Factory Floor Specialists since 1983 CAD/CAM Integration, Inc.



SuiteFactoryTM Operator's Quick Guide

SuiteFactory[™] Version 6.5 Operator's Guide Version 1 April 9, 2004 Copyright © 2004 CAD/CAM Integration, Inc., Woburn, MA 01801

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Starting SuiteFactory

Start SuiteFactory by Clicking on this icon on you desktop!



Login by entering your assigned User Name and Password, if any.

| SuiteFactory Runtime Login | × |
|----------------------------|----------------|
| <u>U</u> ser Name | MILL |
| <u>P</u> assword | |
| ОК | <u>C</u> ancel |

Click OK!

| SuiteFactory Runtime: CCI Test | _ 🗆 🗵 |
|-----------------------------------|-------|
| <u>File View H</u> elp | |
| | |
| DNCservices MILL 4/2/2004 9:34 AM | 1. |

The main SuiteFactory screen appears.

Selecting a file to send to a CNC controller

There are at least three ways to select the file you need depending upon whether or not you know what the file name is or whether you have to search for it based on other information..

Note! When moving the mouse arrow over a button its function is described in a small yellow box on your

screen. Look at the figure below. The mouse was moved over the 2nd button from the right and the description, Monitor Machines... appeared. Also the various pull-down menus, File, View, Configure and Help contain the same functions as the button as well as other less used selections.

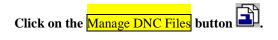
| SuiteFactory Runtime: CCI Test | |
|--|----|
| Eile <u>V</u> iew <u>H</u> elp | |
| | |
| Monitor Machines DNCservices MinCL 147272004 [9:37 AM | 1. |

Click on the Monitor Machines button !

The Machine Monitor screen appears. **Click** on the **Select Machine** pull-down list to choose the machine to which you are sending the file such as the Matsuura mill in this example.

| 📕 SuiteFactory Runti | me: CCI Te | st - [Moni | tor Mate | suura mill] | | | | | - 🗆 × |
|---|----------------------------------|-------------|----------|----------------|--------|-------------|---------|-----|-------|
| <u>F</u> ile ⊻iew <u>H</u> elp | | | | | | | | | |
| 9 🗈 🗖 🛛 | 5 | | | | | | | | |
| Select <u>M</u> achine Matsuura mill [Portserve | er1:4] | Sj | art | <u>S</u> earch | ì | <u>R</u> es | tart | Abo | rt |
| Komo mill [Portserver1: Komo2 mill [Portserver1 Mats-2 mill [Portserver1 Matsuura mill [Portserver1 Mazak Mill [Portserver1 | 1:10] :12] er1:4] 1:17] | | | | | | | | |
| VF-2 mill [Portserver1:7 VF-4 mill [Portserver1:8 | | | | | | | | | |
| DNC File Version | Direction | Position | State | Repeat? | Load | d Mode | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| <u> </u> | | | | | | | | | |
| DNCservices MIL | LL 4/2/200 | 4 11:09 AM | l Queue | d 101246.MA | ATS ve | ersion 1 to | send on | ce. | 1. |

Monitoring turns on. Any files queued up previously will appear in the white field. In this example nothing is on the queue.



The following screen appears. This view shows your list of authorized machines on the left side of the screen and the DNC files assigned to that machine on the right. If this is not similar to what you see, read Appendix D below for a discussion on Views.

Above the list of files are various headings. See Appendix A for detailed descriptions.

| 📲 Manage DNC Files (Assigned Items) | | | | | | | | | | |
|-------------------------------------|-----|---------------|-----|-------------------|-----------|-----------|--|--|--|--|
| <u>File View Filter T</u> ools | | | | | | | | | | |
| | | | | | | | | | | |
| 101246.MATS 1 🖺 | 1] | | | | | | | | | |
| | | Name | Ver | Drawing Number | Operation | Product 🔺 | | | | |
| | | 100668.MATS | 1 | W7893094-002A | R20 | 2142-01 | | | | |
| | | 100845.MATS | 1 | P55900444-002A | H443 | 43532 | | | | |
| | | 100924.MATS | 1 | W7893094-002A | R22 | 2142-02 | | | | |
| | | 100959.MATS | 1 | L6443094-043C | K232 | 65557 | | | | |
| Mazak Mill [Portserver1:17] | | 101022.MATS | 1 | W7893094-002A | R23 | 2142-03 | | | | |
| | | 101024.MATS | 1 | B564546794-001A | M667 | 5344 | | | | |
| | • | 101246.MATS | 1 | W7893094-002A | L55 | 2142 | | | | |
| | - | 101515.1.MATS | 1 | A6785554-033 | T788 | 3388 | | | | |
| | | 103085.MATS | 1 | S5594390-004 | D334 | 77891 | | | | |
| | | 103393.MATS | 1 | B22349349545-009C | | 44653 | | | | |
| | | 104498.MATS | 1 | R45558890-001 | P445 | 5344 | | | | |
| | • | | | | | • | | | | |
| 2650 files. | | _ | | | | | | | | |

At this point, if you see the name of the file in the list you can just select it by a click of the mouse, or you can scroll down until you find your file. The files are listed in alpha-numeric order. You can change the ordering by clicking on the heading above the column. If you click on the name heading it will sort your files in reverse alpha-numeric order. If you click on a date heading once it will sort by the date/time in ascending order. If you click again it will sort in descending order. This is true of most but not all of the columns. You cannot sort by version, for example.

