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Welcome to Envision

ENVISION enterprise solution helps companies to optimize automation processes, minimize unnecessary maintenance, and increase production throughput. In the scope of process diagnostics and quality management, ENVISION’s patented technology is a quantum leap beyond traditional motion sensing diagnostics tools.

Whereas existing diagnostic tools use vibration sensors or other signals, ENVISION creates digital traces of all sets of events pertaining to the automated or manufacturing processes. Envision solution LISTENS to the rhythm of machine and automated operations; ILLUMINATES untapped and currently invisible process data to pinpoint possible problem areas before a critical failure; and TRANSFORMS how systems’ operational and quality performance is measured and managed.

CAPTURING THE HEARTBEAT OF AUTOMATION: ENVISION monitors and records every automated motion and process in real-time. ENVISION actually acts as an EKG of an automated system – comparing the actual process performance against ideal (design intended) cycle time to gauge the health of the system.

Beet Analytics Technology brings the power of digital technology and advanced knowledge of factory automation together, creating a powerful Automation Intelligent System, ENVISION™.

ENVISION demystifies the industrial operations by digitizing each automated process down to every minute detail and presents it in a simple and intuitive way.

ENVISION enables true Preventive Maintenance to minimize downtime, improve production throughput and achieve faster problem solving.

ENVISION creates a competitive advantage by addressing key operational challenges including:

- Provides accurate real-time and historical machine and process performances information to the right user at the right time.
- Enables proactive preventive maintenance by highlighting potential problem areas and providing prioritized list of “Hotspots” in the manufacturing and automation processes.
- Enables all users to monitor and analyze the system performance anywhere via web.
- Delivers high return-on-investment by increasing throughput, reducing machine downtime and achieving faster root-cause analysis.
What’s New
Cycle View Evaluation Module allows a user to view and compare select cycles for evaluation and diagnosis.
More Information
Installation Introduction
Installation

Envision Pilot Checklist
1) Update all hot fixes in Windows and Drivers
2) Update Software / Application
   a) Check/Update Kepware License
   b) Check/Update OPC System License
   c) Check/Update Envision License
3) If there is SAN,
   a) Network Cable from SPA/SPB to Switch
   b) Fiber Cables connect to Server HBAs
   c) Follow SANs Checklist
4) KVM Switch
   a) EAS (Envision Application Server)
   b) EDC (Envision Data Collector)
5) UPS check Battery Condition
6) Connect Monitor / Keyboard / Mouse Console
7) Network Cable from Servers to Switch
8) Network Cable from RSAs to Switch
9) VPN Installed and Tested
10) 200 ft of CAT5e Extension cord
11) NEMAL 620-ft Extension cord
12) 2 IP be able to accessed Internet
13) 1 IP for PLC

Customer Requirements
1) NEMAL6-30R
2) 1-portonPLC
3) 1-portonLAN
4) Loaner Agreement Signed
5) Shipper Document Signed
Software Application

Envision features many helpful tools to help maximize productivity. The following section describes those features in detail, as well as giving instruction on how to use them.

- Navigation
- Cycle Browser
- Cycle View Evaluation Module
- Cycle History
- Production Counts in New Window
- Hotspots
- Notes
- Scheduling
- Production Monitor
- Reporting and Dashboard
- Reports
- Dashboard
- Run
- Subscribe
Navigation

Plant Navigation

In ENVISION, your plant is broken down into a hierarchy of manufacturing categories.

The Factory Plant defines the organizational tree down to the component level. The top 3 levels (Areas, Lines, and Stations) are used to organize the tree into a meaningful and friendly navigation structure. The lower 2 levels (Assets, Groups) are the data objects.

Main Tree Object and Description

**Main Tree**

<table>
<thead>
<tr>
<th>Name</th>
<th>Object</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transmission Plant</td>
<td>PLANT</td>
<td>The Area of the Plant where a particular assembled part is built (example: RWD and FWD Transmission Assembly Areas).</td>
</tr>
<tr>
<td>FWD TRANSMISSION</td>
<td>AREA</td>
<td>A part/place of the Area that is responsible for assembling a part of the assembly (Example: Internal and External parts assembly Lines).</td>
</tr>
<tr>
<td>LOOP 1 ZONE 3</td>
<td>LINE</td>
<td>A Station within the Line that is responsible for the collection of Assets (Example: Gear build, valve body, and torque converter build Stations).</td>
</tr>
<tr>
<td>STA 25</td>
<td>STATION</td>
<td>Assets are used to define a repeatable set of motions/activities (Groups) that have defined Start and End signals (Example: Builds the Valve body and inspects/quality check assets).</td>
</tr>
<tr>
<td>Sta 25 On-Deck Tag</td>
<td>ASSET</td>
<td>GROUPS A Group is a collection of OPS (individual motions/event data objects). Assets are a collection of Groups that describe a particular sequence of events that comprise one complete cycle for the Asset (Example: A part enters On-Deck, then Part is present On-Deck, signal to show OP is complete).</td>
</tr>
<tr>
<td>Sta 25 In-Station</td>
<td>ASSET</td>
<td></td>
</tr>
<tr>
<td>CYCLE TIME</td>
<td>ASSET</td>
<td></td>
</tr>
<tr>
<td>Release LP From On-Deck</td>
<td>GROUP</td>
<td></td>
</tr>
<tr>
<td>LP Enters In-Station Stop</td>
<td>ASSET</td>
<td></td>
</tr>
<tr>
<td>Re LP In-Sta RFID Tag</td>
<td>ASSET</td>
<td></td>
</tr>
<tr>
<td>TP Enters On-Deck Stop</td>
<td>ASSET</td>
<td></td>
</tr>
</tbody>
</table>
How to Navigate with ENVISION

Navigating to the area of your plant you would like to monitor can be done at any time using the top navigation bar in the ENVISION browser. Navigate to any object to view in depth critical performance data. If you are reopening, it may return to the area of the object tree you were previously viewing. If not, then it will open to the Dashboard with only the Object Tree. Select the Object Tree Icon to proceed.

