Toledo Integrated Systems

MaxNet

Pressroom Networking Software

Toledo Integrated Systems
Toledo Transducers, Inc.
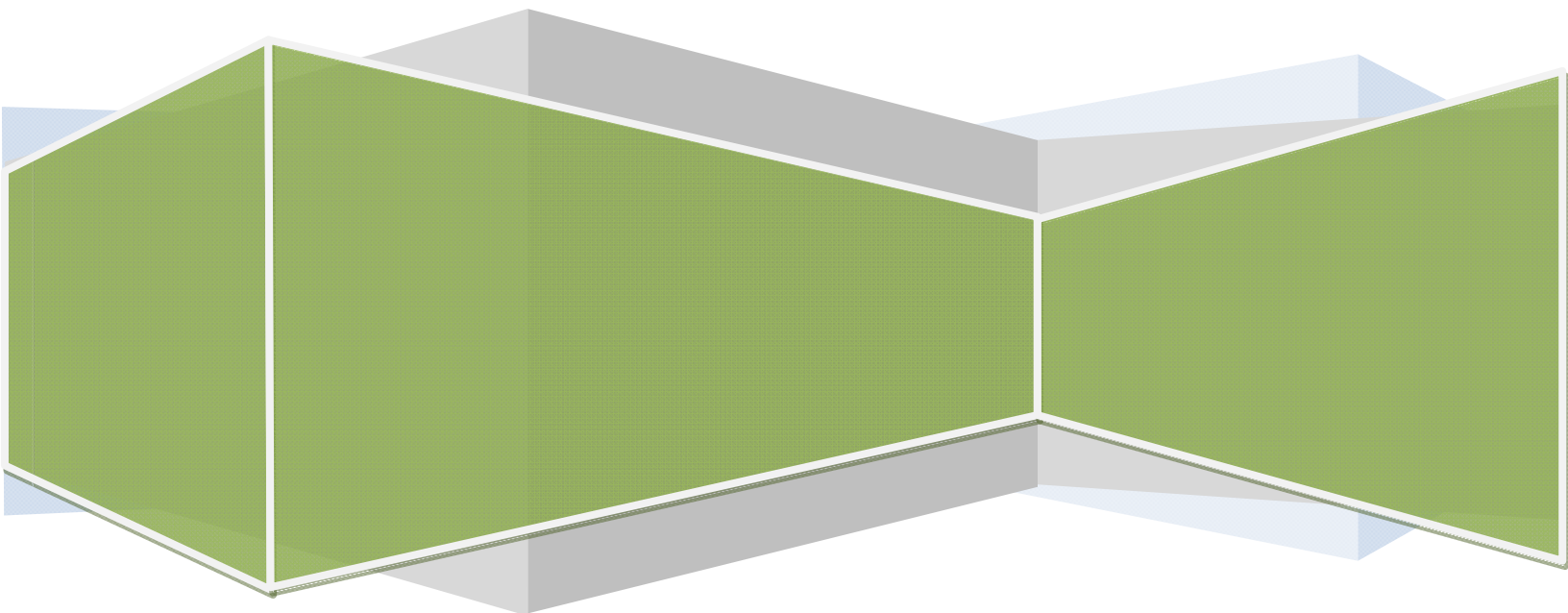
Article I. **Limited Warranty**

The software is warranted by the manufacturer, Toledo Integrated Systems, to be free from defects in workmanship for one year from the date of manufacturer's shipment. This warranty is limited to the functions of MaxNet as stated in this manual. If modifications are made to the software, Toledo Integrated Systems will not be responsible for MaxNet.

All products subject to this warranty must be returned for examination, repair or replacement to:

F.O.B. Toledo Integrated Systems
6834 Spring Valley Dr.
Holland, OH 43528

The express warranty set forth herein is in lieu of all other warranties, expressed or implied, including without limitation any warranties of merchant-ability or fitness for particular purpose. All such warranties are hereby disclaimed and excluded by the manufacturer.

Repair or replacement of defective products as provided above is the sole and exclusive remedy provided there under. The manufacturer shall not be liable for any further loss, damages, or expenses, including incidental or consequential damages, directly or indirectly arising from the sale or use of this product.

Any unauthorized changes to the program will void this warranty.

There are no warranties that extend beyond those expressly set forth herein.

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1. Overview

Figure 1.1 – MaxNet Home Screen

MaxNet is a powerful networking tool used by numerous industries to monitor and track production, downtime and maintenance. MaxNet not only provides live data but also historical data which includes downtime, production and individual job and die set reports which can be sorted by user, date, time and/or specific job.

MaxNet has the ability to provide live and historical data for up to 32 machines which are automated with Toledo Integrated Systems Maximizer (TPC) control, a Toledo Integrated Systems Co-Pilot or an Allen-Bradley PanelView.

MaxNet can be configured to work on a network which runs on a domain or workgroup, giving the end user the more flexibility in regards to what type of network is pre-existing.

2. Installation

I. Maximizer TPC / PanelView

*Note, if there are no Maximizer TPC or PanelView units being monitored by MaxNet, this part of the installation preparation is not necessary.

*DCOM settings will be modified
1. At the client PC, install the Elipse Scada software by running the "Elipse 2_29 new.exe" located on the MaxNet installation CD.
2. Once the Elipse Scada software is installed, click START and then RUN from the Windows fly-out menu.
3. Click on the RUN option
4. Type "DCOMCNFG" (without quotes) and press ENTER. The Windows "Component Services" should load. See below:
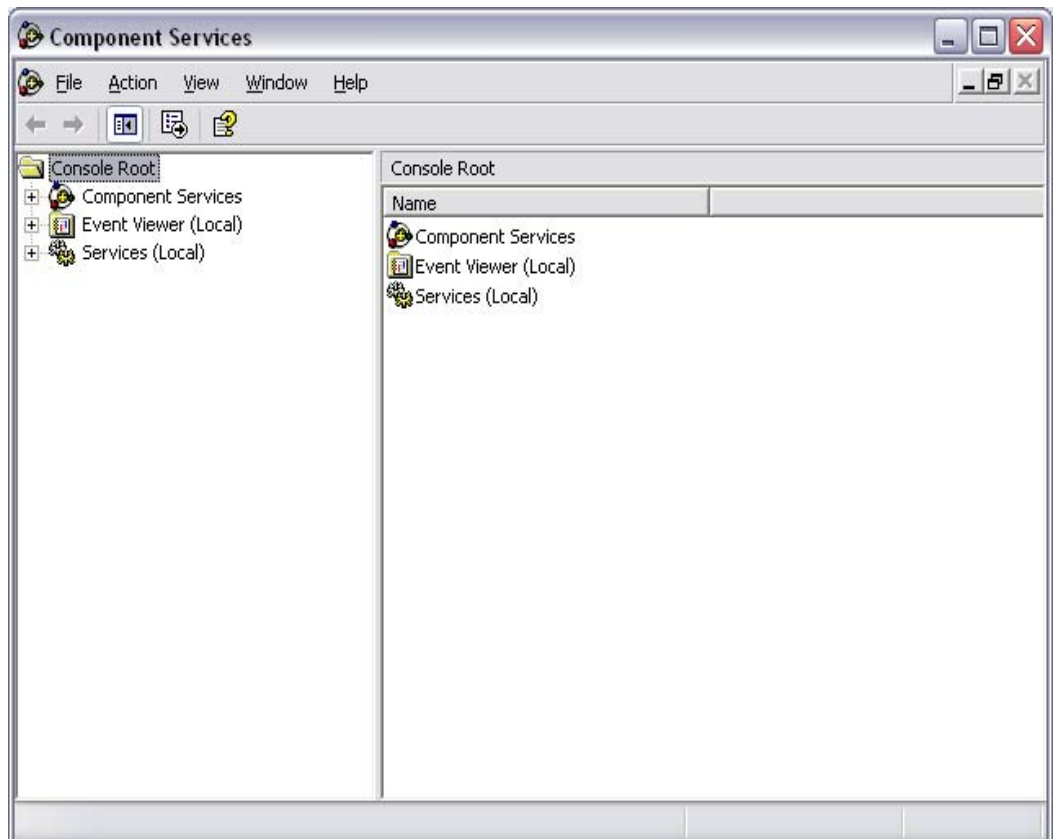
2-I-1 – Component Services

5. Once the window is loaded, expand the "Component Services" list. Once expanded, expand the "Computers" subfolder. Once the "Computers" subfolder is expanded, right-click on the "My Computer" node and select "Properties".

