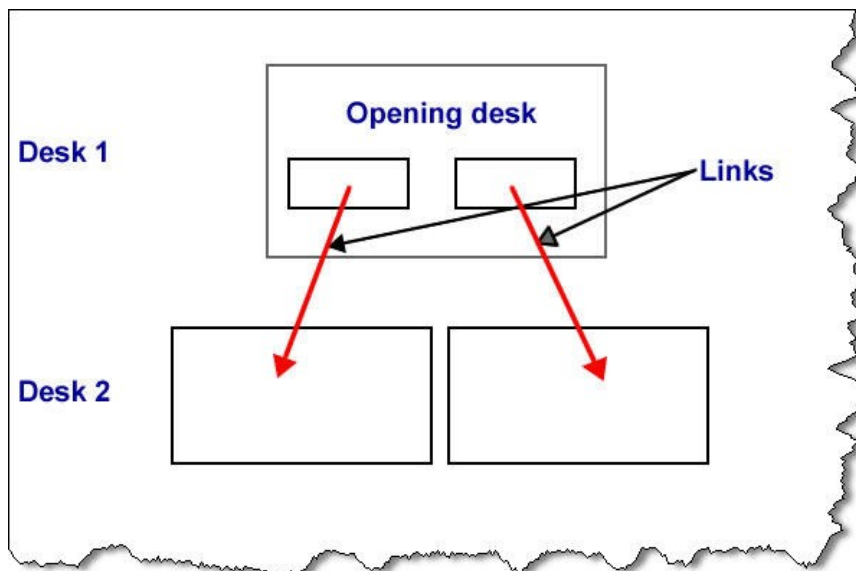
I found it less complicated if I initially created a paper creation of a layer with its name on it. This allowed me to lay out the paper on the floor in the order I needed them. Any missing layers were visually obvious. From my paper approach, I can define how many Desks I needed. You may wish to call them Desk numbers first and worry about actual names later when the navigation is sorted.



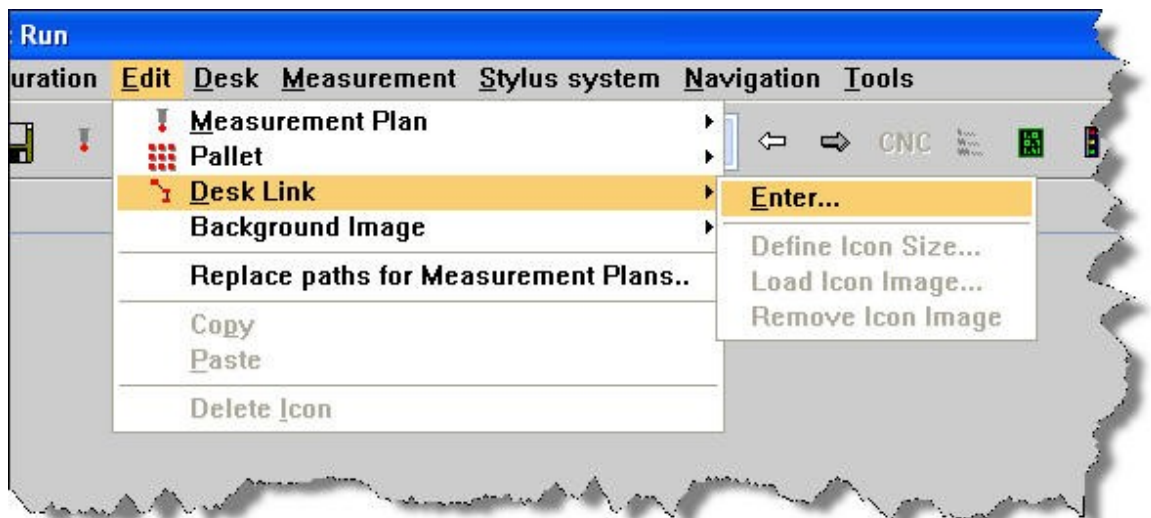
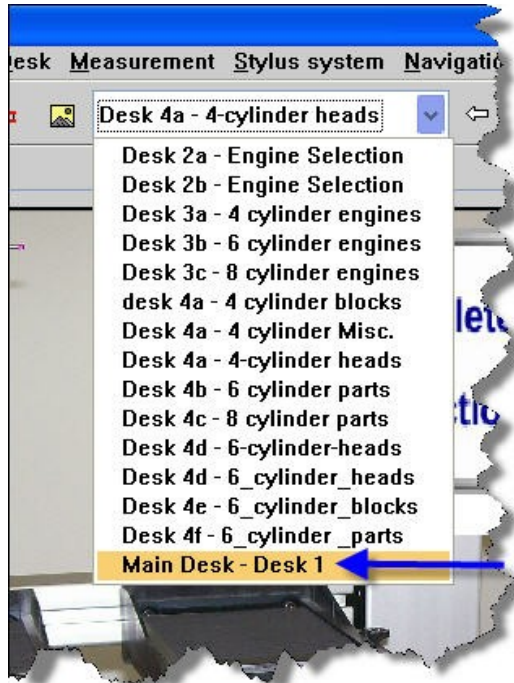
After you have created the new desks and wish to see how many you ended up with, click on the down arrow in the Desk drop down and it will show you all of the created desks.