Top Navigation Bar

When first opening Envision, it will open to the Dashboard window. The head navigation bar can be found at the top of your ENVISION browser.

1. The top navigation area can be used to access any of the different features of Envision: Dashboard, Cycle view, Hotspots, Reporting, and Notes.

2. The plant breakdown can be used to navigate to the object you want to view.
Main Tree Navigation

*Click* **Object Tree** on the navigation bar to open the **Main Tree** window to navigate to the Object desired.

You can also navigate by using the Object String next to the Object Tree Icon. *Click* on the Object label Icon to open a window to proceed to the next level down. Or hover over an Object label and a drop down option will appear to go to the next level down.

1. You can also use the Object String to navigate up or down the Object Tree String. Hover the cursor over the Object in the string, and it will reveal the other Objects in that level.

2. Now, slide the cursor down to one of the object to reveal the child objects of your selection.

3. Click on it to go to that level.
Select the + box next to each item to further expand the areas. Continue to expand areas until you reveal the object you desire, then Click on the Object to open the cycle browser. This will open the browser window with the last 100 cycles.

Click on the Cycle View Tab at the top of the browser to open the cycle view. Once selected, the Cycle view browser will open with the Last 100 cycles displayed for that object. The upper graph will be empty (No Cycle Selected), until you select a cycle to view. Simply select a cycle to view by Clicking on the lower graph in the Cycle view browser.
Cycle Browser

- **Location**
- **Selecting a Cycle**
- **View Types**

The cycle browser provides graphical data on your processes cycle status, including the machine heartbeat. The Cycle Browser has two main displays, the Upper display and the History Display panel.

**Location**

Make sure you have the Cycle view tab selected on the ENVISION top menu.

You can then access the cycle browser by using the Main Tree window to navigate to your desired object. **Click** on the + sign beside the object. This will reveal the lower level objects. Proceed until you reach the object desired. **Click** on the object and the Cycle Browser will open. After selecting the desired object, the cycle browser will launch to this browser. A cycle has not been selected yet, so the upper graph will be empty and say **No Cycle Selected**.
Selecting a cycle

To Select a cycle, go to the bottom of the cycle browser, known as the History Display Panel. From here you can select a cycle to view in the Upper Graphical area of the cycle browser. While browsing over the History Display Panel, you can hover over a cycle to view the details of that cycle. Select a cycle by clicking on that cycle. After you click on it, a white line will appear above the selected cycle, and the upper window will update with the selected cycle.
**View Types**

Located in the top right of your cycle browser, are 2 buttons to change the views to either **Heartbeat** or **Sequence**.

**Heartbeat View** is the default view. The **Blue Heartbeat Baseline** can only be viewed in Heartbeat view.

**Sequence view** contains state label which can only be seen in the sequence view.
View Options

Below is a list of View options you can apply to your cycle view. These buttons are in the top right corner of the cycle browser, they are Cycle view tabs. X-Axis, Baseline, Tolerance, and States. The Baseline can only be viewed in the Heartbeat view as the States tab is only active in the Sequence view as shown in the figures below.
Below is a list of options you can apply to your Cycle view.

1. **Toggle X-Axis** button to show or suppress x-axis labels.

2. **Toggle Baseline** to show the Heartbeat of the machine by blue line or Blue bracket in Sequence mode.

3. **Toggle Tolerance** button to suppress or show if the object is in the allowable range to maintain a healthy state.

4. **Toggle States** to suppress or show the State Labels in Sequence view only.
Object Properties

The Object Properties are located in the top left of the cycle browser. **Model, AGV, Part, CycleNumber, Cycle time, and time data** can all be located here. The highlighted Cycletime is dependent on the status of the cycle displayed. It can be **Green (Good)**, **Yellow (Watch)**, **Orange (Warning)**, **Purple (Missing)**, or **Red (Fault)**.

Good / **Green** - Normal, Optimum Performing Range
Watch / **Yellow** - Watch, Not Optimum but within defined Tolerance window.
Warning / **Orange** - Warning, Outside Defined Tolerance Window
Fault / **Red** - Fault
Missing / **Purple** - Missing Data due to Stoppage or Missing Input/Output.
Baseline Editor (Learn)

The Learned Baseline Editor is an application/tool within the ENVISION Cycle browser, that can take a selection of objects at the Asset level and filter the data values to view the baseline data. Within the LBE, lies a baseline table that you can filter and sort to see the data averages of certain values.

Opening the Baseline Editor

The LBE can only be used in the Cycle View browser. Open the Cycle View browser and drill down to an Asset level. In the lower part of the Cycle View browser (History Display Panel). Select a cycle from the History Display Panel. From there, navigate to the upper part of the Cycle View browser, on the upper right above the upper graph window. Select the light blue button with the oxford cap (graduation cap) on it.

1. Select a cycle from the History Display Panel.
2. Click on the Baseline Editor button to open the Learn - Baseline Editor window.
After selection of the Baseline Editor button, the Learn – Baseline Editor setup window will open. It displays an editing area, Select Learn Mode and Select # of Cycles, where you can select the number of Cycles to display. You can choose up to a ~ 1000 cycles if needed. After you select the number of cycles and Learn mode, click on the Confirm button to the left of the edit box.