6. From the properties menu, select the "Default Properties" tab. Change the properties window to match the window below:
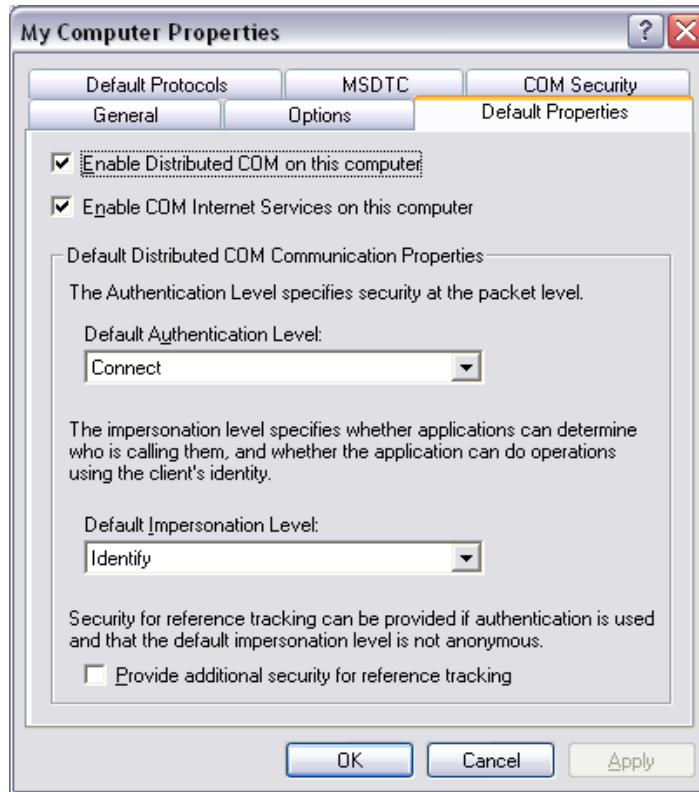
Figure 2-I-2 – My Computer Properties

7. The next step is to configure the default COM security. Click on the "Default COM Security" or "COM Security" tab. There will be two groups, Access Permissions and Launch Permissions. Inside both groups will be two buttons, "Edit Default" and "Edit Limits". Click on "Edit Default" and a permission dialogue box will appear. Add the following users and allow local and remote access by checking the "Allow" checkbox.

- Everyone
- Interactive
- System
- Network
- Anonymous Logon

Add the above users to all four permission dialogue boxes.

8. Close the properties dialogue box and in the "Component Services" window, expand "My Computer", expand the "DCOM Config" node (if prompted, select "No" when asked to record any setting). In the "DCOM Config" folder list, right click on "OpcEnum" and select "Properties". Configure the properties screen as seen below:

Figure 2-I-3 – OpcEnum Properties (General)

Figure 2-I-4 – Opc Enum Properties (Location)

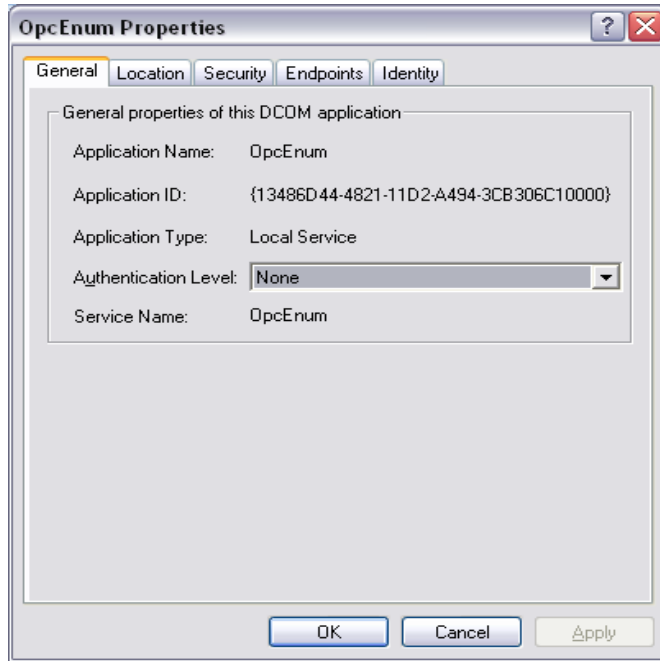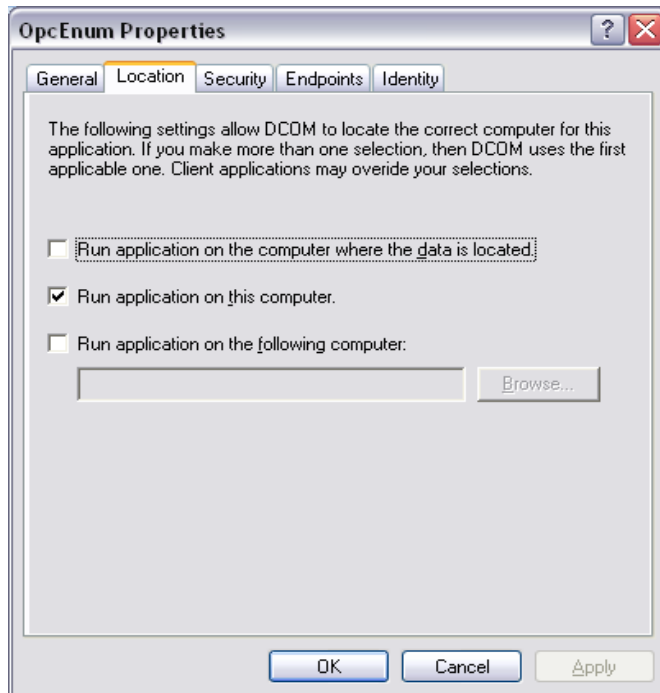9. Once the "General" and "Location" tabs are configured as above, select the "Security" tab. Under the "security" tab there will be three groups, "Launch Permissions", "Access Permissions" and "Configuration Permissions". Select the "Customize" radio button for all three groups. For each group, add the following users by clicking the "Edit…" button to open the permissions dialogue box.

   - Everyone
   - Interactive
   - System
   - Network
   - Anonymous Logon

   Make sure that for each user the "Allow" checkboxes are checked. This will have to be done for each user added to each group.

10. Close the "Component Services" window and open the Windows Firewall from the Control Panel.
11. Make sure that "Don't Allow Exceptions" is **NOT** checked.
12. Under the "Exceptions" tab, select "Add Port". When the Add Port dialogue box opens, type "DCOM" (all capital letters, no quotes) in the "Name" text box and "135" (no quotes) into the "Port Number" textbox. Leave the TCP radio button checked and select "OK".
13. Windows firewall will now allow the DCOM communication between the client PC and the remote machines. ***Note, when MaxNet is first installed, on the initial load the firewall may block the program. A dialogue box will appear notifying the user that the firewall has blocked MaxNet. Simply click "Allow" and restart MaxNet and the firewall will allow the program to run. If it will not connect and no prompt appears, open the firewall configuration again and add the program "MaxNet" from the installed folder.**
14. Restart the Client PC

After restarting the client PC, the DCOM settings will allow MaxNet to communicate with the Maximizer TPC and PanelViews. The client PC is now configured to communicate with the Maximizer TPC or PanelView.

II. Co-Pilot

*Note, if there are no Co-Pilot units being monitored by MaxNet, this part of the installation preparation is not necessary.

1. Co-Pilots communicate differently than Maximizer TPC's and PanelViews with regards to MaxNet. A MySQL database is used to store the live and historical data from a Co-Pilot. For MaxNet to communicate with the MySQL database, simply install the MyODBC driver (MySQL connecter) which is included on the MaxNet installation CD.
2. Install the connecter by running the "mysql-connector-odbc-3.51.26-win32.msi" file located on the MaxNet installation CD.
3. Once the connector is installed, open "Data Sources (ODBC)" window from "Administrative Tools" in the Control Panel.
4. Under the "User DSN" tab, select "Add" and scroll down to the MyODBC driver and select "Finish". See below:
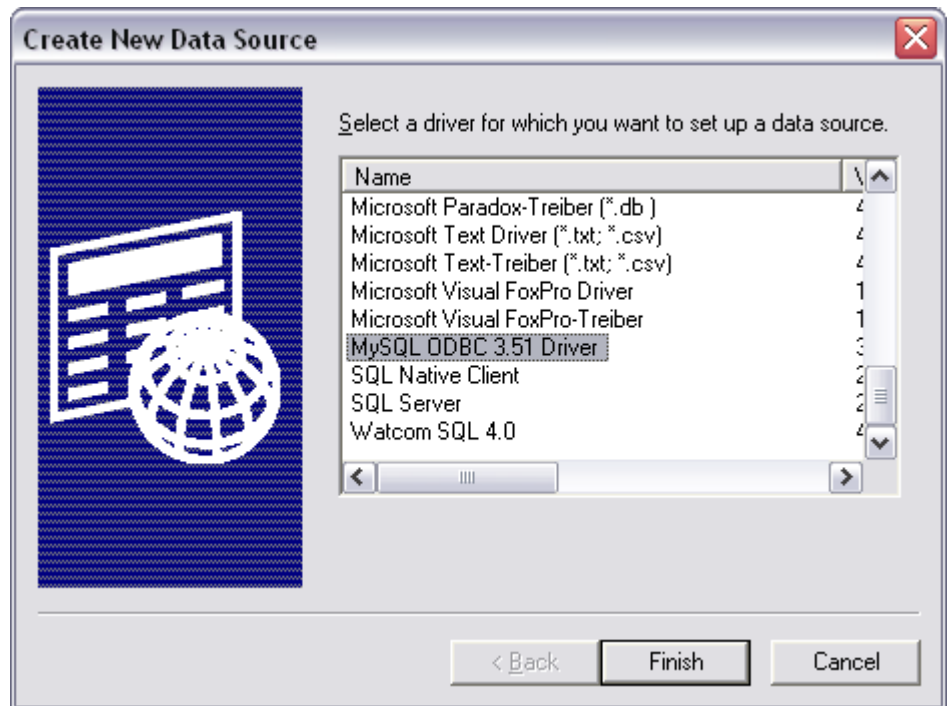
Figure 2-II-1 – Create New Data Source ODBC