The second part of the procedure is to create a link between the Desks, this is our other navigational tool and it works in a similar way. A link is a button which, when selected, will direct us to where its destination is.



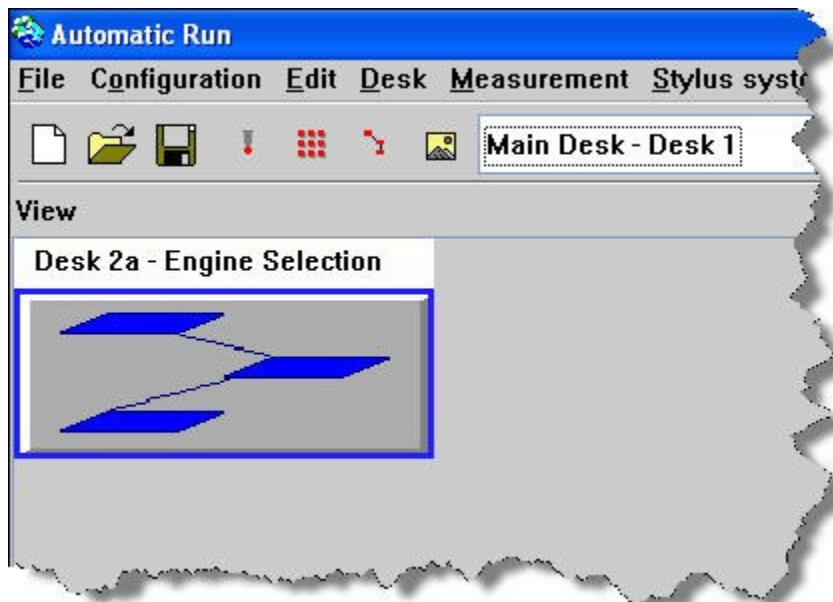
To add a link make sure that the first page is open  
By selecting it from the list.



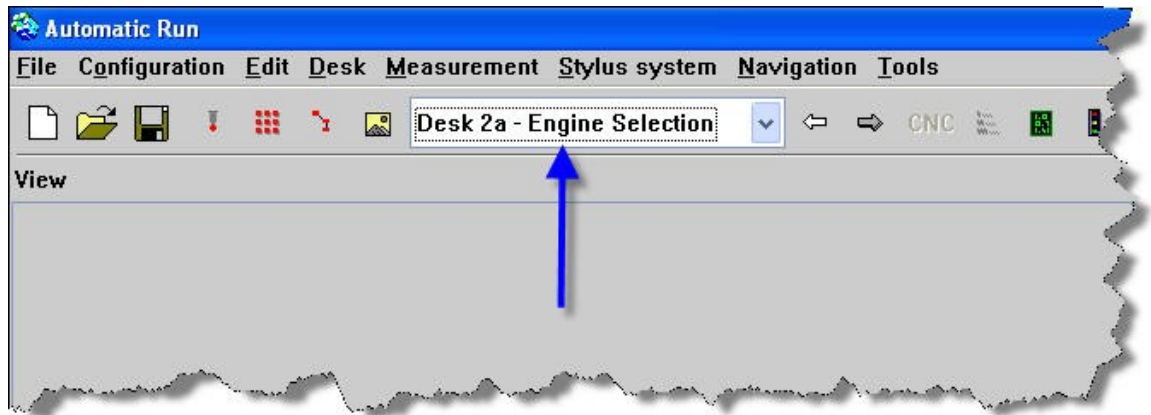
To insert a link from Desk 1 to Desk 2 we need a  
link or “Desk Link” on our main page. Click on the  
link and it will insert the raw link onto our page.