OR

You can start typing the name in the white field above the machine list. As you type the pointer will quick-search down the list for the closest match. When you see your file you can select it by clicking on it or just keeping typing the entire name.

Before you send the file to the CNC, you can click on other buttons to print it, view it or compare it side-by-side to another file. To send the selected file to the selected machine, **click on** Send.

The following screen appears:

| 💾 Send | × |
|--|------------------------------|
| How do you want to send 10124 mill? | 6.MATS version 1 to Matsuura |
| <u>S</u> end One Time or Continuous | y? |
| One Time | C <u>C</u> ontinuously |
| <u>H</u> ow will the controller run this | program? |
| Memory Mode | ○ <u>I</u> ape Mode |
| ОК | <u>C</u> ancel |

Click OK unless you are drip-feeding to the CNC in real time (Tape Mode). In Memory Mode a timeout is active which clears the file from the machine queue if the data transfer is stopped by the CNC for the set amount of time. (A SuiteFactory parameter). In Tape Mode this timeout is ignored so that the file stays on the queue during long cutting of arcs for example. Selecting "Continuously" causes the file to be re-queued each time it's sent for doing production jobs in Tape Mode.

Click OK

You return to this screen.

| 📕 Manage DNC Files (Assigned II | tems) | | | | | | _ 🗆 > |
|----------------------------------|---------------|-----|-------------|-----|--------|-----|------------------|
| <u>File V</u> iew <u>Fi</u> lter | | | | | | | |
| 91 🗿 🗖 🖿 | | | | | | | |
| Close |) 🕷 🗶 👹 | | | | | | |
| | Name | Ver | Size Master | Out | Format | Ext | Last Ac - |
| | 100668.MATS | 1 | 2196 X | | GCode | nc | 4/2/2004 10:43:3 |
| | 100845.MATS | 1 | 775 X | | GCode | nc | 8/5/2002 8:01:5 |
| | 100924.MATS | 1 | 1236 X | | GCode | nc | 8/5/2002 8:01:5 |
| | 100959.MATS | 1 | 903 X | | GCode | nc | 8/5/2002 8:01:5 |
| 😟 🏭 Mazak Mill [Portserver1:17] | 101022.MATS | 1 | 1219 X | | GCode | nc | 8/5/2002 8:01:5 |
| VF-2 mill [Portserver1:7] | 101024.MATS | 1 | 663 X | | GCode | nc | 8/5/2002 8:01:5 |
| | 101246.MATS | 1 | 1595 X | | GCode | nc | 4/2/2004 10:48:4 |
| | 101515.1.MATS | 1 | 1131 X | | GCode | 1 | 8/5/2002 8:01:5 |
| | 103085.MATS | 1 | 1284 X | | GCode | nc | 8/5/2002 8:01:5 |
| | 103393.MATS | 1 | 1734 X | | GCode | nc | 8/5/2002 8:01:5 |
| | 104498 MATS | 1 | 2751 X | | GCode | nc | 8/5/2002 8:01:5 |
| | ▲ | | | | | | • |
| 2650 files. | | | | | | | |

Click <u>Close</u> and you return to the Monitor Screen. But now the DNC File you selected in shown. You now go to your Machine Controller and select the Read function. Last Data Transferred will show the program data being sent and a progress bar keeps track of how much data was transmitted. If most of the time you know the name of the file you need, then leave this window on your computer screen ready to select the next machine and/or DNC file you need.

| SuiteFactory | Runtime: | CCI Test - [Mo | onitor Mat | suura mill] | | | _ 🗆 × |
|--|-------------------------------------|----------------|------------|---------------|-------------|-----------------|---------------|
| <u>File View H</u> elp | | | | | | | |
| 9 🗈 🛛 | Q | | | | | | |
| Select <u>M</u> achine Matsuura mill (F | Portserver1:4 | | Start | <u>S</u> earc | h | <u>R</u> estart | <u>A</u> bort |
| Send <u>P</u> rotoc Receive <u>P</u> rotoc | ol: <u>Generic</u> ol: Generic I | RS232 RS232 | | | | | |
| Last Data Trans G2X1.297Y-0.1 G1X1.06 G0X0.6293Y-0. | 12100-0.112 | | Sen | t 1393/1595 | bytes, 87%. | | •• |
| DNC File | Version | Direction | Position | State | Repeat? | Load Mode | |
| 101246.MATS | 1 | To Machine | 1 | Sending | Once | Memory | |
| | | | | | | | |
| p E DNCservio | ces MILL 4 | 10:48 | AM Queue | ed 101246.M | ATS version | 1 to send on | ce. // |