5. A configure page will load. Ask the company IT personnel for the database settings. If configured correctly, the driver should be able to browse to the "MaxNet" table as shown below:
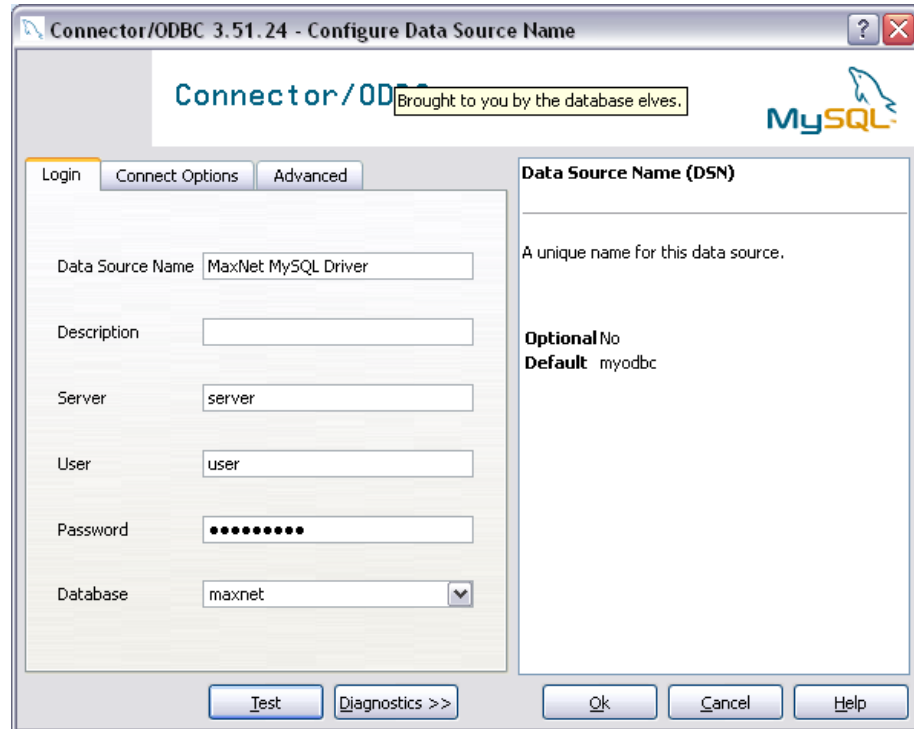
Figure 2-II-2 – MyODBC Connector Configuration Screen

6. If the Database drop down box can browse to the MaxNet folder, the driver is configured correctly. Click "OK". Do the same for the "System DSN" tab.
7. Once the driver is added to both the System and User DSN tabs, MaxNet can now communicate with the MySQL database.

III. MaxNet

1. Run the MaxNet Setup.msi file located on the MaxNet installation CD. The Setup.msi file is located in the "Setup" folder.
2. Follow the installation wizard and install MaxNet to the desired location. By default, the installation path is "C:\Program Files\Toledo Integrated Systems\MaxNet"
3. Click "Finish" when prompted. MaxNet is now installed on the client PC.

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3. Initial Startup

1. When installed, MaxNet can be ran from the desktop shortcut or by clicking START >> ALL PROGRAMS >> TOLEDO INTEGRATED SYSTEMS >> MAXNET >> MAXNET
2. On the initial load, shortly after the splash screen has appeared, a dialogue box will appear notifying the user that MaxNet could not find the server configuration file. See below:

Figure 3-1 – MaxNet Configuration Error

3. Click "OK" and another dialogue box will appear prompting for the folder location of the MaxNet server files. Ask the IT personnel which folder this is and then browse to that folder and select "OK". Once MaxNet finds the configuration files, the program will continue with its load.
4. If Co-Pilots are being monitored, there will be two errors that appear with regards to the database connection. Click "OK" to both errors and let MaxNet finish loading. When the program has started, any Co-Pilots being monitored will show a black stamping press with the label "DB Connection Error".
5. To correct this connection error, select FILE >> LOG IN/OUT from the pull down menu in the top left corner. By default, MaxNet is shipped with a user database which contains username: 1, password: 1 (This username/password can be deleted later on). Enter "1" into both fields and select "OK". The user is now logged into MaxNet.
6. Once logged in, select FILE >> CONFIGURE SYSTEM from the pull down menu in the top left corner.
7. When the "Configure System" form loads, select CONFIGURE >> MAIN SERVER from the pull down menu in the top left corner.
8. On the "Main Server Configuration" page, enter in the IP address of where the MySQL database is installed (ask an IT personnel if unsure).
9. On the Co-Pilot Server Configuration" page, enter the same information as that which was entered for the MyODBC driver during the installation.

10. Once the new parameters are entered, select "Save and Exit".
11. Close the main configuration page.
12. Restart MaxNet. Once restarted, MaxNet should be communicating with the database.

*Note, also on the initial load the Windows firewall notification may appear showing that MaxNet is being blocked. If this notification appears, click "Allow" and restart MaxNet.
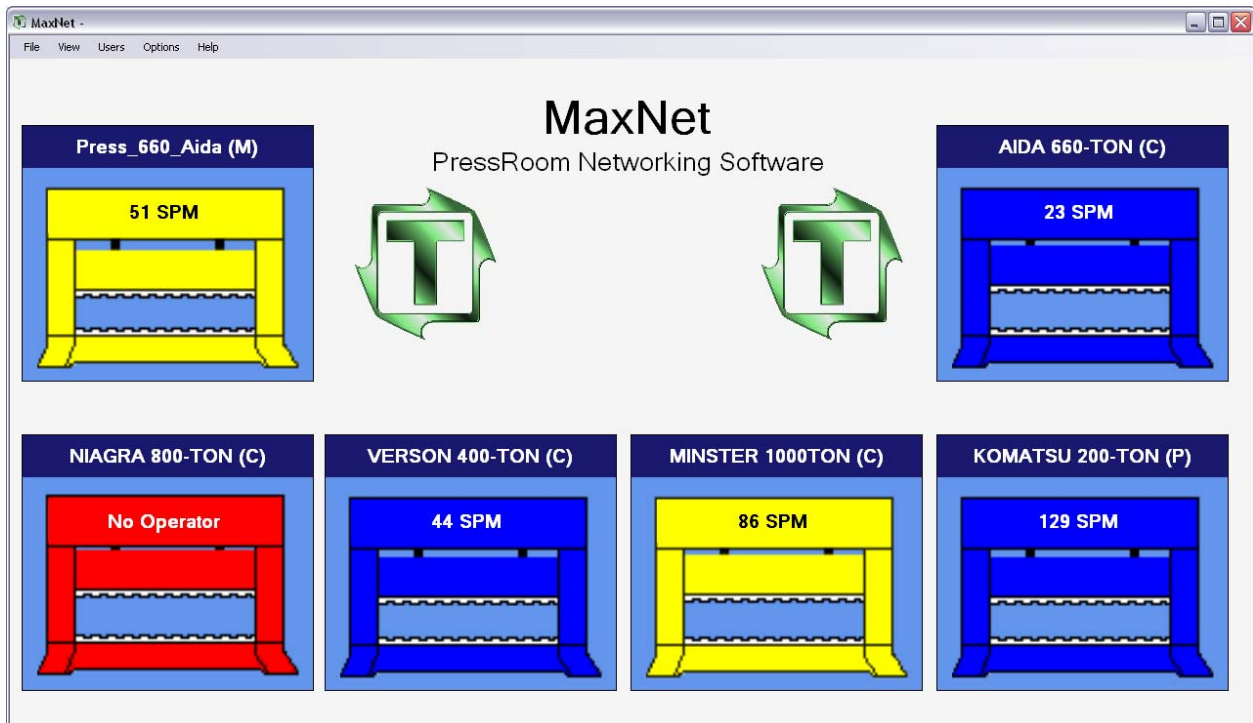
4. Main Screen

Figure 4-1 – MaxNet Main Screen

The MaxNet main screen displays all of the configured press names, status and speed (SPM). From this screen a user can see which presses are running and at what speed, which presses are down and for what reason.

I. Color Legend

- Blue / Green – Press is running. The speed (SPM will be displayed in the near the top of the press). The color of a running press is configurable. See section 4.3
- Yellow – Press is running but the tonnage monitor is in setup mode. The speed will still be displayed near the top of the press.
- Red – The press is not running. When the speed of the press is registered as "0", a red press will appear along with the downtime reason appearing where the speed normally is.
- Black – The Co-Pilot, Maximizer or PanelView is not connected to the network and cannot be pinged. Once reconnected to the network, MaxNet will automatically reconnect to the machine. Also a black press will appear if the server cannot be pinged.
- Gray – The press station is not configured for a Co-Pilot, Maximizer or PanelView. The label will read "Not Used".