![Learn - Baseline Editor](image)

After selecting the Confirm button, the Learn – Baseline Editor window will open. In this window, it offers a selection of options to filter and sort the available data.

![Learn - Baseline Editor](image)

The Object data is separated into three groups. **Model, Group, and Tag.** They are sortable. The available data values are the Events, SD (Standard Deviation), Cycle Len. (Length), Min Tol. (Minimum Tolerance), Max Tol. (Maximum Tolerance), Min Normal (Minimum Normal), and Max Normal (Maximum Normal).
To sort the Object data columns, you can utilize the **Filtering feature** to the right of each edit box. Clicking on it reveals your filtering choice. Click on the filter button and input the object value and it will start to auto display some choices.

- Is equal to
- Is not equal to
- Starts with
- Contains
- Does not contain
- Ends with

Except for Events and SD, the others can be adjusted by clicking on the value. It will then highlight and offer you a choice to increase or decrease the value. You can also manually input the number to make it exact.
Cycle View Evaluation Module

Overview

The Cycle View Evaluation Module will allow users to view multiple cycles at the Asset and Group object level in the cycle view browser. It can be utilized with any cycle, regardless of its status (watch, warning, etc.). The three main parts used for this module is the Cycle View Browser, Cycle Compare (Collection) Window, and the Cycle Compare Browser.

- Open Cycle View
- Selecting Cycles to Compare
- Open Cycle Compare Window
- Configure Cycle Collection
- Adding More Cycles
- Zoom Feature
- Deleting a Cycle
- Deleting a Collection
- Cycle Toggle Feature
- Reference

Open Cycle View

First we need to navigate to get to the Cycle View Browsers, so that the History Display Panel can be accessed.

After opening the ENVISION browser, click on the blue Object Tree icon to open the Main Tree. Navigate the Main Tree to drill down to the Asset or Group level. This module is active at the Asset levels and below.
Selecting Cycles to Compare

Once the ENVISION browser is open, select the Cycle view tab from the top menu tab and a new Cycle View window will reveal with the last 100 cycles in the History Display Panel (in the lower browser window).

Select a cycle from the History Display Panel. Once a cycle is selected, it will have a white line on top showing that it is selected.

Open Cycle Compare Window

When the cycle is clicked on, the upper display window will show the cycle selected. In the upper right hand side above that window will be the Cycle View Menu bar. On the far right side is the Cycle compare button.
Configure Cycle Collection

When the Cycle Compare window opens, input a Name for the cycle’s folder, then select the Create a New Cycle Collection button. This will update the window with a new folder (CEM 001) and the first selected cycle.

You can click the View button and the upper display will reveal the selected cycle as shown below. This will only show the cycle selected.
Adding More Cycles

To add more cycles, select another cycle from the History Display Panel. Once selected, select the Cycle Compare button. The Cycle Compare window will open. Click on the first cycle that was selected, then select the Save to Collection button in the upper right-hand side of the window. This will add it to your selection. Ensure that you select the correct cycle you want to compare with. If many cycles (assets) are already present in the Cycle Compare window, it is possible to add to a different collection, so selecting the wrong cycle will pair your selection to that cycle instead of the intended one.

Now with 2 (or more) cycles in the Cycle Compare folder (CEM 001) you can select the View button, and this will show the 2 (or more) cycles in the upper browser window.

The cycles will be displayed layered one atop of the other. Hovering over a bar will reveal the details of the cycle. On the left hand side, it will display the cycle information of the cycles selected and stored in the Cycle Compare Collection. To exit this mode, you can select from one of the Cycle View buttons to the right of the window, such as Heartbeat and Sequence views buttons.
## Zoom Feature

While viewing the cycles in this cycle compare window, you can zoom in to a collection by click and holding, then drag the zoom selection area over your intended cycles. The selected area will be highlighted, then Update to a zoomed in view on your selection.

**NOTE:** The zoom selection area is highlighted with a deeper color.

Click the Reset Zoom button to return to original display size.
Deleting a Cycle

From the Cycle Compare Window, select a single cycle from the list in the Cycle Compare window and select the **Delete Cycle** button to delete the cycle selected.

The Cycle Compare window will update to show the Collection Folder CEM 001 and the unselected cycle.

In the event that you deleted a cycle in favor of a different one, you can close the Cycle Compare window and select a different cycle to compare with the remaining cycle. Click on a new cycle in the History View Panel, then click the yellow Cycle Compare button to open the Cycle Compare Collection. Click on the cycle that you want to compare, then click the Save to Collection button. See *Adding More Cycles*. 

**The unselected cycle will remain in the collection.**
Deleting a Collection

Select a Collection Folder from the list in the Cycle Compare window, then select the **Delete Collection** button to delete the folder and the cycles in it.

**SPECIAL NOTE:**

Though the data for the cycle and collection have been deleted, it still can be viewed if you have not *closed* the Envision Browser or *navigated* to another collection.

Simply click on the Teal colored cycle compare button under the Heartbeat and Sequence buttons. This will reopen the last cycle compare set that was previously viewed before.
Cycle Toggle Feature

When viewing the Cycle Compare Browser with multiple cycles, it is possible to remove the cycle data from the present Compare window. With two or more cycles displayed, you can click on the left hand side of the window, and select from the cycle information area. Click on any one or more of the Cycle Information tiles to remove from the Cycle Compare browser area. Click on it again to add it back to the browser.

The first cycle will be on the top in the left hand side information window, and will be on the bottom bar on the Compare Cycle Window.