Receiving a DNC file from a CNC Controller

From the main SuiteDNC tool bar.

| SuiteFactory Runtime: CSC (GenDyn GTN) | | |
|---|----------------------|---------------|
| <u>F</u> ile ⊻iew <u>C</u> onfigure <u>H</u> elp | | |
| | | |
| Manage DNC Files 5/11/2002 5:55 PM | 1. | |
| Click on the Monitor Machines button , select the machine from the drop dow | n list and then clic | ck on the Man |
| DNC Files button button the Monitor Screen. | | |

| Hanage DNC Files | | | | | | | | | | |
|-------------------------|---|---------|-----|---------|------|---------------------|---------------------|-----------------------|--|--|
| <u>File View Filter</u> | | | | | | | | | | |
| | | | | | | | | | | |
| V419999 B Receive | | | | | | | | | | |
| | | Name | Ver | Size Ma | ster | Last Access | Last Modified | Import Time 🔺 | | |
| 1 72VTL [DNCservices:1] | | | 1 | 288 X | | 5/9/2002 3:40:00 PM | 5/9/2002 3:39:59 PM | 5/9/2002 3:40:00 PM | | |
| | | V410101 | 1 | 855 | | 5/9/2002 4:18:25 PM | 5/9/2002 3:40:00 PM | 5/9/2002 4:18:25 PM | | |
| | | V411001 | 1 | 855 | | 5/9/2002 4:18:51 PM | 5/9/2002 3:40:00 PM | 5/9/2002 4:18:51 PM | | |
| | | V411002 | 1 | 855 | | 5/9/2002 4:19:08 PM | 5/9/2002 3:40:00 PM | 5/9/2002 4:19:08 PM | | |
| | | V411003 | 1 | 855 | | 5/9/2002 4:19:22 PM | 5/9/2002 3:40:00 PM | 5/9/2002 4:19:22 PM | | |
| | | V411004 | 1 | 855 | | 5/9/2002 4:19:40 PM | 5/9/2002 3:40:00 PM | 5/9/2002 4:19:40 PM | | |
| | | V411005 | 1 | 855 | | 5/9/2002 4:19:56 PM | 5/9/2002 3:40:00 PM | 5/9/2002 4:19:56 PM | | |
| | | V411006 | 1 | 855 | | 5/9/2002 4:20:08 PM | 5/9/2002 3:40:00 PM | 5/9/2002 4:20:08 PM | | |
| | | V411007 | 1 | 855 | | 5/9/2002 4:20:39 PM | 5/9/2002 3:40:00 PM | 5/9/2002 4:20:39 PM | | |
| | | V411008 | 1 | 855 | | 5/9/2002 4:21:03 PM | 5/9/2002 3:40:00 PM | 5/9/2002 4:21:03 PM | | |
| | | V411009 | 1 | 855 | | 5/9/2002 4:21:17 PM | 5/9/2002 3:40:00 PM | 5/9/2002 4:21:17 PM | | |
| | | V411010 | 1 | 855 | | 5/9/2002 4:21:36 PM | 5/9/2002 3:40:00 PM | 5/9/2002 4:21:36 PM | | |
| | | V411011 | 1 | 855 | | 5/9/2002 4:21:58 PM | 5/9/2002 3:40:00 PM | 5/9/2002 4:21:58 PM | | |
| | | V411012 | 1 | 855 | | 5/9/2002 4:22:11 PM | 5/9/2002 3:40:00 PM | 5/9/2002 4:22:11 PM | | |
| | | V411013 | 1 | 855 | | 5/9/2002 4:22:28 PM | 5/9/2002 3:40:00 PM | 5/9/2002 4:22:28 PM - | | |
| | • | | | 1 | | 1 | | F | | |
| 19 files. | | | | | | | | li. | | |

The machine 48VTL is selected. Enter a new file name, V41999, in this example, and the Receive button is enabled.

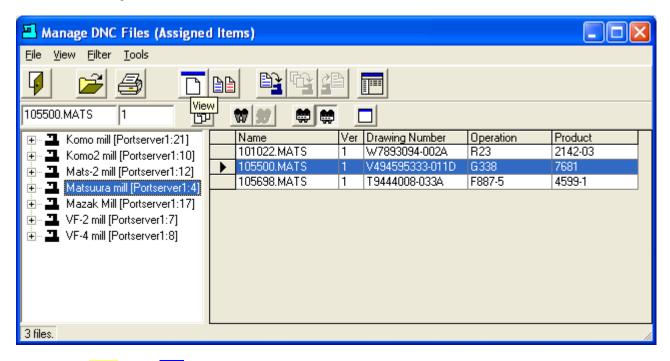
Click on Receive. The file V41999 is then queued up. To verify this click on Close to return to the Monitor screen.