II. Press Name

- The press name is loaded into the title of each press. After each press name is either a (P) for PanelView, (M) for Maximizer TPC, or (C) for Co-Pilot. These letters are designed to show the user which product is being used at each machine.

III. Hover Display

- When hovering over an active press, up to five parameters can be displayed in the hover window located in the middle of the main screen. These parameters can be changed from the Options >> Hover Options menu on the main page. The options are listed below:
    A. User ID: The operator which is logged into the Maximizer TPC unit (Not applicable for Co-Pilots or PanelViews)
    B. Job Number: The loaded job number
    C. Job Name: The loaded job name
    D. Part Counter: The total part count for the current job loaded.
    E. Shift Counter: The total count per shift. This is reset at the end of each shift (Not applicable for Co-Pilots).
    F. Batch Counter #1: For Maximizers and PanelViews, this is the amount of parts left for Batch Count #1. When used with a Co-Pilot, this is how many parts have been added to Batch Count #1.
    G. Batch Counter #2: For Maximizers and PanelViews, this is the amount of parts left for Batch Count #2. When used with a Co-Pilot, this is how many parts have been added to Batch Count #2.
    H. Good Part Counter: Number of parts made that has been considered "good" for the loaded job (Not applicable for Maximizers or PanelViews).
    I. Lifetime Stroke Counter: Non-resettable counter which records each stroke of the press (Not applicable for Maximizers or PanelViews).

IV. File Menu Strip

- File
    A. Log In/Out: Will bring the username/password prompt to the front of the screen. Users will need to log into MaxNet to access password protected screens.
    B. Configure System: Password Protected screen which is used to configure each press station. From this screen each press station can be configured for the type of product (Co-Pilot, PanelView or Maximizer), the IP Address of each product and the machine name. Also configurable from this page are the

settings for the Co-Pilot database and the configuration for the main server including, IP Address, folder location and customer name.

    C.   Exit: Closes the instance of MaxNet

- View
  - A. Reports
    - Full Production: Report used to display the production of each machine on the MaxNet network.
    - Downtime: Report used to display the downtime of each machine on the MaxNet network.
    - Job: Report used to display the job information of each machine on the MaxNet network.
    - Configure: Password protected screen is used to configure each machines historic database to be used with the production, downtime and job reporting.
  - B. Shift Times: Displays the shift times for each machine on the MaxNet network.
  - C. Downtime: Displays the downtime for each machine on the MaxNet network.
  - D. Signature Viewer: Opens the signature viewer page which can load signatures and overlays from the Co-Pilot or Toledo Integrated Systems SLIM tonnage monitor. Signatures are not available from systems using a Toledo TTLM as a tonnage monitor.
- Users
  - A. View: Password protected screen which opens the operator view page. This loads the Maximizer TPC users along with the MaxNet users. Users cannot be added or deleted from this screen.
  - B. Add: Password protected screen which opens the operator add page. From this page, users can be added to the MaxNet system or to the Maximizer TPC's on MaxNet network.
  - C. Delete: Password protected screen which opens the operator delete page. From the page, users can be removed from the MaxNet or Maximizer TPC systems.
- Options
  - A. Hover Options: Five parameters can be selected from the menu which is used to determine what parameters are displayed when a user hovers over an active press with a mouse cursor. These are set for each individual MaxNet station. The Options available are:
    - User ID
    - Job Number
    - Job Name
    - Part Counter
    - Shift Counter
    - Batch Count #1

- Batch Count #2
- Good Part Counter
- Lifetime Stroke Counter

B. Background Color: A MaxNet user can change the color of the MaxNet background to his/her liking. This color is set for each individual MaxNet station.

C. Press Running Color: A MaxNet user can change the color of a running press which is not in setup mode. The two choices are blue or green. By default, MaxNet is installed with a green running press.

- Help
    A. MaxNet Help: Loads the MaxNet manual.
    B. About MaxNet: Loads the MaxNet "About" screen which displays the version of MaxNet along with any technical contact numbers.

V. Context Menu Strip

Right-clicking on any active machine will display the context menu strip. Listed below are the screens and parameters that can be viewed for each press.

- Tonnage Monitor
    A. Tonnage: Displays the four corner and total tonnage along with the status, capacity, benchmark, high and low set points for each channel. The mode of the tonnage monitor is also displayed.
    B. Signatures: This is the same page as the "Signature Viewer" found under the "View" menu on the main page. Signatures from a Toledo SLIM or Co-Pilot can be viewed from this screen. Live signatures can be recalled from a Co-Pilot from this screen.
    C. Statistics: Displays the statistics for the specific machine. Statistics include:
        - Highest Load
        - Number of High Alarms
        - Last High Alarm
        - Last Alarm
        - Last Low Alarm
        - Number of Low Alarms
        - Lowest Load
    D. Details: Displays the details of the tonnage monitor. The details include:
        - Capacity
        - High Set Point
        - Low Set Point
        - Current Tonnage (Peak)
        - Benchmark

- - Benchmark High Percentage
    - Benchmark Low Percentage
- PLS (Programmable Limit Switches): Displays information regarding the programmable limit switches for the machine. The parameters include:
    - PLS Name
    - Window 1 On/Off
    - Window 2 On/Off
    - Time
    - Frequency
    - Speed Compensation
- Die Protection: Displays information regarding the die protection for each machine. The parameters include:
    - Die Protection Name
    - Window On
    - Window Off
    - Type of Stop
    - Frequency
    - Type of Contact (NO/NC)
    - Type of Window
- Brake Monitor: Displays information regarding the parameters for the brake monitor along with the historical test data. Parameters include:
    - Allowable Stopping Time
    - Actual Stopping Time
    - Degrees To Stop
    - Last Performed Test (Historical)
    - Press Speed (Historical)
    - Stopping Time (Historical)
- Shut Height / CB (Counterbalance): Displays the shut height and counterbalance information for the specific machine.
- Counters: Displays information regarding the different counters for each machine. Parameters listed on this page include:
    - Maximizer / PanelView
        - User ID
        - Job Name
        - Part Count Preset, Job Count and Shift Count
        - Tub Count Preset, Left and Finished Tubs
        - Batch Count Preset and Left
    - Co-Pilot
        - Job Name
        - Part Count Preset, Job Count and Shift Count
        - Batch Count #1 and #2 Preset and Count

- Lifetime Counter
- Good Part Counter

- Scheduling: Only applicable for Maximizer TPC's, this screen allows a scheduler to add/edit the scheduling page at the Maximizer screen. From this screen, a scheduler can inform an operator on the floor of what job needs to be ran, the priority and how many parts to run.

5.   Features

I.   Log In/Out

- A user does not need to be logged into MaxNet to view the main screen, view the PLS, die protection, counter, brake monitor, shut height or counterbalance information. However a user must be logged in to access certain screens. Listed below are the password protection screens and what level the user needs to be to access each screen.
  - Configure System: Level 2
  - View Operators/MaxNet Users: Level 2
  - Add Operators/MaxNet Users: Level 2
  - Delete Operators/MaxNet Users: Level 2
  - Configure Reports: Level 2
  - Shift Times (To Alter): Level 2
  - Downtime Names (To Alter): Level 2
  - Scheduling (For Maximizer TPC's): Level 1
  -
- A user can log into/out of MaxNet by selecting FILE >> LOG IN/OUT from the Menu bar. By default, MaxNet is shipped with a username: "1", password: "1". This is the only username/password in the user database and can be deleted when other users are added.

Figure 5-I-1 – Login Screen

- When a user successfully logs into MaxNet, the username will appear after the company name in the MaxNet title bar in the top left of the screen.
- To log out of MaxNet, click FILE >> LOG IN/OUT. A message prompt will appear asking to confirm the logout, select "Yes" to log out or "No" to stay logged in.