Select the name of the destination Desk and the link will be entered into the program.



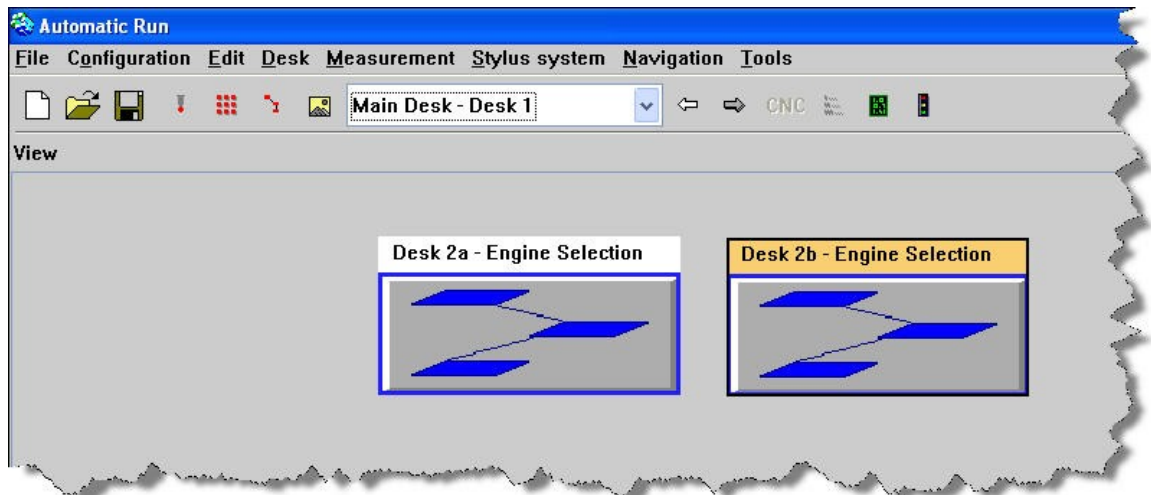
If you double click on this link, it should take you to the page or desk that you assigned.



We can see that double clicking took us to this Desk, which is where we wanted to go.

Return to Desk one and add another Desk link but this time point it to Desk 2b.

Calypso has a habit of placing new links in the upper left corner of the screen, which means that a second link will actually cover the first.

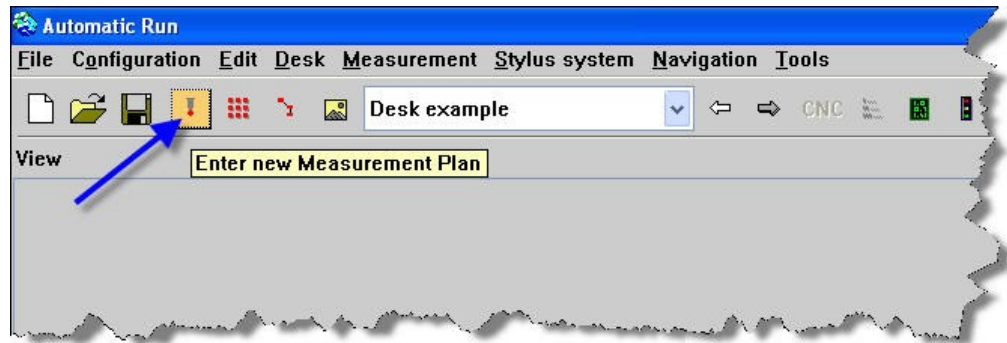


Click on the links to highlight them and drag them into the desired visual location on the screen.