| SuiteFactory Runtime: CSC (GenDyn GTN) - [Monitor 48¥TL] | | | | | | | | | |
|---|---------------------|--------------|-------------|-----------|----------------|-----------------|---------------|--|--|
| <u>F</u> ile ⊻iew y | <u>C</u> onfigure | Help | | | | | | | |
| 9 🗈 | | Q | | | | | | | |
| Select <u>M</u> ac 48VTL [DI | hine NCservices: | 6] | St | art | <u>S</u> earch | <u>R</u> estart | <u>A</u> bort | | |
| Send Protocol: <u>Generic RS232</u> Receive Protocol: <u>Generic RS232</u> | | | | | | | | | |
| | | | | Received | 10 bytes. | | | | |
| DNC File | Version | Direction | Position | State | Repeat? | Load Mode | | | |
| V419999 | 1 | Receive | 1 | Receiving | Once | Memory | | | |
| | | | | | | | | | |
| 😎 jdnc: | services G[| 01 5/11/200 | 02 (6:08 PM | Queued V4 | 19999 version | 1 to receive. | //. | | |

At the CNC, V48VTL output (punch, send . . .) the file. As the data is received the Received 0 bytes field will be updated. When done the file will be removed from the queue automatically after about 5 seconds.

Viewing and Printing

Return to the Manage DNC Files screen. Select a machine and select the file to view.



Click on the View button 🗋 .

| P.1 of 105500.MATS | |
|---|----------------|
| Find What: | <u>F</u> ind |
| □ <u>W</u> hole Word | <u>C</u> ancel |
| 🔲 <u>M</u> atch Case | <u>P</u> rint |
| % 01050 (105500 REV.B) (SPIDER CAM -MATSUURA) (REM 4/16/92) G0G17G40G49G80G91G98 G45A0.D97 G45X0.D98 G45Y0.D99 G92A0.X0.Y0.Z1. G53X-22.Y0. M1 T1M6(7/16 HSS ENDMILL) G0G90X-1.465Y0.A0.S1110M3 | |

From this screen you can search for something, scroll up and down and print the file. You can also select just a part of the file to print. Some shops put notes and tooling information as a file header and want to print out only that part. To do that, use the mouse to highlight the text to be printed:

| P.1 of 105500.MATS | |
|---|----------------|
| Find What: | <u>F</u> ind |
| ☐ <u>W</u> hole Word | <u>C</u> ancel |
| 🔲 <u>M</u> atch Case | <u>P</u> rint |
| % 01050 (105500 REV.B) (SPIDER CAM -MATSUURA) (REM 4/16/92) G0G17G40G49G80G91G98 G45A0.D97 G45X0.D98 G45Y0.D99 G92A0.X0.Y0.Z1. G53X-22.Y0. M1 T1M6(7/16 HSS ENDMILL) G0G90X-1.465Y0.A0.S1110M3 | |

Click Print.

| 🖪 Prin | t | | |
|--------|------------------|--------------------------------|--------------------------|
| Ŷ | Do you want to p | rint only the selected text in | stead of the whole file? |
| (| Yes | No | Cancel |

If you click Yes then the only the highlighted text will be printed. If you click No then the entire file will be printed.

You can also print a file by simply clicking on the Print button

Comparing Two Files

Go to the Manage DNC Files Screen. Select a machine. For example, say you want to see what the differences are between the original file, 101022.MAT and the one uploaded from the CNC named, 101022A.MATS. Highlight the original file, 101022.MAT.

| Manage DNC Files (Assigned File View Eilter Iools | þþ | | | | | | | |
|--|----|---------------|-----|-------------------|-----------|-----------|--|--|
| 101022.MATS 1 | | | | | | | | |
| | | Name | Ver | Drawing Number | Operation | Product 2 | | |
| | | 100668.MATS | 1 | W7893094-002A | R20 | 2142-01 | | |
| | | 100845.MATS | 1 | P55900444-002A | H443 | 43532 | | |
| Mats-2 mill [Portserver1:12] | | 100924.MATS | 1 | W7893094-002A | R22 | 2142-02 | | |
| Matsuura mill [Portserver1:4] | | 100959.MATS | 1 | L6443094-043C | K232 | 65557 | | |
| Mazak Mill [Portserver1:17] | • | 101022.MATS | 1 | W7893094-002A | R23 | 2142-03 | | |
| 🗄 📲 VF-2 mill [Portserver1:7] | - | 101022A.MATS | 2 | W7893094-002A | R23 | 2142-03 | | |
| 主 🗠 🛄 VF-4 mill [Portserver1:8] | | 101024.MATS | 1 | B564546794-001A | M667 | 5344 | | |
| | | 101246.MATS | 1 | W7893094-002A | L55 | 2142 | | |
| | | 101515.1.MATS | 1 | A6785554-033 | T788 | 3388 | | |
| | | 103085.MATS | 1 | \$5594390-004 | D334 | 77891 | | |
| | | 103393.MATS | 1 | B22349349545-009C | | 44653 | | |
| | | | | | | | | |
| 2651 files. | | | | | | | | |
| | | | | | | | | |

Click on the Compare button . Next, highlight the second file, 101022A.MATS and click on the Compare button again.