Clicking on the Cycle Information tile will toggle to deselect or select a cycle.

Note: This is only for the cycles that were selected and saved to the collection. You can add additional cycles if needed.
Reference

Cycle Compare (Collection) Window

Adding Addition Cycles
Notes

Within Cycle View browser, there is a button you can use to make notes about the object.

Opening Notes

Simply **Click** on the Notes button and a window will open labeled Cycle Notes. It will offer you a few options to choose from. There are Select Common Notes, Enter Custom Note, and View Notes.

The Select Common Notes, displays a list of the Notes in the current selection or where you are in the cycle view browser.

The **Enter Custom Note**, will allow you to input a note into the Notes database. Simply, **Click** on the Category space to reveal a drop down menu with choices. Select the proper Sub Category (Other in this example), then fill in your comments in the Comments section provided. When you are finished, **Click Save** to hold the position, or **x Close**.

The **View Notes** tab will let you view the active notes where you are viewing. The Note button will have a red circle with a number in it (number of active Notes). When you click on the Notes button, click the View Notes to display the active notes.
Cycle History

Overview

Cycle history can be used to identify areas of concern quickly. Located on the bottom of the cycle browser, the cycle history window shows the cycles of an object in sequence across a preset date range.

- Color Code
- Location
- History Filter Option
- Export Last 1000 Cycles to xls
- Cycle Date Options
- Cycle History View Types
- Cycle View History Reference Sheet
- Cycle History Day View
- Cycle History Higher Level View
Color Code

The history module provides performance history for any selected objects. Each cycle's object status is indicated by a color code:

<table>
<thead>
<tr>
<th>Color</th>
<th>Name</th>
<th>Usage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Toggle Filter Good</td>
<td>Normal, Optimum Performing Range</td>
</tr>
<tr>
<td>2</td>
<td>Toggle Filter Watch</td>
<td>Watch, Not Optimum but Within Defined Tolerance Window</td>
</tr>
<tr>
<td>3</td>
<td>Toggle Filter Warning</td>
<td>Warning, Outside Defined Tolerance Window</td>
</tr>
<tr>
<td>4</td>
<td>Toggle Filter Fault</td>
<td>FAULT</td>
</tr>
<tr>
<td>5</td>
<td>Toggle Filter</td>
<td>Missing Data due to Stoppage or Missing Input / Output</td>
</tr>
<tr>
<td>6</td>
<td></td>
<td>Design Time Line Color, The Optimum Value</td>
</tr>
<tr>
<td>7</td>
<td></td>
<td>Object is inactive or actual cycle length is zero</td>
</tr>
<tr>
<td>8</td>
<td></td>
<td>Selected Object or Cycle</td>
</tr>
</tbody>
</table>
Location

Make sure you have the **Cycle view** tab selected on the ENVISION top menu:

Use the Main Tree navigate to the object you would like to view for cycle information.

Selecting your object will launch the cycle browser. The cycle history module is located in the bottom portion of the cycle browser.
History Filter Options

A list of cycle history options highlighted in Red, is located in the top right corner of the bottom window.

Column Chart

User Parameter

Toggles to suppress the kind of cycles selected. Good, Watch, Warning, Fault and Missing.

Toggle Trend Line

Bar Chart

Table View in New Window

Export to Last 1000 cycles to Excel

Collapse the History Display Panel

**Column Chart** – The Cycle History Panel contains a color-coded graph that indicates cycle statuses for a selected object over a period of time. This is showing the last 100 cycles.
Bar Chart is a bar style color coded graph that shows the actual timeline of the object in progress. It shows a visual representation of the uptime and downtime.

Parameter History
This displays the Parameter History data in a window within the cycle browser to view. It shows the Parameter and the Value History. This will display within the cycle browser window.

Table View in New Window
This displays a new window with the cycle parameters in a separate window. This window can be moved out of the cycle browsers window so it can be view on a separate monitor if needed.
Export last 1000 Cycles to Excel

This displays a spreadsheet program to view data. Export last 1000 Cycles to Excel.

From the Cycle Browser screen, you can select the .xls button to Export the last 1000 Cycles to Excel. This opens a spreadsheet program to view and plot data.

Click on the .xls button and History Export window will open so that you can figure what you want on your report.

First, set the date range by Clicking on the edit box. A calendar will appear. Click on date on the calendar to set the start date. Click again to set the end date. You can also use the presets at the bottom of the calendar window. Check off any of the statuses that you want to omit from your excel report. Check off any Tags you want to omit from your report. When you are done setting up the excel report, Click the Export button.
The History Report window will disappear and you’ll receive a Notice in a green window that will let you know that it may take several minutes and it will notify you when the download is complete, with another small green window. The download tab at the bottom left of the browser will open and start downloading. When it is finished, **Click** on the pull down tab to reveal the menu. Chose Open, this will open an excel file with the data configuration that was selected.

An excel document will now open with the data selected. It can now be viewed, plotted, and sent as needed. The file is in your Downloads folder.
- **Toggle Filter Good** – Toggle this filter to suppress Good data cycles
- **Toggle Filter Watch** – Toggle this filter to suppress Watch data cycles
- **Toggle Filter Warning** – Toggle this filter to suppress Warning data cycles
- **Toggle Filter Fault** – Toggle this filter to suppress Fault data cycles
- **Toggle Filter Missing** – Toggle this filter to view Missing data cycles
- **Toggle Trend Line** – This turns on a trend line in the lower graph in Column chart view only.