II. MaxNet/Maximizer Users

A.   View MaxNet/Maximizer Users

- MaxNet and Maximizer users login name, password and level can be viewed from the View MaxNet/Maximizer User page. To open this page, click USERS >> VIEW from the main menu strip. The page below will load:
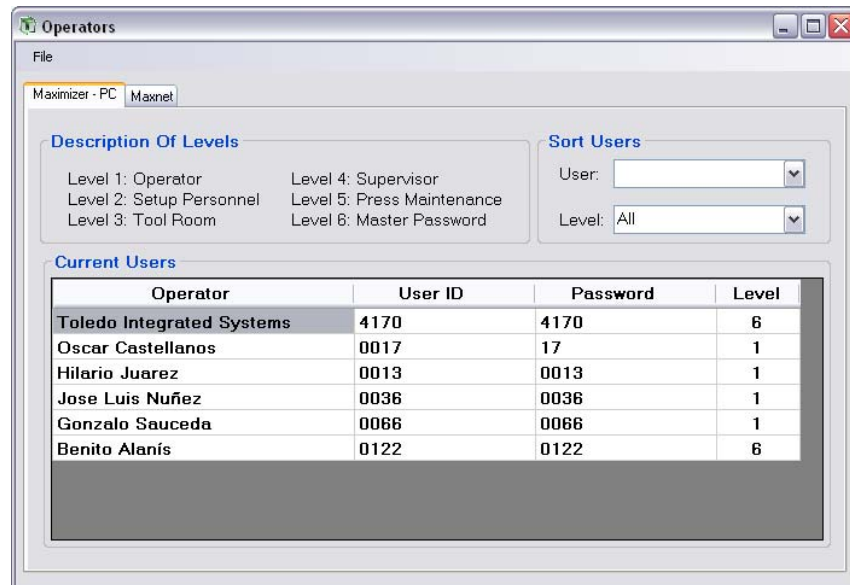

Figure 5-II-A-1 – Maximizer Users

- The Maximizer TPC will be displayed as shown in figure 5B. Maximizer operators have 4 parameters:
    - Operator Name
    - User ID
    - Password
    - Level
- There are also 6 levels that an operator can be assigned. Those levels are listed below starting with the least to highest level of permission.
    - Operator (Level 1)
    - Setup Personnel (Level 2)
    - Tool Room (Level 3)
    - Supervisor (Level 4)
    - Press Maintenance (Level 5)
    - Master Password (Level 6)
- The list can also be sorted by level or username. For bigger databases, simply sort by the level you would like to view or by the username by using the drop down menu boxes in the top right hand corner of the page.
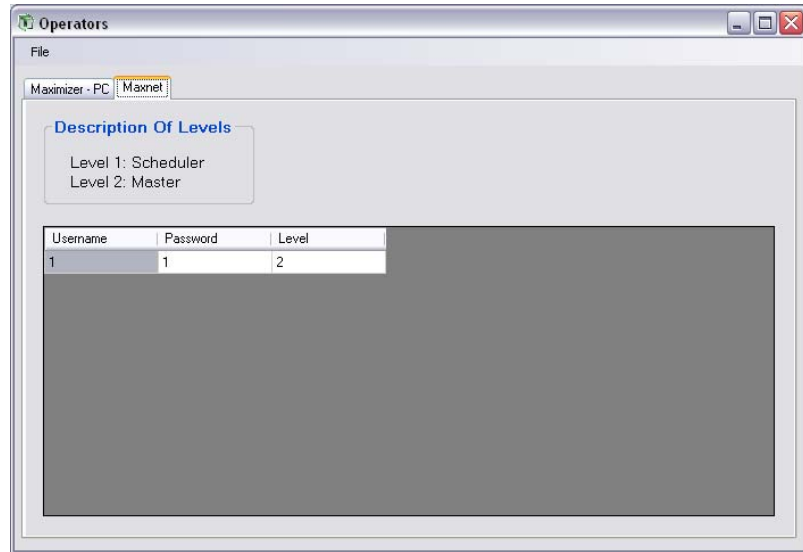
Figure 5-II-A-2 – MaxNet Users

- Selecting the "MaxNet" tab will switch the view from Maximizer operators to MaxNet users. MaxNet users have a username, password and level.
- The levels for a MaxNet user include a master level (Level 2) or a scheduling level (Level 1).

B. **Add MaxNet/Maximizer Users**

- To add an operator to a Maximizer or the MaxNet system, select USERS >> ADD from the main menu strip.
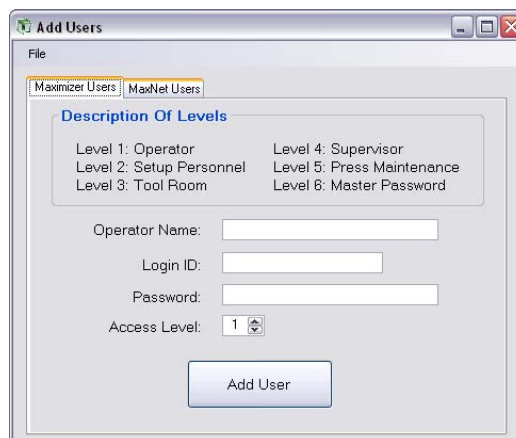

Figure 5-II-B-1 – Add Maximizer User

Figure 5-II-B -2 – Add MaxNet User

- Figure 5D shows the initial page load of the Add Users page. There are two tabs, "Maximizer Users" and "MaxNet Users".
- To add a user to the online Maximizer TPC's, fill out the form as shown in Figure 5D and select "Add User". MaxNet will add the user to all of the available Maximizer's. A dialogue box will appear showing the progress and the success/failure of the user being added to each Maximizer.
- To add a user to the MaxNet system, click on the "MaxNet Users" tab. Figure 5E will load, see above.
- Fill in the desired Login ID, password and user level and select "Add User". A message box will appear detailing the success/failure of the user to be added to the MaxNet user database.

C.   Delete MaxNet/Maximizer Users

- To delete an operator from a Maximizer or the MaxNet system, select USERS >> DELETE from the main menu strip.
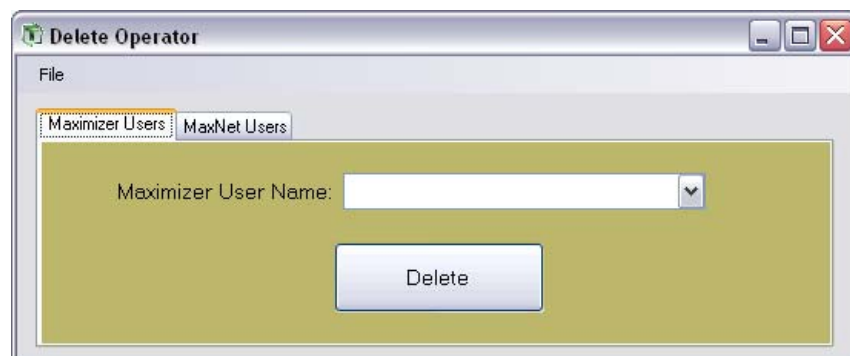

Figure 5-II-C-1 – Delete Maximizer Operator

- Figure 5F shows the initial page load of the Delete Users page. There are two tabs, "Maximizer Users" and "MaxNet Users".
- To delete a user from the online Maximizer TPC's, select the user which is to be deleted from the drop down menu box and select "Delete". MaxNet will delete the user from all of the available Maximizer's. A dialogue box will appear showing the progress and the success/failure of the user being deleted from each Maximizer.
- To delete a user from the MaxNet system, click on the "MaxNet Users" tab. Figure 5G will load, see above.
- Once again, select the desired MaxNet user to delete from the drop down menu box and select "Delete". A message box will appear detailing the success/failure of the user to be deleted from the MaxNet user database.

III. Configure System

A.   Main Configuration

- To open the main configuration page, select FILE >> CONFIGURE SYSTEM from the main menu strip.
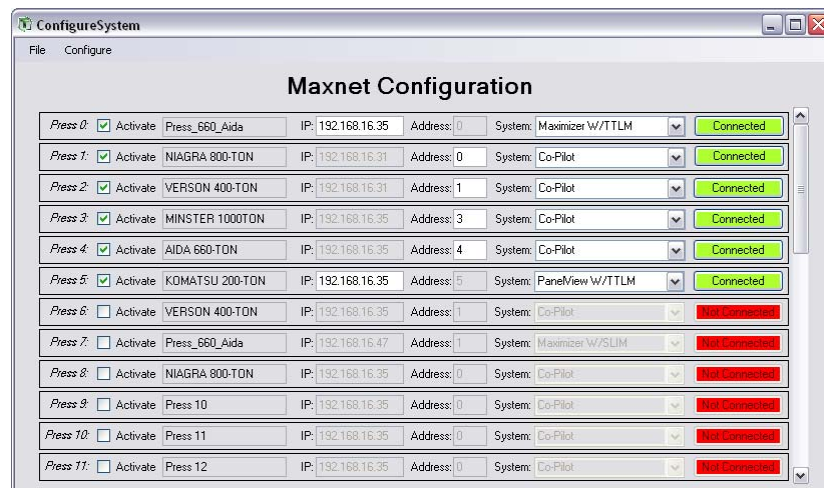

Figure 5-III-A-1 – MaxNet Main Configuration

- From the main configuration screen, users with level 2 permissions can configure each station to be activated or deactivated, input the IP address of the Maximizer or PanelView, input the address of a Co-Pilot or select the type of system and tonnage monitor being used on each station.
- Once MaxNet is configured correctly, it is strongly recommended to make a backup of the configuration file. To create a backup, select FILE >> CREATE

BACKUP from the Configure System menu strip and save the "Configuration.ini" file to the desired folder location.

- When finished making changes to the configuration page, click FILE >> SAVE AND EXIT from the menu strip bar or click the red "X" in the right hand corner of the window. All parameter values will be saved when the form is closed.
- **Warning: changes made this page are universal and will affect other users of MaxNet. For example, if user A deactivates a press, the press will be activated for all other users using MaxNet.**
- **Warning: when the "Configure System" page is closed, the parameters will be saved. Incorrect changes made to this page could cause MaxNet not to function correctly.**

B.   Server Configuration

- To open the server configuration page, first select FILE >> CONFIGURE SYSTEM from the main menu strip to open the main configuration page. Once the main configuration page loads, select CONFIGURE >> MAIN SERVER from the configure system menu strip.