The lines that are different are shown in blue. Lines missing are red. Added lines are green.

| | amDiff <u>V</u> iew <u>N</u> avigation <u>S</u> earch <u>I</u> nfo | | |
|--|--|--|---|
| 🦝 🍕 | • 12 12 12 12 112 112 111 III III III III | 8 7 | a 🔐 🖓 🗘 |
| | : Change line 12 (left file) to line 12 (right file) | | • |
| | | | DOCUME~1\phantom\LOCALS~1\Temp\CCIDNC\1\101022A.MATSV2.nc |
| 56 57 58 60 61 62 | G1G41X.6799Y.8476 X1.2094Y1.7647 G3X.9236Y1.9297I1429J.0825 G1X.3941Y1.0126 G40X.537Y.9301 G0Y0. X1.074 G41Y165 G1X2.133 | 55 56 57 58 59 60 61 62 | X1.2094Y1.7647 G3X.9236Y1.9297I1429J.0825 G1X.3941Y1.0126 G40X.550Y.9301 G0Y0. X1.074 |
| 65 66 67 68 69 70 71 72 | G3X2.133Y.165I0.J.165 G1X1.074 G0G40Y0. X.537 Y9301 G1G41X.3941Y-1.0126 X.9236Y-1.9297 G3X1.2094Y-1.7647I.1429J.0825 G1X.6799Y8476 | 63 64 65 66 67 68 69 70 71 | G1X1.074 G0G40Y0. X.537 Y9301 G1G41X.3941Y-1.0126 X.9236Y-1.9297 G3X1.2094Y-1.7647I.1429J.0825 G1X.6799Y8476 |
| 74 75 76 77 78 79 | G0G40X.537Y9301 X537 G1G41X6799Y8476 X-1.2094Y-1.7647 G3X9236Y-1.9297I.1429J0825 G1X3941Y-1.0126 G0G40X537Y9301 Z1.M9 | 72 73 74 75 76 77 78 79 80 | X537 G1G41X6799Y8476 X-1.2094Y-1.7647 G3X9236Y-1.9297I.1429J0825 G1X3941Y-1.0126 G0G40X550Y9301 Z1.M9 |
| 82 | G28G91Z0.M19 G28X0.Y0. M30 | 80 81 82 83 84 01 | G28G91Z0.M19 G28X0.Y0. M30 |
| 9 differe | inces found | | Added lines Deleted lines Changed lines |

This works quite well with files that are alike as in the example, above. However, sometimes files sent to a CNC and the received back appear to be very different when using the compare feature. Often this is due to the fact that the CNC either deletes "white space" that it gets or it might add "white space" for printing purposes. If you see this happen then click on View/Options on the Compare Tool Bar and select the items that make sense.

| Options | × |
|--|---|
| Compare Display Misc | |
| Ignore all <u>w</u> hite space in lines | |
| Ignore changes in <u>a</u> mount of white space in lines | |
| Ignore <u>c</u> ase | |
| Ireat both files as text files | |
| Ignore leading white space in lines | |
| 🗖 Ignore trailing white space in lines | |
| | |
| OK Cancel | |

Appendix A

| HEADING | DESCRIPTION |
|--------------------|--|
| Name | Self-explanatory |
| Version | If allowed, it is possible to have more than one version of a DNC file. |
| Size | The number of characters (or bytes) in the file. |
| Master | If there is an X in this field the file is a Master File, meaning that it was either |
| | manually or automatically imported into the database from the programming or |
| | engineering department. Files uploaded from CNC controllers or created by copying |
| | or a new file created by the editor is not a Master File and it has no X. |
| Out | An X in this field indicates the file was "checked out" for editing and cannot be used |
| | by anyone else until it is checked back in. |
| Last Access Time | The last Date and Time this file was downloaded to a CNC controller. |
| Last Modified Time | The Date and Time this file was created or the last time it was edited. |
| Import Time | The Date and Time this file was either imported into the database (which would make |
| | it a Master file) or the Date and Time this file was created by upload or the editor. |
| Extension | The original .ext that windows based files use to determine which application will |
| | start when you "Open" the files. For example, .txt causes Notepad to open and .doc |
| | causes Word for Windows to open. Some non-text DNC files like those from a |
| | Mazatrol CNC have a .bin extension. |
| Format | Shows what kind of a DNC it is. Most DNC files are "GCODE" text files. Mazatrol |
| | CNC files show the format for the particular CNC model, for example, Mazak M32 |
| | or Mazak T-Plus, etc. |

Descriptions of DNC file list headings.