**Collapse Table** – This button will collapse the graph or table in the lower Cycle browser window. When it’s collapsed, hovering over the icon will restore the graph temporarily, until the cursor is moved off the lower graph, then it will collapse again. **Click** on the icon again to leave it up.
Cycle Date Options

A list of cycle date options, is located in the top left corner of the bottom graph window.
You can also select the date tab on the left to access open a new graph chart, **Click** on the date range and a calendar will open that can be used to view any date range (Custom Range View).

Select the date range you desire and click the **Submit** button to reload the browser with the selected Data Ranges.

Click on the Date Range display to open a Selection Calendar.

Simply select the year, month, and date in the Custom Range view, to be included in the range, by using the drop down tabs on the calendar. Other options are available as well. By selecting the **Last 7 days, 30 days, This Month, and Last month**, this will open another Graphic chart in the window that will display the selection chosen.
Simply select the year, month, and date in the **Custom Range view**, to be included in the range, by using the drop down tabs on the calendar. Other options are available as well. By selecting the **Last 7 days, 30 days, This Month, and Last month**, this will open another Graphic chart in the window that will display the selection chosen:

After submitting the selected Date Range this will open another Graphic chart in the middle of the Cycle Browser Window. This will display a selection of the dates you picked.
Cycle History View types

There are 4 different view types in the cycle history options tab. In all 4 views, you can Click on the green object area to view data for that cycle as well as the Table in the New Window. The Table in the New Window button is located on the history menu to the left of the other 3 buttons. The content in the upper browser window will update to the selected cycle or point.

History View – Shows the last 100 cycles for a selected object.

Model View – Shows the variances for each cycle.

Table View – Opens a scrollable table where the graph was.
Table View in New Window – Opens a table of parameters in a New Window.

<table>
<thead>
<tr>
<th>Cycle Len...</th>
<th>Baseline</th>
<th>Model</th>
<th>Cycle#</th>
<th>Pallet</th>
<th>PartNumber</th>
<th>DateStamp</th>
</tr>
</thead>
<tbody>
<tr>
<td>130.43</td>
<td></td>
<td>Model Test 6 OPTION: 2</td>
<td>35055371045...</td>
<td>35</td>
<td>315</td>
<td>11/04/2016 1:39:18 pm</td>
</tr>
<tr>
<td>130.44</td>
<td></td>
<td>Model Test 1 OPTION: 2</td>
<td>35056371047...</td>
<td>36</td>
<td>316</td>
<td>11/04/2016 1:39:45 pm</td>
</tr>
<tr>
<td>130.45</td>
<td></td>
<td>Model Test 1 OPTION: 2</td>
<td>35057371050...</td>
<td>37</td>
<td>317</td>
<td>11/04/2016 1:40:13 pm</td>
</tr>
<tr>
<td>130.54</td>
<td></td>
<td>Model Test 6 OPTION: 2</td>
<td>35058371064...</td>
<td>38</td>
<td>318</td>
<td>11/04/2016 1:42:29 pm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Model Test 1 OPTION: 2</td>
<td>35059371067...</td>
<td>39</td>
<td>319</td>
<td>11/04/2016 1:42:56 pm</td>
</tr>
</tbody>
</table>
Cycle View History Reference sheet 1

**View Type / Description**

- **History View**: Each bar represents a cycle for the selected process.
- **Model View**: See variances for each cycle.
- **Table View**: Data for each cycle presented in a table.
- **Table View In New Window**: Printable pop-out window with a version of the cycle table.
Table View in the New Window

Once a window is opened, it can be viewed on a separate monitor if needed. The new window view also can group data by column. Simply **Click** and hold on the column desired, then drag it up to the bar above the columns to group by columns.

The table will update to represent the parameters by the group selected (PartNumber). Add more groups to sort even further for more accuracy.

At any time, you can **Click** on any of the parameters on the table and it will update the graphs in the Cycle View Window. **Click** on the **X** of the groups selected to remove the group if desired. This will update the window to the active groups.
Cycle History Day View

Use the date panel in the cycle history browser to access the day view for your object. Or **Click** forward or backward to get to the date desired.

Selecting either the "yesterday" or "today" tab will reveal an hourly view for that day in your cycle history browser. Simply select the hour you would like to see a cycle breakdown for:

Doing so will reveal a graph (Hour View) with bars representing each cycle in the selected hour. Roll the mouse pointer over single bar for more information on that cycle:

Selecting the **Show Day View** tab, from the top menu will reveal history day view variance data:
Cycle History Higher Level View

You can view cycle history for objects at levels higher than asset or group. Simply **Click** any folder or labeled object above the asset or group level in the main tree.

Doing so will reveal a history graph indicating the status percentage of the object day-by-day.

You can also select the **State Duration tab** in the top right corner to see a graph indicating how long the object was in the fault, blocked, and starved states, day-by-day:
Production Counts in a New Window

Opening the Production Counts

To open the Production Counts in a new window, go to the upper right hand side of the Cycle View Browser. Click on it and it will open a new window with a Parameters window within it.
Parameters Window

In the parameters window is where you configure the data you would like to view. They are Date Range, Efficiency, Select Area, and Hourly Target Rounding.

Select Date Range

To start, input a date range by clicking on the Select Date Range edit box. This action will reveal a calendar set that will allow you to select a date range. Click once to select the starting or end date. Click again on a date before or after to include the days in between your selections.

Your selected date range will appear in the edit box and above the calendar selection widget. When your date range is correctly configured, click on the Close button to continue.

Efficiency

The Efficiency parameter is set at a default value. If it is not what is desired, then it can be changed simply by selecting within the edit box and changing it to the desired value.
Select Area

Click on the edit box to reveal a drop down menu. In the drop down menu, will be the areas that are currently present in the Envision. Select the correct area you would like to view.