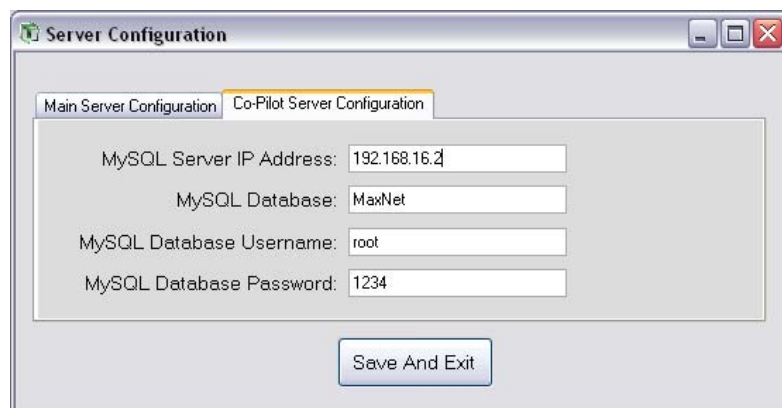Figure 5-III-B-1 – Main Server Configuration

Figure 5-III-B-2 – Co-Pilot Server Configuration

- There are two tabs regarding the server configuration, "Main Server Configuration" and "Co-Pilot Server Configuration".
- The "Main Server Configuration" tab declares the server IP address, server folder and customer name.
    o The server IP address is the IP address of the PC where the system files are stored.
    o The MaxNet server folder is the path to where those system files are stored. Users can navigate that folder using the "Browse" button on the right hand side of the page.
    o The customer folder name is required for Maximizer TPC's and stores the folder name of the where the Maximizer files are stored.
- The "Co-Pilot Server Configuration" tab declares the MySQL server address, database, username and password. **This tab only needs to be configured for systems where MaxNet is monitoring Co-Pilots.**
    o The MySQL server address is the IP address of the PC where the MySQL database is stored (Normally the same as the server IP address configured on the "Main Server Configuration" tab).
    o The MySQL database field declares the MySQL database (table name) which is used for MaxNet. This is always MaxNet unless told so otherwise by a Toledo representative.
    o The MySQL database username is the username used to log on to the database.
    o The MySQL database password is the password used to log on to the database.
- Once the desired changes are made to either tab, click the "Save and Exit" button and the server configuration will be saved to the current parameters.
- **Warning: changes made this page are universal and will affect other users of MaxNet**
- **Warning: when the "Server Configuration" page is closed, the parameters will be saved. Incorrect changes made to this page could cause MaxNet not to function correctly.**

C.   Adding A System To MaxNet

- To add a system to the MaxNet network, the main configuration page must be opened. To open the main configuration page, select FILE >> CONFIGURE SYSTEM from the main menu strip.
- With the main configuration page opened, find a deactivated press number. A deactivated is a row which the "Activated" checkbox is unchecked. See figure 5K below.
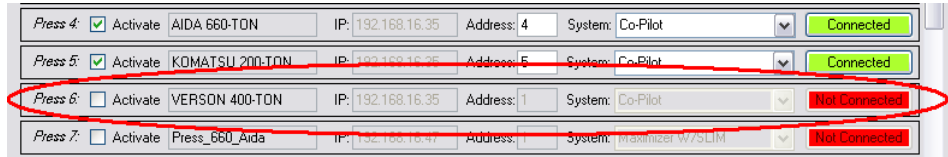
Figure 5-III-C-1 – Activating Press

- Using figure 5K as an example, to add a system to station 6, check the "Activated" checkbox. Notice the IP Address /Address textbox, System drop down menu and Connect button all become activated.
- Next select the type of system being added. The choices are:
  - Maximizer W/SLIM
  - Maximizer W/TTLM
  - Maximizer W/Out Tonnage
  - Co-Pilot
  - PanelView W/TTLM
  - PanelView WOut TTLM
- Different systems call for different parameters. A Maximizer TPC or PanelView require an IP address while a Co-Pilot requires an address instead of an IP address.
- Once the desired system is selected, enter either the IP address of the machine (Maximizer or PanelView) or the address (Co-Pilot) and click on the red "Not Connected" button. A message box will appear detailing the success/failure to add the machine to the network.
- If the machine is successfully added to the network, the press name will be updated automatically.
- Once the machine is successfully added, close the main configuration page and restart MaxNet. Once MaxNet is restarted, the changes will be updated and the new machine will be monitored by MaxNet.

D.   Removing A System From MaxNet

- To remove a system from the MaxNet network, the main configuration page must be opened. To open the main configuration page, select FILE >> CONFIGURE SYSTEM from the main menu strip.
- With the main configuration page opened, find a desired machine and uncheck the "Activate" checkbox.
- Close the main configuration page and restart MaxNet. The system will be removed from MaxNet network.

IV. Personal Options

A.　　Hover Options

- Hover options are parameters that can be viewed when a user hovers over an active press. This allows a user to quickly view common parameters such as the current job number, part and batch count for each machine without having to open up numerous windows.
- Up to five (5) parameters can be viewed during a hover over. There are nine (9) parameters to select from. Those parameters are:
    - User ID: The operator which is logged into the Maximizer TPC unit (Not applicable for Co-Pilots or PanelViews)
    - Job Number: The loaded job number
    - Job Name: The loaded job name
    - Part Counter: The total part count for the current job loaded.
    - Shift Counter: The total count per shift. This is reset at the end of each shift (Not applicable for Co-Pilots).
    - Batch Counter #1: For Maximizers and PanelViews, this is the amount of parts left for Batch Count #1. When used with a Co-Pilot, this is how many parts have been added to Batch Count #1.
    - Batch Counter #2: For Maximizers and PanelViews, this is the amount of parts left for Batch Count #2. When used with a Co-Pilot, this is how many parts have been added to Batch Count #2.
    - Good Part Counter: Number of parts made that has been considered "good" for the loaded job (Not applicable for Maximizers or PanelViews).
    - Lifetime Stroke Counter: Non-resettable counter which records each stroke of the press (Not applicable for Maximizers or PanelViews).
- The select or deselect the hover parameters, select OPTIONS >> HOVER OPTIONS from the main menu strip. If five (5) options are already selected, a parameter must first be unchecked before another parameter can be checked.
- The hover options are set for each individual MaxNet station. User A's hover options can be different than user B's.

B. **Background Color**

- A MaxNet user can change the color of the MaxNet background to his/her liking. This color is set for each individual MaxNet station. The colors are listed below:
    - Black
    - White
    - Whitesmoke
    - Gray
    - Dark Gray
    - Dark Goldenrod
    - Dark Khaki
    - Olive Drab
    - Green
    - Dark Slate Gray
    - Cadet Blue
    - Royal Blue
    - Blue
    - Indigo
    - Plum
    - Deep Pink
- To select a background color, select the OPTIONS >> BACKGROUND COLOR from the main menu strip and select the desired background color from the fly-out menu.

C. **Running Press Color**

- A MaxNet user can change the color of a running press/machine to his/her preference. The two color choices are listed below:
    - Blue
    - Green
- During installation the default running press color is green. This can be changed by selecting OPTIONS >> RUNNING PRESS COLOR and choosing the desired color from the fly-out menu.
- The running press color is for a machine that is running but not in setup mode. If the machine is in setup mode, the color will be yellow.

V. Shift Times

- Shift times can be viewed by selecting VIEW >> SHIFT TIMES from the main menu strip.
- This will open the shift times page which will allow a MaxNet user with level 2 permissions to change the shift times for each individual machine on the MaxNet network.

Figure 5-V-1 – Shift Times

- If the MaxNet user is not logged in with a level 2 password, the shift times can still be viewed but will be read only and cannot be changed until the user is logged in.

VI. Downtime Names

- Downtime names can be viewed by selecting VIEW >> DOWNTIME NAMES from the main menu strip.
- This will open the downtime names page which will allow a MaxNet user with level 2 permissions to change the downtime names for each individual machine on the MaxNet network.

Figure 5-VI-1 – Downtime Reasons

- The downtime names page displays each of the 10 reasons for the four (4) categories of downtimes (Operator, Maintenance, Tool Room/Setup and Die Setter).
- The downtime reasons are pulled from the first available machine on the network (normally press 0). If the downtime reasons are different on another machine, a MaxNet user can change where the downtime names are downloaded from by using the drop down list near the bottom of the page.
- **Warning: If changes are made to this screen all online machines will be updated with the new downtime reasons.**

VII. Tonnage Monitor

- To view the tonnage parameters and statistics for each machine on the MaxNet network, right-click on the activated press and hover over "Tonnage Monitor" from the context menu strip. Four (4) tonnage options are available:
  - o Tonnage
  - o Signatures
  - o Statistics
  - o Details

A. Tonnage

- The tonnage page displays the four (4) corner and total peak tonnage, monitor mode (Setup, Learn, etc..), monitor alarm status and each corner capacity, high and low set points, and benchmark.