Appendix B

Machine Monitor Screen Functions

| SuiteFactory Runtime: CSC (GenDyn GTN) | | | | |
|--|-----|--|--|--|
| <u>File ⊻iew Configure H</u> elp | | | | |
| | | | | |
| DNCservices Monitor Machines 34 PM | li. | | | |

From the SuiteFactory Main window click on Monitor Machines.

| <mark>=</mark> s | uiteFactory Runtim | e: CSC (GenD | yn GTN) - [no | machine selecte | d] | |
|------------------|--|--------------|---------------|-----------------|-----------------|-------|
| Eile | <u>V</u> iew <u>C</u> onfigure <u>H</u> | elp | | | | |
| Ø | | | | | | |
| Se | lect <u>M</u> achine | _ | Start | <u>S</u> earch | <u>R</u> estart | Abort |
| Re | Send <u>P</u> rotocol: eceive <u>P</u> rotocol: | | | | | |
| | | | No machine | e selected | | |
| 33 | DNCservices GD1 | 5/11/2002 1 | :36 PM | | | 1. |

Click on the Select Machine pull-down arrow.

| 📒 SuiteFactory Runtime: CSC (Ger | nDyn GTN) - [no | machine selecte | ed] | |
|---|-----------------|-----------------|-----------------|-------|
| <u>File ⊻iew C</u> onfigure <u>H</u> elp | | | | |
| | | | | |
| Select <u>M</u> achine | Start | <u>S</u> earch | <u>R</u> estart | Abort |
| 48VTL [DNCservices:6] 72VTL [DNCservices:5] 84VTL [DNCservices:7] MC40 [DNCservices:8] | | | | |
| | No machine | e selected | | |
| DNCservices GD1 5/11/2002 | 1:42 PM | | | 1. |

Click to select a machine. This shows machine, 48VTL, with a DNC file, V411004, queued to be sent once.

| 🛂 SuiteFactory Runtime: CSC (GenDyn GTN) - [Monitor 48¥TL] | | | | | | | | <u>- 🗆 ×</u> |
|--|-------------------------------------|----------------------------|-------------|---------|----------------|-----------------|----|--------------|
| <u>F</u> ile <u>V</u> iew | <u>C</u> onfigure | Help | | | | | | |
| 9 🗈 | | Q | | | | | | |
| Select <u>M</u> ac 48VTL [D | chine NCservices: | 6] 🔹 | St | art | <u>S</u> earch | <u>R</u> estart | Ab | ort |
| Send <u>P</u> Receive <u>P</u> | rotocol: <u>Ger</u> rotocol: Ger | neric RS232 neric RS232 | | | | | | |
| Last Data | Transferred: | | | Sent 0/ | '855 bytes, 0% | <u>.</u> | | |
| DNC File | Version | Direction | Position | State | Repeat? | Load Mode | | |
| V411004 | 1 | Send | 1 | Sending | Once | Memory | | |
| | | | | | | | | |
| DNC 😎 | services G | D1 5/11/200 | 02 1:43 PM | | | | | 1. |

Monitor Screen Functional Description

The Queue

The white window in the Monitor Screen displays the Job Queue. The Job Queue is simply the list of DNC files to be sent to or to be received from the selected machine controller. The queue displays the DNC file name; its version; direction of transmission: Send or Receive; its position in the queue; the state of the transmission: Sending, Receiving or Pending; whether or not it is to be repeatedly sent: Once or Loop; and its Load Mode: Memory or Tape.

The Queue Editor

Clicking on the last big button on the right brings you to the Queue Editor. If more than one inactive file is queued for any one machine, the queue editor enables you to re-arrange the order of files on the queue or to delete them from the queue.

The Function Buttons

These buttons enable you to control the data transmission in various ways:

Start

- This button is available when a DNC file is queued up if the "User Must Start" feature was selected on the Machine Properties Identification tab at installation. It is prevents data transmission until it is clicked.
- Used with some older CNC's that had no handshaking.

Search

- This button is available when a DNC file is queued to send. When clicked it aborts any current data transmission and opens a window with a view of the contents of the queued up DNC file. You can search to any line in the file and start transmission from that point on.
- Used when drip-feeding long part programs in tape mode to re-start at some safe-start point after some incident such as a tool break.

Restart

• This button is available whenever a DNC file is queued up. When clicked it aborts any current data transmission and then restarts the DNC file transmission from the beginning.

Abort

• This button is available whenever a DNC file is queued up. When clicked it aborts any current data transmission. The DNC file is removed from the queue.

Other features

Send and Receive Protocol fields

Displays what protocols were selected during machine properties setup at installation.

Last Data Transferred

Displays the last three full lines of data sent to a machine controller.

Sent

A progress bar showing the percentage of data sent to a machine controller.

This is a view of the Monitor Screen with DNC file, V419087, queued to be received. Instead of a progress bar showing percent receive, the Received xxx bytes field appears which will be updated as date is transmitted from a machine controller.

| 🔁 SuiteFactory Runtime: CSC (GenDyn GTN) - [Monitor 48VTL] | | | | | | | | | | |
|---|---|-----------|---------------|----------------|-------------------|------------|--|--|--|--|
| <u>File ⊻iew C</u> onfigu | <u>File View Configure H</u> elp | | | | | | | | | |
| | | | | | | | | | | |
| Select Machine Start Search Restart Abort 48VTL [DNCservices:6] Image: Start Start Search Restart Abort | | | | | | | | | | |
| Send Protocol: Receive Protocol: | Send Protocol: <u>Generic RS232</u> Receive Protocol: <u>Generic RS232</u> | | | | | | | | | |
| | | | Re | eceived 0 byte | es. | | | | | |
| DNC File Version | Direction | Position | State | Repeat? | Load Mode | | | | | |
| V419087 1 | Receive | 1 | Receiving | Once | Memory | | | | | |
| | | | | | | | | | | |
| DNCservices | ADMINISTRAT | OR 5/11/2 | 2002 3:03 PM | Queued V4 | 19087 version 1 t | o receive. | | | | |

Appendix C

The SuiteFactory Database and Resource Collections

SuiteFactory is a database driven system.