Hourly Target Rounding

The Hourly Target Rounding feature allows you to Round Down or Round to the nearest whole number. Simply select one of the choices:

When all items are complete, check over your inputted values. If everything is as you desire, the click the _Save_ button.

Change Parameters

If changes in the parameters entered are needed, then simply click the _Change Parameters_ button to re open the Parameters window. Make your changes then click _Save_ button to re-save.

Reporting

Click the yellow _Print_ button to download the result to an xls format.
Dashboard Overview

When you log into Envision, you will be greeted by the dashboard screen. There are several graphs available that provide critical object data in the Dashboard panel. You can navigate up or Down the Object Tree by using the Object Tree Icon or by utilizing the Object String next to it. A drop down menu will appear if you hover over the Object Labels.
Dashboard Item and Description

1. **Navigation Panel**: The main panel used to navigate the Envision interface.

2. **Child History Table**: A quick overview of the cycle performance of your main factory zones.

3. **Offload Efficiency Table**: Lets you know how efficiently cycles are being completed.

4. **OEE Chart**: A chart that quickly visualizes OEE data calculated automatically by Envision.

5. **Cycle Status Graph**: Visualize how cycle time is trending.

6. **Notes Panel**: Contains user created notes that are attached to specific machine processes. Can also be found in the notes section.

7. **State Duration Graph**: Visualize how often shifts were in certain states.

8. **Fault Table**: Visualizes what objects have most recently recorded a fault.

9. **Hotspots Panel**: Visualizes which objects have accumulated the most faults in a predetermined time-frame.
Hotspots

- Navigation
- Hotspot Options
- Hotspot Views
- Count/Accumulation
- Pallet Breakdown
- Model Breakdown

Overview

The Hotspot module displays the list of motions that accumulate the variances over a period of time. It also shows the number of occurrences each day that contributed to the accumulated variances. ENVISION only uses non-faulted cycles for the hotspots calculation. This module shows the accumulated effects of minor variances in certain motions that can cause significant production loss (leakage) over time. For example, for a 60 second cycle time machine, a one second delay in one motion will cause approximately one part per hour production leakage.

Navigation

Use the Main Tree to navigate to the objects you want to view a hotspot report on.

Once you have chosen your object, Click on the Hotspot tab from the top menu.
The module will launch after selecting the **Hotspot** tab. Each colored box in the module represents the number of over cycle Occurrences that occurred for the object in a given hour on a given day (View shown below). The number in each cell represents the number of occurrences in that particular hour span.

**Hotspot Options**

**Set Date Range**

You can select the date range you would like for the hotspot module using the dropdown calendar located in the upper left corner.
Variance

Use the **Variance Accumulation** tab located in the right corner of the module for the variance view. In the Variance view, the module lets you see the amount of over cycle variance for each hour (in Minutes) of your object cycle.

**Hour Detail**

By **Clicking** on any of the individual cells in the hotspot module, you can access a more detailed breakdown of over cycle processes in that hour. The number **29** represents the Over cycle occurrences for that hour.
By selecting the Hour \textbf{29} on the figure above, this will display a detailed table revealing a comprehensive breakdown of processes that contributed to the accumulated over cycle time for that hour selected. Hovering over the bar will display the data for your selection.

\textit{Clicking} on the object bar will display a table of object data that may be grouped by dragging a column header to the top line.

The \textbf{View Cycle} button will open a new browser window with the object data for that selected cycle object.
Hotspot Views

In the top right corner of the hotspot module are options for other table views you can access.

**Timeline**—The default view in the Hotspot module. A graph showing the total over cycle accumulation for each object.
Count/Accumulation
This tab shows the Variance Accumulation (in minutes) as well as the Overcycle Occurrences from a specific dates selected to view. This data can be exported to excel. Click the yellow button to and it will start a download to an excel file. A tab will open on the bottom left side of the browser. Open to view, plot, and send the excel data.

Pallet Breakdown
This reveals a graph showing which AGVs (carriers) contributed to your over cycle accumulation.

Model Breakdown
This reveals a graph of Occurrences and Variance based upon Model Type.
Notes

Overview

The Envision notes panel allows users to input descriptions about any given cycle they wish. This is a practical and convenient method of communicating issues as they happen across an assembly plant. Notes that have inputted at any time are persistently available to be viewed by authorized users.
Scheduling

The scheduling menu allows you to setup and configure a schedule for multiple shifts. It also will allow you to schedule Non-Production Events, such as Preventative Maintenance, Breaks, and other reasons for a scheduled shutdown.

Navigating

On the opening screen, select the calendar icon in the upper left corner of the Envision browser.

- Navigating
- Scheduling Configuration
- Non-Production Event
- Extend Shifts
- Deleting Shifts

Scheduling Configuration

Start by selecting a day on the calendar. By selecting a date on the calendar, the area to the right of the calendar will now reveal the Create Shift Menu. From here you can enter the name of the shift, which shift (if multiple shifts are present), Start time, and End time.
Enter the name of the Shift (Red). Some shifts have 2 or more other shifts so you can enter which shift it is by labeling them Crew A and B or 1, 2, and 3. Enter the Start Time for the shift by Clicking inside the edit box. This will open a time clock menu. Click on the Hour to set the Hour, then Click on the minutes. Select A.M. or P.M., then Click Save when you are done.

We have selected a Start time of 3:00 P.M. and an End time of 11:00 P.M.
Non-Production Event

During a shift, it may be necessary to have a scheduled shutdown for Preventative Maintenance, Breaks, or a Shift change. For that, we have an area to input a Non-Production Event.