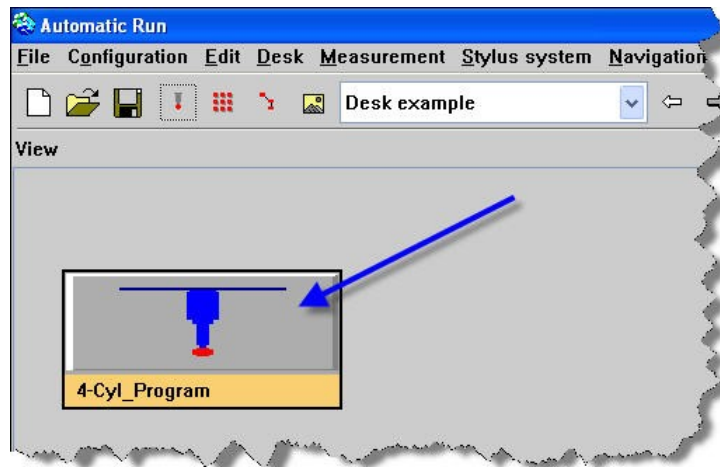
Don't forget that you can test your navigation by double clicking on the icon and checking where it goes.

This is where the initial naming of the desks and the paper navigation aids will help you, complete the navigation to meet your requirements, until you reach the last page.

The last Desk is a little different, this desk will actually select the measurement plans that need to run from the icons on the page.

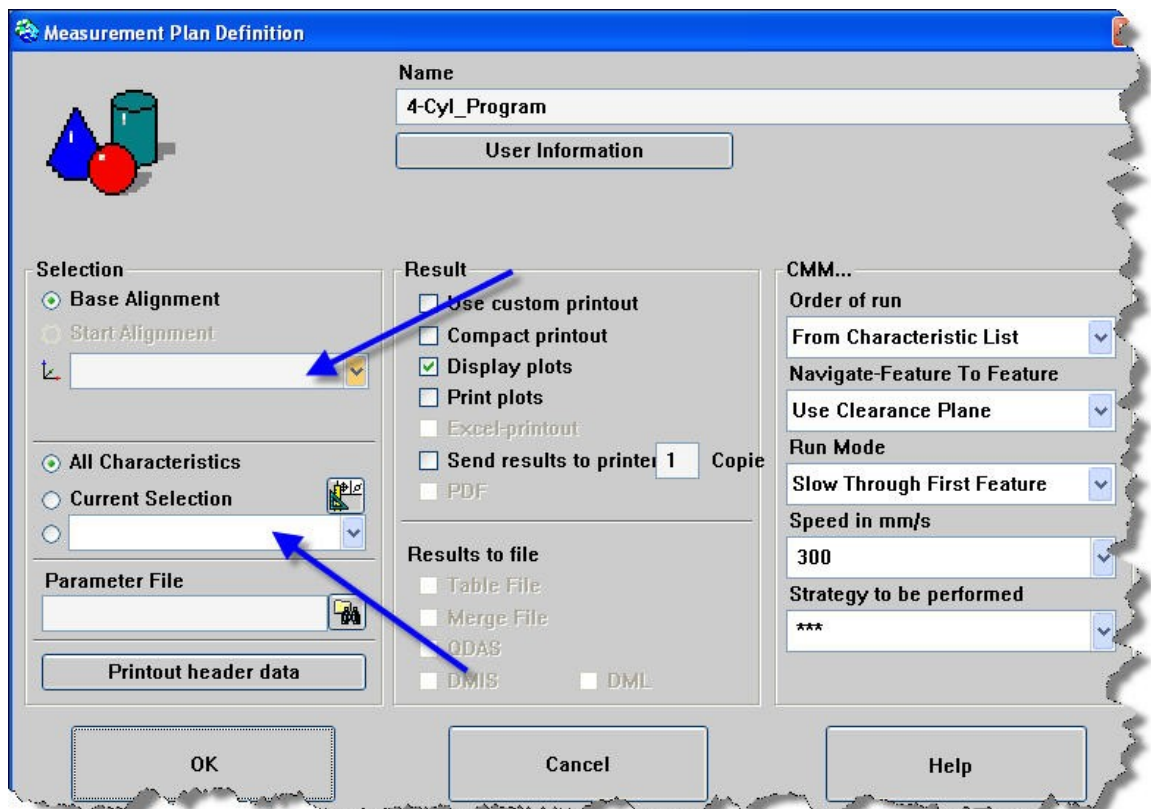
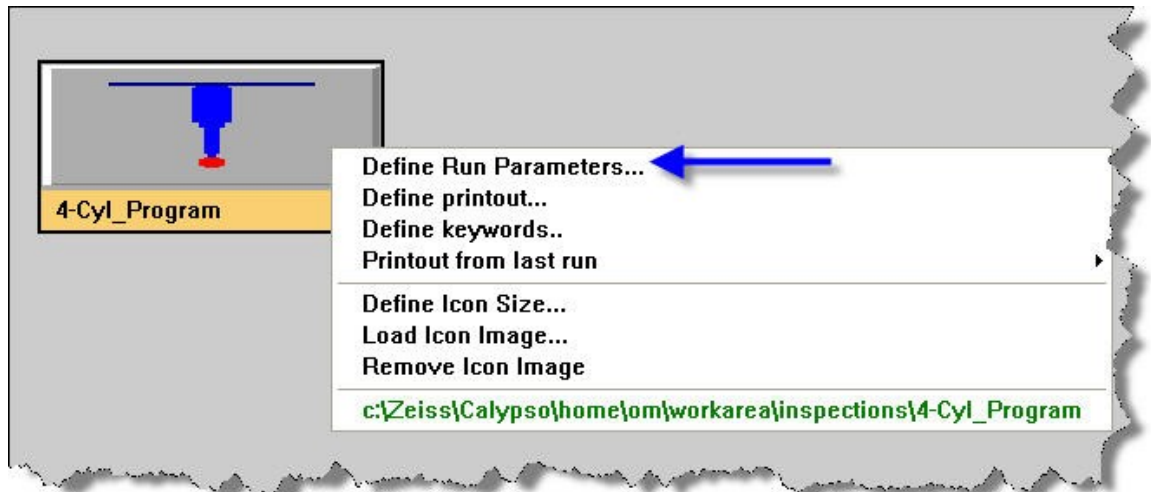