Database driven refers to the fact that instead of using the Windows Operating System's folders, and depending upon someone's knowledge of how to implement Windows security to protect and keep track of all the files, documents, setup and other information, SuiteFactory uses a database. This puts all the information in a centralized place, making file control, maintenance, backup and restore much easier. All DNC files and other controlled documents are stored in special folders inside the folder containing the database files. Each in encoded with a special ID so that it can be tracked from inception by import, upload from a CNC or created by the NC editor to the end of its useful life and sent to the archive.

Resource Collections tie everything together

There are machines. There are part program DNC files for those machines. There might be packets (optional) containing documents, DNC files or other kinds of text files that can be use to contain all the information needed to perform a machine tool operation. There are people, whom we call users, who need to send these files to machines or view these files or perhaps edit them or something else. Users are members of groups with special rights assigned to establish what the group members can or cannot do while using SuiteFactory.

Think of SuiteFactory's Resource Collections as boxes; containers where we put all the machines that can run the same DNC files, the DNC files for those machines and the user groups that have permission to run those machines. If you have the Job Packet option, packets for operations for those machines are also put in the correct Resource Collection.

Since Resource Collections are not actually physical containers, the word we use is "assign." For example, say you have three Matsuura 75 mills with Fanuc 15M CNC's. We create a Resource Collection called MATS75 and "assign" to it all three Mastuura mills, all the DNC files that can be run by those machines, the user groups that have the need to operate these machine, and any packets with operational data for those machines.

The screen below shows the Resource Collections > Machines > Files view of the Manage DNC Files screen. The small red box with the two black machines represents the Resource Collection, MATS75. Assigned to that MATS75 are three machines, Mats_75A, B and C. The assigned files are shown on the right. Notice that the Send button is greyed out and therefore not available.

| 💶 Manage DNC Files | | | | | | |
|--------------------------|----------|-----|-------------|----------------------|----------------------|-------------------|
| <u>File View Filter</u> | | | | | | |
| 🧧 🍯 🗖 🗎 | | | | | | |
| M75001 1 | end 🐨 💓 | | | | | |
| ⊡ ¹ _1 MATS75 | Name | Ver | Size Master | Last Access | Last Modified | Import Ti |
| 📕 🛄 Mats_75A [ronjan:4] | ▶ M75001 | 1 | 158 | 5/12/2002 3:49:37 PM | 5/12/2002 3:49:53 PM | 5/12/2002 3:49:37 |
| Mats_75B [ronjan:5] | M75002 | 1 | 274 | 5/12/2002 3:50:11 PM | 5/12/2002 3:50:40 PM | 5/12/2002 3:50:11 |
| Mats_75C [ronjan:6] | M7500234 | 1 | 1404 | 5/12/2002 3:53:41 PM | 5/12/2002 3:53:42 PM | 5/12/2002 3:53:41 |
| | M750056 | 1 | 389 | 5/12/2002 3:50:54 PM | 5/12/2002 3:51:19 PM | 5/12/2002 3:50:54 |
| | M75006 | 1 | 3036 | 5/12/2002 3:51:31 PM | 5/12/2002 3:52:02 PM | 5/12/2002 3:51:31 |
| | M7500876 | 1 | 274 | 5/12/2002 3:53:15 PM | 5/12/2002 3:50:40 PM | 5/12/2002 3:53:15 |
| | M754656 | 1 | 1535 | 5/12/2002 3:52:57 PM | 5/12/2002 3:52:36 PM | 5/12/2002 3:52:57 |
| | M754945 | 1 | 1535 | 5/12/2002 3:52:13 PM | 5/12/2002 3:52:36 PM | 5/12/2002 3:52:13 |
| | • | | | | | Þ |
| 8 files. | | | | | | h. |

This is because the focus in on the Resource Collection, MATS75. In order to send a file to a machine you have to select it.

Click on Mats_75C.