To set this up, start by Clicking in the box under the NPE. Input the Name/Reason in that Edit box. Click in the Start time box to open a Time Clock Menu. Use this to input the Start Time for the event. Now input the End time. Verify after inputting the times, that the correct time to the right of the Start and End time is correct at intended. If not, you can simply select the delete button or make a correction to either. Select the Planned Schedule to make this repeat for all the shift’s select. Set the Cycle Speed Factor if it isn’t already set to specification. Now select the Repeat Shift checkbox if you would like to add duplicate shifts throughout the week.

After checking the Repeat shift box, a Repeat Until edit box and a weekday selection menu will appear. Use the Calendar to select the date that you to repeat the weekly schedule. This will repeat until the date you select. Now select the days that you would like to repeat on the Weekday Selection menu.
Check over the information you have inputted in this configuration menu. If everything is correct, select **Save** to continue.

The page will update and look similar to this. The calendar will show the shifts, and the area next to the calendar will now have an Edit Red shift window. Also, at the bottom, you now have an option to Extend to future shifts.

Check over the information you inputted and click **Save** when finished.
Extend Shifts

After selecting **Save**, more options will reveal. The **Apply to Future shift's** check box will appear. Check off the **Extend** button to open an **Extend until**: edit box. Input the data you would like to extend the shifts until. Select the days, then **Click Save**.
Deleting Shifts

The Scheduling module also allows you to delete a shift or All (Future) shifts. To Delete a shift, Click on the shift name on the calendar, then select Delete Shift. You can Delete All Shifts (Future) by Clicking on a shift on the calendar, then Click this button. All future shifts will be deleted.

To Delete a shift, click on the shift name on the calendar, the select Delete Shift.
Production Monitor

Overview

The Production Monitor is a browser that can provide a quick live report on plant productions. The Production Monitor can display data for the entire plant, including overcycle time in accumulated events, production data for each zone hour by hour or by a selected shift.

- Location
- Select Historical Shift
- Change Object
- Alternate Navigational options
- Hour View and Shift View
- Rollup Hotspots
- Filters
- Production Lost
- Buttons and Descriptions
- Reporting
- Screen Print
- Over Cycle (Last 50000) and Over Cycle (Selected Shift)
- Top Assets by Groupleader, Station, and Top 3
- Top 3 Pallets (AVG)
**Location**

The Production Monitor button is located in the upper right hand corner of the Envision Browser window highlighted in red.

Once selected, it will open a new window with the Production monitor. In this new window, there will be an Objects window for you to navigate to the object you desire.

Click through the Objects string to get to the object desired. Once you have revealed the level desired, then Click on the **Save** button. This will open a new Browser. This Production Browser can be opened in levels from **AREA, LINE, STATION,** to **ASSET.**

A browser window will open to the location selected. The Production Monitor will default to the current day or shift. If there is not any data for current shift, it may be necessary to look back into the past for data. This module works with current data and historical data.
Select Historical Shift

This opens and displays a Previous Shifts window that will allow you to choose from the Current Shift all the way to the last few months. To view a specified date, scroll down to the date, and shift desired and Click on it. This will re-open the window (at the same level) of the day and shift selected.

Once the browser is open to the location desired, an alternate way to navigate to a higher or lower object can be done either by selecting the Change Object Icon, Object Labels, or the Object String Tab.
Change Object

This displays a window to navigate up or down an Object Tree. **Click** on the Object in the white part of the window:

- Sta 1
- Sta 2
- Sta 3

to navigate down the object tree.

OR

**Click** in an Object in the black portion of the Object window;

- Simulation > Test Area > Test Line 2 Copy >

to navigate Upward to an Object desired. **Click** the Save button to open the objects below the selected object.

Alternate Navigational options

There are additional ways to navigate to a higher level or drill down to a lower level object, by using the Object Title Label, or the Object String on the top left hand side of the Production Monitor Browser.

**Clicking** on the Object Title Label 1 of the upper graph will open a new Production Monitor window with a new graph of the objects below the selection.

**Clicking** on the Object String 2 at the top of the browser. Doing this will open a new browser with a higher level Object.
Navigating by Object Title

The titles on the upper portion of the Production monitors are active links to the next level below the current object being viewed.

Clicking on the S01 Fixture will reopen the window that selected level. You can drill down to the Asset level.
Navigating to a Higher Level

To navigate to a level higher than your current location, you can utilize the Object String (address) on the top of the Production Monitor browser.

Clicking on the Test Line 2 Copy will reopen the PM browser to that level as seen below.
Hour View and Shift View

After selecting location from the Object Tree a browser will open. These examples show the Hour View and Shift view side by side. In the lower part of the browser is the lower graph in a Rollup Hotspots View ON and OFF.

The Shift View shows the bars separated by it’s classifications and color coding. They are yellow for Starved, orange for Overcycle, and blue for Blocked.

In the Hour view, the bars are separated by the 13 hours. The classification are used in stacked style bars.

Hovering over the bars with the cursor will reveal the details of the cycles.
Rollup Hotspots

The Rollup Hotspots button will take the top 10 variances, will roll the group object displayed into the Assets in a display.
Filters

The Filters tab allows the user to select and sort by Classification. It also will let you select a checkbox for Bottle Neck and to Disable PM visibility, as well as allowing you to set the number of Top Hotspots.

The Filter tab is located on the upper right hand corner of the Production Monitor browser.

Filter Options Selection Window

The Filter Options window allows you to set up the displaying of data in 3 ways.