On the final page, click on the icon shown and select the program from the list that you wish to run when this icon is selected.





You can see that the icon pointing to the measurement plan has been added, but it needs the run parameters to be set for the program itself. Click on the icon to make it active, and then right click and select Define Run Parameters.

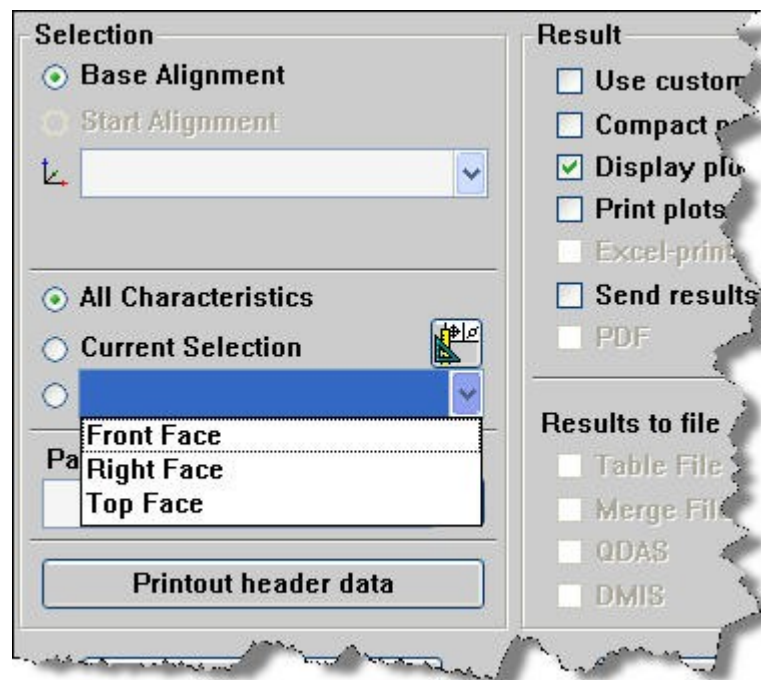


What has to be assigned here is

- The alignment that the program is relative to.
- The mini plan that is to be run if one exists for this program.