Now both the Send and Receive buttons are enabled.

| Manage DNC Files | | | | | | |
|--------------------------|----------|-----|-------------|----------------------|----------------------|-------------------|
| <u>File View Filter</u> | | | | | | |
| 🧧 🎒 🛅 🗎 🗎 | | | | | | |
| M75001 1 | Receive | | | | | |
| ⊡ ⁴ _1 MATS75 | Name | Ver | Size Master | Last Access | Last Modified | Import Ti |
| Mats_75A [ronjan:4] | ▶ M75001 | 1 | 158 | 5/12/2002 3:49:37 PM | 5/12/2002 3:49:53 PM | 5/12/2002 3:49:37 |
| Mats_75B [ronjan:5] | M75002 | 1 | 274 | 5/12/2002 3:50:11 PM | 5/12/2002 3:50:40 PM | 5/12/2002 3:50:11 |
| Mats_75C [ronjan:6] | M7500234 | 1 | 1404 | 5/12/2002 3:53:41 PM | 5/12/2002 3:53:42 PM | 5/12/2002 3:53:41 |
| | M750056 | 1 | 389 | 5/12/2002 3:50:54 PM | 5/12/2002 3:51:19 PM | 5/12/2002 3:50:54 |
| | M75006 | 1 | 3036 | 5/12/2002 3:51:31 PM | 5/12/2002 3:52:02 PM | 5/12/2002 3:51:31 |
| | M7500876 | 1 | 274 | 5/12/2002 3:53:15 PM | 5/12/2002 3:50:40 PM | 5/12/2002 3:53:15 |
| | M754656 | 1 | 1535 | 5/12/2002 3:52:57 PM | 5/12/2002 3:52:36 PM | 5/12/2002 3:52:57 |
| | M754945 | 1 | 1535 | 5/12/2002 3:52:13 PM | 5/12/2002 3:52:36 PM | 5/12/2002 3:52:13 |
| | - - | | | | | Þ |
| 8 files. | | | | | | h. |

See Appendix D for discussion on Views.

Appendix D

Views

When you first login to SuiteFactory and select Manage DNC files, you might get a screen that look like this: This view is Resource Collections > Machines > Files. In addition, File Cabinets are shown.

| Manage DNC Files | | | | | | |
|--|---------------------------|-----|-------------|----------------------|----------------------|------------------|
| <u>File</u> File <u>C</u> abinet <u>V</u> iew <u>Fi</u> lter | | | | | | |
| 9 3 DM | | | | | | |
| M7500876 1 | 🛱 🕷 💭 | | | | | |
| | Chapge View | Ver | Size Master | Last Access | Last Modified | Import |
| 🖶 🖣 72VTL | Change View Mir 300876 | 1 | 274 | 5/12/2002 3:53:15 PM | 5/12/2002 3:50:40 PM | 5/12/2002 3:53:1 |
| ⊕ 4 _1 84∨TL | M754656 | 1 | 1535 | 5/12/2002 3:52:57 PM | 5/12/2002 3:52:36 PM | 5/12/2002 3:52:5 |
| HATS75 | M754945 | 1 | 1535 | 5/12/2002 3:52:13 PM | 5/12/2002 3:52:36 PM | 5/12/2002 3:52:1 |
| MC40 | | | | | | |
| File Cabinets | | | | | | |
| | - | | | | | |
| E : S | | | | | | |
| | | | | | | |
| | | | | | | |
| Mill Operations | | | | | | |
| | | | | | | |
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| | | | | | | |
| | | | | | | |
| L | • | | | | | |
| 3 files. | | | | | | |

Click on the small Change View button (1st small button on left.) This screen shows the current view.

| 💾 Change DNC Files View Mode | |
|--|--|
| Show File Cabinets ➡ide File Cabinets | |
| <u>M</u>achines->Resource Collections->Files <u>R</u>esource Collections->Machines->Files | |
| Assigned Not Assigned | |
| ✓ View <u>Approved DNC Files</u> | |
| View Unapproved DNC Files | |
| OK. <u>C</u> ancel | |

For everyday shop operations we recommend the view without file cabinets showing and Machine > Resource Collections > Files. Unless your shop is using the DNC file approval feature, make sure that both View Approved and View Unapproved DNC files are checked.

| Change DNC Files View Mode | _ 🗆 × |
|--|-------|
| Show File Cabinets <u>H</u>ide File Cabinets | |
| <u>Machines->Resource Collections->Files</u> <u>Resource Collections->Files</u> | |
| ▲ssigned Not Assigned | |
| View Approved DNC Files | |
| View Unapproved DNC Files | |
| OK <u>C</u> ancel | |

Click OK. The resulting view is

| 📕 Manage DNC Files | |
|---|--|
| Eile View Eilter | |
| | |
| | |
| Image: Additional state of the second state of the seco | |
| O files. | |

If you click on the small + signs next to the machine symbols you get to see the Resource Collection or Collections to which the machines are assigned. You have to select a machine or Resource Collection to see the assigned files.

Experiment yourself with the various views.

| Manage DNC Files | | |
|--|--|--|
| <u>File View Filter</u> | | |
| | | |
| M75001 1 🖺 | 11 11 11 11 11 11 11 11 11 11 11 11 11 | |
| → 48VTL [ronjan:1] → 48VTL → 72VTL [ronjan:2] → 72VTL → 72VTL → 84VTL → 84VTL → 84VTL → 84VTL → 84VTL → Mats_75A [ronjan:4] → Mats_75B [ronjan:5] → Mats_75C [ronjan:6] → Mats_75C → Mats_75 | Please select a machine or resource collection | |
| 0 files. | | |