Figure 5-VII-A-1 – Tonnage (Outer Slide)

B. Signatures

- The signatures page will allow a MaxNet user to view signatures from a Toledo Co-Pilot or SLIM tonnage monitor. Users can view signature overlays, zoom in on a corner signature or request a live signature from an online Co-Pilot.
- To request an live signature from an online Co-Pilot, select the Co-Pilot name and signature number from the bottom right hand corner and select "Recall". It will take a couple of seconds to load the new signature.
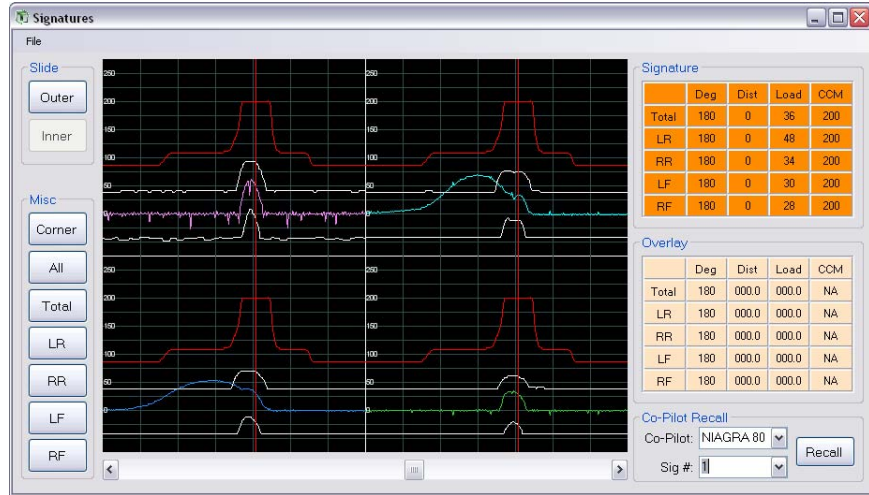
Figure 5-VII-B-1 – Signature Screen
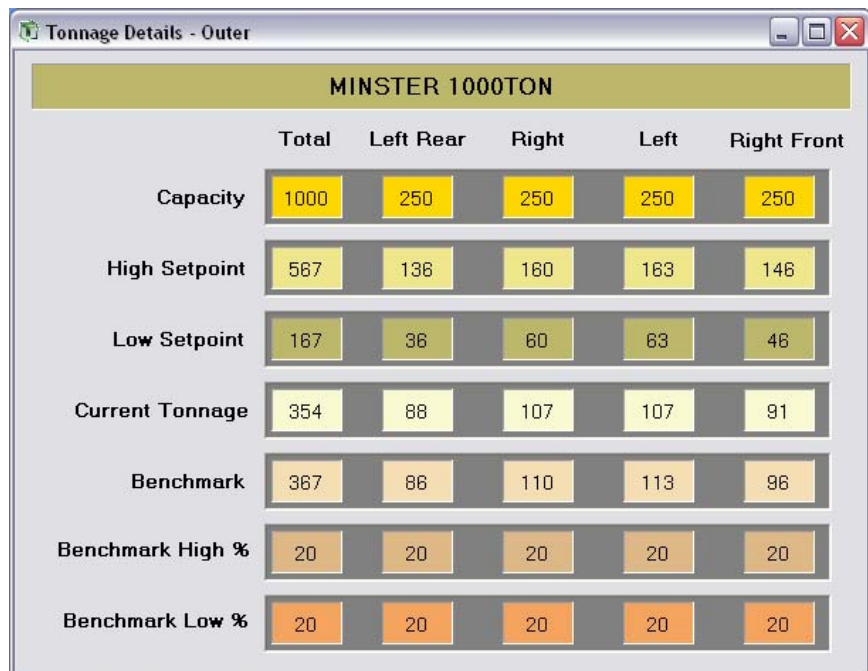
C.   Statistics

- The statistics page will display the following information from the tonnage monitor:
    - Highest Load
    - Number of High/Low Alarms
    - Last High/Low Alarm
    - Last Alarm
    - Lowest Load

Figure 5-VII-C-1 – Statistics (Outer Slide)

D.   Details

- The details screen will display the following information from the tonnage monitor:
    o Capacity
    o High Set Point
    o Low Set Point
    o Current Tonnage (Peak)
    o Benchmark
    o Benchmark High Percentage
    o Benchmark Low Percentage

Figure 5-VII-D-1 – Tonnage Details (Outer Slide)

VIII. Programmable Limit Switch (PLS)

- The programmable limit switch parameters can be viewed for each machine by right-clicking on an activated press and selecting "PLS" from the context menu strip.
- This PLS page displays the following information about the selected machines programmable limit switches:
  - o PLS Name
  - o Window 1 On/Off
  - o Window 2 On/Off
  - o Time
  - o Frequency
  - o Speed Compensation

Figure 5-VIII-1 – Programmable Limit Switch Screen

IX. Die Protection

- The die protection parameters can be viewed for each machine by right-clicking on an activated press and selecting "Die Protection" from the context menu strip.
- This die protection page displays the following information about the selected machines die protection:
  - o Die Protection Name
  - o Window On
  - o Window Off
  - o Type of Stop
  - o Type of Contact (NO/NC)
  - o Type of Window

Figure 5-IX-1 – Die Protection Screen

X. Brake Monitor

- The brake monitor parameters can be viewed by right-clicking on an activated press and selected "Brake Monitor" from the context menu strip.
- The brake monitor page displays the following information about the selected brake monitor:
    - Allowable Stopping time
    - Actual Stopping Time
    - Degrees To Stop
    - Last Performed Test (Historical)
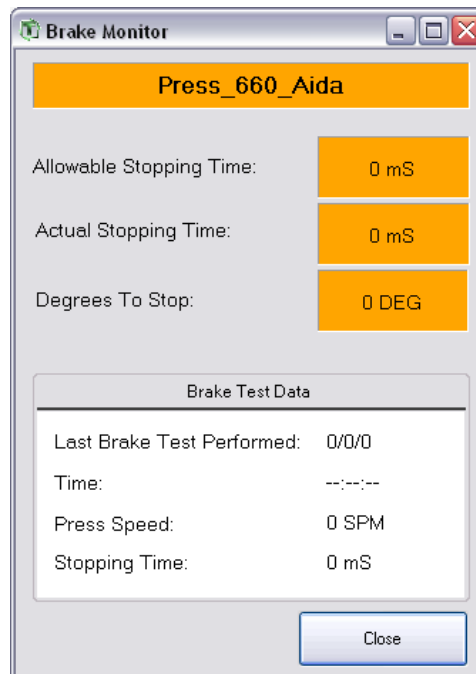   - Press Speed (Historical)
    - Stopping Time (Historical)

Figure 5-X-1 – Brake Monitor

XI. Shut Height / Counterbalance

- The shut height and counterbalance information can be viewed by right-clicking on an activated press and selecting "Shut Height / CB" from the context menu strip.
- The shut height / counterbalance page display the target and actual values for both sets of shut heights and counterbalances.

Figure 5-XI-1 – Press Functions

XII. Counters

- The counters page displays the parts, job, shift, batch #1, batch #2, good and lifetime counts for each machine online.
- To view the counters page, right-click on an activated press and select "Counters" from the context menu strip.
- The counters page is different for a Maximizer and PanelView than for a Co-Pilot. Below are the counters which are displayed for each system.
    - ➢ Maximizer / PanelView
        - ▪ User ID
        - ▪ Job Name
        - ▪ Part Count Preset, Job Count and Shift Count
        - ▪ Tub Count Preset, Left and Finished Tubs
        - ▪ Batch Count Preset and Left
    - ➢ Co-Pilot
        - ▪ Job Name
        - ▪ Part Count Preset, Job Count and Shift Count
        - ▪ Batch Count #1 and #2 Preset and Count
        - ▪ Lifetime Counter
- Good Part Counter Figure 5W below is the counters page for a Maximizer or PanelView. Figure 5X displays the counter page for a Co-Pilot.
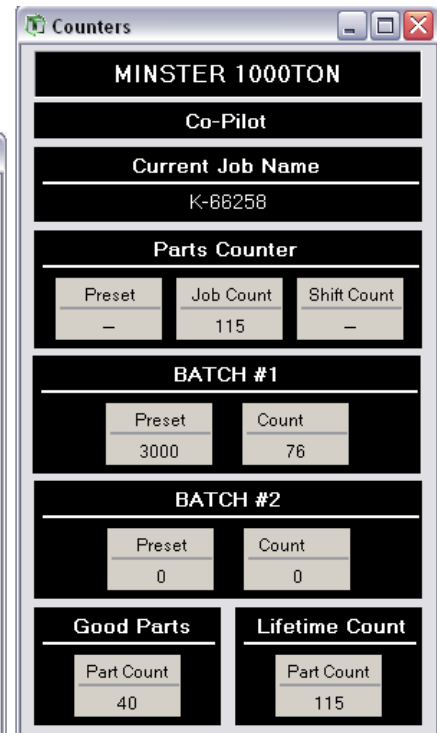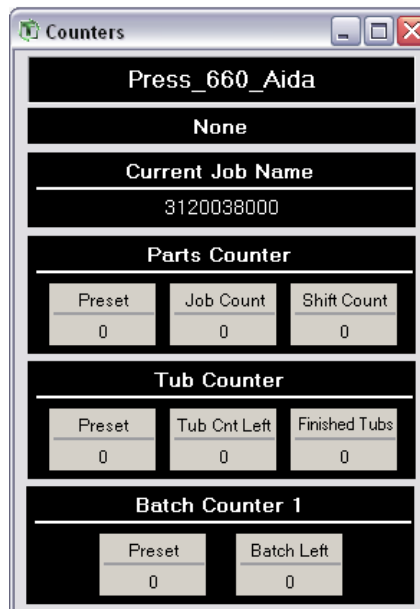