The alignment really depends on the way that you wish to run your program, but typically this would be the name of the program,

The mini plan approach is where you have taken the time to subdivide your programs into mini-plans. In our example there were three mini plans that were available for this program.

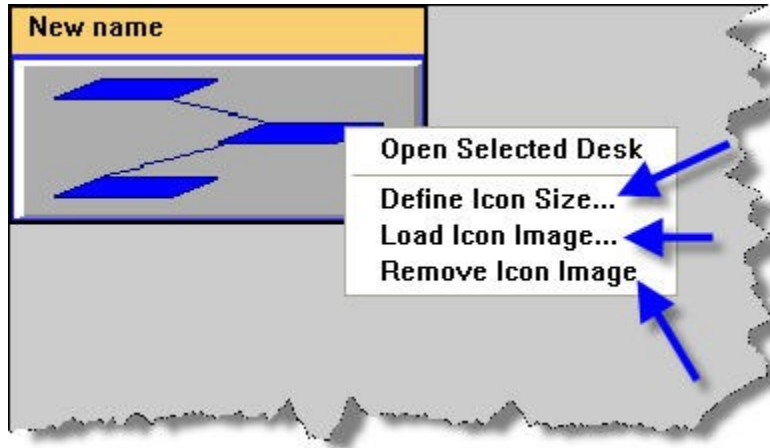


In this instance, we would have four separate icons in on this desk. One would run the whole program and the other three would run the respective mini plan.

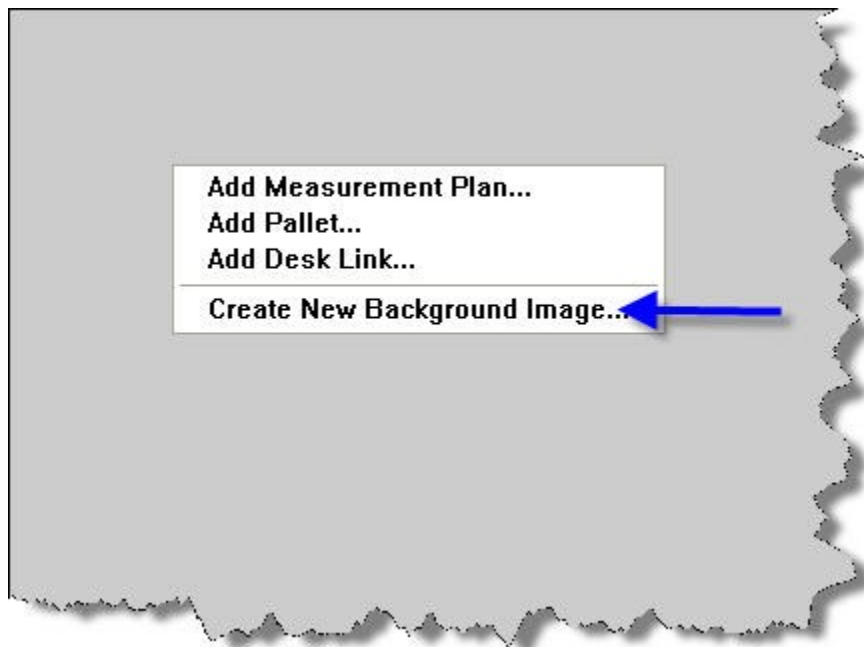


One last element to discuss regarding this plan is the inclusion of graphics that can be included in the Desks.

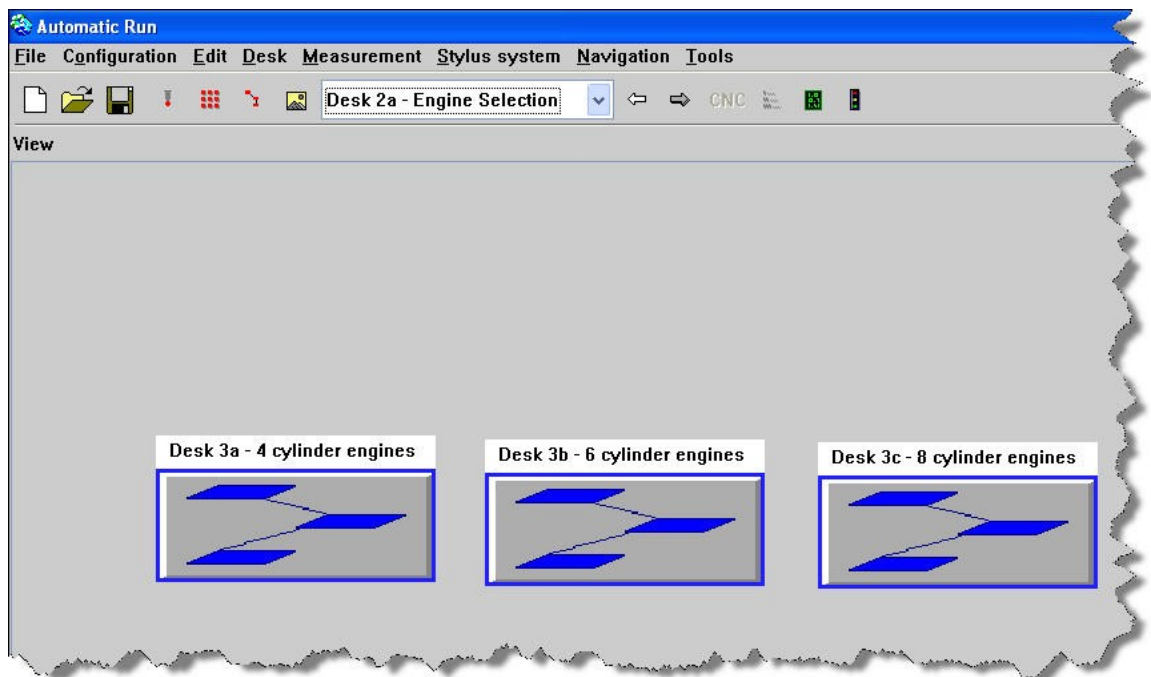
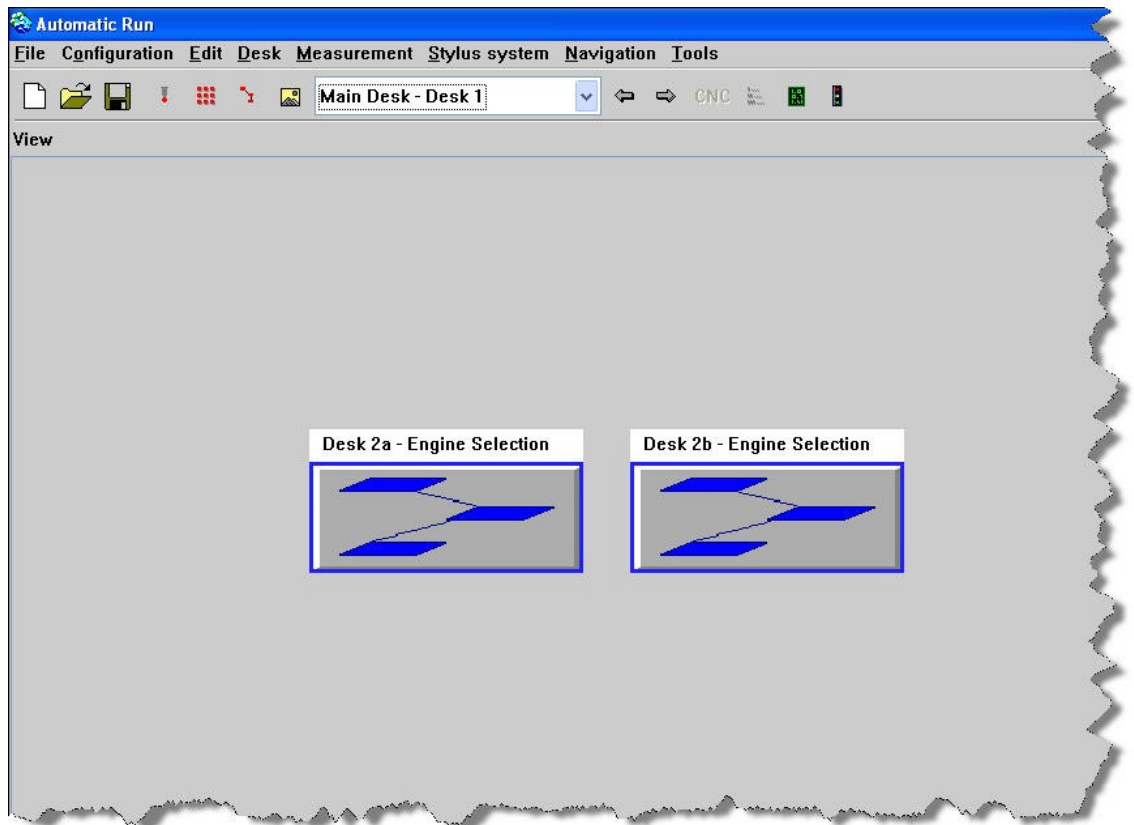
Each icon can have a graphic assigned to it, just right click to access the graphical options.