Figure 5-XII-1 – Counters (Maximizer) Figure 5-XII-2 – Counters (Co-Pilot)

XIII.   Scheduling

- Only applicable for Maximizer TPC's, this screen allows a scheduling to add/edit the scheduling page at the Maximizer screen.
- To open the scheduling screen, right-click on an active Maximizer machine and select "Scheduling" from the context menu strip.
- From this screen, a scheduler can inform an operator on the floor of what job needs to be ran, the priority and how many parts need to be ran.
- If a user is not logged into MaxNet, the user will be able to view the scheduling page but not make changes. A user must be logged in with a level 1 or high permissions level to alter the scheduling page.

Figure 5-XIII-1 - Scheduling

6.   Reporting

MaxNet offers an in-depth reporting tool which can be used to view data or graphical representations of production, downtime or job reports. Reports can be run separately or from the MaxNet Live program.

To open the reporting program separately, select START >> ALL PROGRAMS >> TOLEDO INTEGRATED SYSTEMS >> MAXNET >> MAXNET REPORTING. This will load the MaxNet Reporting window from which you can run the production, downtime or job reports. You can also set the database configuration from inside the reporting window.

To launch the reporting window from MaxNet Live, select VIEW >> REPORTS >> LAUNCH REPORTS. The Reporting window will load.

I.   Configuring Reports

- The reporting configuration can be configured from MaxNet Live or from the reporting window. A username and password are required to access the report configuration page. Users can be viewed, added or deleted from MaxNet Live (See section 5.II).
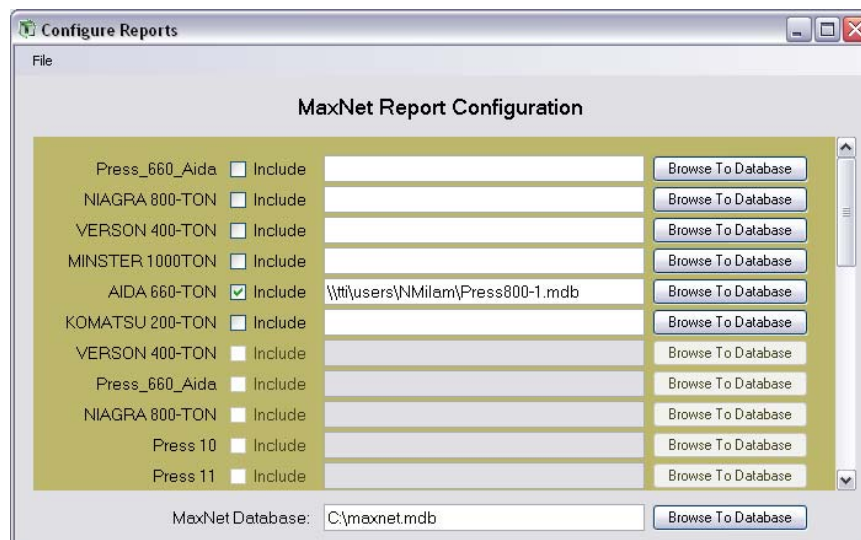

Figure 6-I-1 Report Configuration

- To access the configuration page from the reporting window, select FILE >> CONFIGURE REPORTS. A login box will appear. Enter a valid username and password and the report configuration page will load.

- To access the configuration page from MaxNet Live, select VIEW >> REPORTS >> CONFIGURE REPORTS. If a user is not logged into MaxNet Live, a dialogue box will appear prompting the user to log in. Once the user is logged in, the configuration page will load.

- The report configuration page allows users to declare the press database path and location, along with the main MaxNet reporting database.

- If the press is online and available, the activate checkbox, database path and browse button will be enabled.

- To add a press database to the MaxNet reporting, check the checkbox next to the press name and then select the "Browse" command button. This will load a dialogue box which can be used to browse to the press database. Once the press database is located, highlight the database and select "Open". The database path and name will be placed in the textbox next to the press name.

- Once all necessary changes/updates are made, select FILE >> SAVE to save the configuration.

II. Updated Databases

- The remote press databases will be copied to the server and inserted into the main MaxNet database during an update.

- This is done manually by selecting UPDATE >> DATABASE from the main menu selection in the reporting windows. An update progress bar and window will appear displaying the progress of the update, see figure 6-II-1 below. Once the update is complete select "Close".
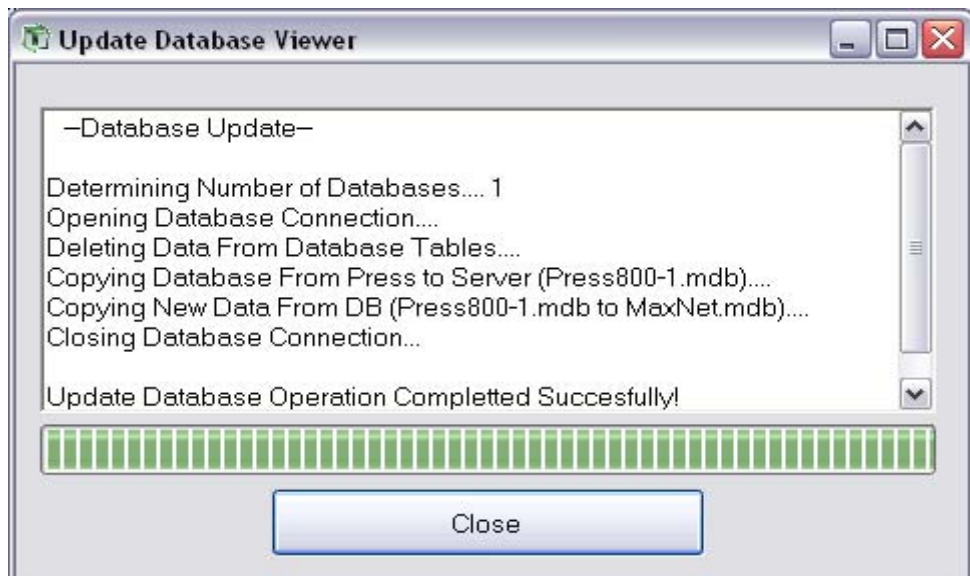

Figure 5-II-1 – Update Progress Window

- The report title contains the time the database was updated.   Once the database is updated, the title will contain the current date and time.

III. Full Production Reports

- The full production report displays the most information with regards to all production for an entire network of presses.

- To run a full production report, select the "Full Production" tab in the reporting window and enter the desired report parameters. The parameters for a full production report are listed below

  ➢ Date

  ➢ Time

  ➢ Operator/Employee

  ➢ Department

  ➢ Press Name

  ➢ Job Name

  ➢ Shift

- Once the selected parameters are entered, select the "View Data Report" button from the left hand side. A full production report will be generated in the report viewer window.

IV. Downtime Reports

- The downtime report displays information regarding the downtime of each press that is on the MaxNet network.

- To run a downtime report, select the "Downtime" tab in the reporting window and enter the desired parameters. The parameters for the downtime report are listed below.

  ➢ Date

  ➢ Time

  ➢ Employee

  ➢ Press

  ➢ Job Name

  ➢ Shift

- Once the desired parameters are entered, a user can run a data or graphical report.

- To run a data report, select the "View Data Report" button from the left hand side. A data report will be generated inside the report viewer window.

- To run a graphical report, select the "View Graph" button from the left hand side. A graphical report will be generated inside the report viewer window.

V. Job Reports

- The job report displays information regarding the job information for each press that is on the MaxNet network.

- To run a job report, select the "Job" tab in the reporting window and enter the desired parameters. The parameters for the downtime report are listed below.

  ➢ Date

  ➢ Job Name

- Once the desired parameters are entered, a user can run a data or graphical report.

- To run a data report, select the "View Data Report" button from the left hand side. A data report will be generated inside the report viewer window.

- To run a graphical report, select the "View Graph" button from the left hand side. A graphical report will be generated inside the report viewer window.

VI. Report Viewer Window

- Each data or graphical report is generated inside the report viewer window. From this window, a user can zoom in on the report or print the report to a desired network printer.

- To print a report, select the printer icon from the top left of the viewer window and a print dialogue box will appear. Select the desired printer and select "Print".