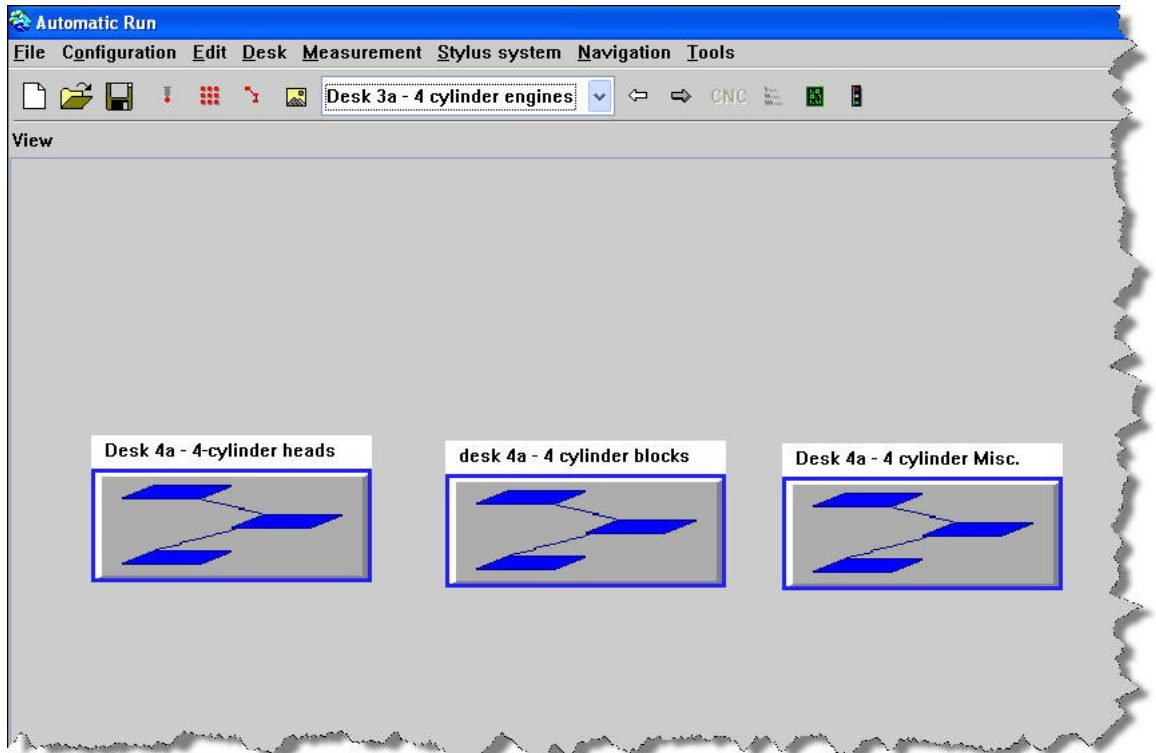


If you wish to add a graphic to the background, with nothing selected on Desk, right mouse click to access the graphic options,



In conclusion, lets have a look at the screens that were produced to create our navigation.





The final page has background graphics to both the screen and to the individual links.

The Autorun class is a 1 day class typically taught at one of our training facilities:

For more information contact regarding the availability of a class, contact:

[Mcordova@zeiss.com](mailto:Mcordova@zeiss.com)

Or call her at 1-800-327-9735 – option 4