It will allow you to pick and choose the Object Classifications you would like to see. Simply click on one of the classifications, and it will highlight in green when it is select.

You can select if you would like to view Bottle Necks and Disable PM Visibility, simply by checking off a box next to each option.

You can set the amount of Top Hotspots you would like to view in the Production Monitor, simply by using the slider to select between 1 and 10 Top Hotspots.

Finally, you can set the amount of Top Hotspots you would like to view in the Production Monitor, simply by using the slider to select between 1 and 10 Top Hotspots.

When all your filter options are configured, select the Save button to complete your configuration setup.
Production Lost

When the **Production Lost** button is selected, the browser window will open to a similar window as previous, however, the bottom graph will change the scale and will have the total Units lost presented. In the upper graph, it looks similar Minutes (mode/default), but the Minutes and Units will be reversed.
Reference Sheet

**Change Object**
This opens and displays a window to navigate Up or Down the Object Tree. Click on the "Up" section to move Up or click on the "Down" section to move down the Object Tree. After the destination is reached, click the "Go To" button to proceed to that Object.

**Objects**
- Transmission Plant
- FWD TRANSMISSION
- Black
- OPP 1.ZONE

**Hour**
Displays Object data, Hour by Hour.

**Shift**
Displays Objects data in a 10-hour shift.

**Minutes**
Displays Object data in Minutes and Units in the upper graph in the browser.

**Production Lost**
Displays the number of Units lost. The Minutes data is displayed as well under the Units.

**Trend**
Trends button displays a Green trend line on the upper graph in the Hour by Hour Mode only.

**Select Historical Shift**
This displays a window of the last few months. To view a specified date, click on the date, shift, and the browser will refresh with the date selected.

**Previous Shifts**

<table>
<thead>
<tr>
<th>Day/Week</th>
<th>Date</th>
<th>Shift/Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday</td>
<td>12/5/2015</td>
<td>Day</td>
</tr>
<tr>
<td>Tuesday</td>
<td>12/6/2015</td>
<td>Day</td>
</tr>
<tr>
<td>Wednesday</td>
<td>12/7/2015</td>
<td>Day</td>
</tr>
<tr>
<td>Thursday</td>
<td>12/8/2015</td>
<td>Day</td>
</tr>
</tbody>
</table>

**Rollup Hotspots**
This button will group all the objects and display them in their own groups by station, instead of showing the top 10 accumulations.

**Starved**
The Object is waiting for the next part to start working.

**Overcycle**
A cycle that is outside the tolerance range of the cycle time for that object.

**Blocked**
An Object that is in a blocked state. The Object completes its work and is waiting for downstream Objects to finish so the finished part can move out of the Object.

**Reporting**
This displays a window with a selection of Report to view by Preview, Excel, or PDF. Click on the selection under reports, then choose the option to view.
Buttons and Descriptions

**Hour**
Displays Object data, Hour by Hour.

**Shift**
Displays Objects data in a 10-hour shift.

**Minutes**
Displays Object data in Minutes and Units in the upper graph in the browser.

**Production Lost**
Displays the number of Units lost. The Minutes data is displayed as well under the Units.

**Trend**
Trends button displays a trend line on the upper graph in the Hour by Hour Mode only.

**Rollup Hotspots**
This button will group all the objects and display them in their own groups by station, instead of showing the top 10 accumulations.

This Icon displays a window with a Table of Recorded Overcycles.

This Icon displays a window to view Notes that were taken on the Object cycle. The number indicates how many notes have been taken on that object.

**Starved**
The Object is waiting for the next part to start working.

**Overcycle**
A cycle that is outside the tolerance range of the cycle time for that object.

**Blocked**
An Object that is in a blocked state. The Object completes its work and is waiting for downstream Objects to finish so the finished part can move out of the Object.
Reference Sheet 2

Selecting **Hour** shows the data based upon an 10 hour shift in the upper graph and show the Variance Accumulations in Minutes (occ) in the lower graph.

Selecting **Shift** will show the data based upon the whole shift in the upper graph. The lower graph will be the same as Hour mode.

The **F** opens a table of the recorded overcycles.

Breakdown for 948TE T/L-F LOOP 1 ZONE 3 (Night Shift 10/26/2015)

948TE T/L-F LOOP 1 ZONE 3 1/2/15 0:30:00 35.62 min 35.38 min

948TE T/L-F LOOP 1 ZONE 3 1/2/15 0:30:00 35.62 min 35.38 min

948TE T/L-F LOOP 1 ZONE 3 1/2/15 0:30:00 35.62 min 35.38 min

948TE T/L-F LOOP 1 ZONE 3 1/2/15 0:30:00 35.62 min 35.38 min

Selecting **Historical Shift**

This opens a window of the last 30 days. To view a specified date, click on a date, with a choice of Day or Night shift and the browser will refresh with the date selected.

Change **Object**

This opens a window to navigate Up or Down the Object Tree. Click **Save** to open the browser to the desired location of the Object Tree.

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Reporting

This displays a window with a selection of Report to view by Preview, Excel, or PDF. Click on the selection under reports, then choose the option to view.

When the Reporting Button is selected, a window will open with a menu in the upper left hand corner. There are 7 choices of ways to view object data.
Screen Print
Select Screen print will copy the current browser window and open it in a PNG format.

At the bottom left hand corner, a tab will open to view the .png file.

Select Open, and it will open a window to view the Screen Print. The background will be a lighter shade for printing and displaying.
Over Cycle (Last 50000) and Over Cycle (Selected Shift)

Both Over Cycle (Last 50000) and Over Cycle (Selected Shift) work the same way to download to an Excel file for viewing.

Selecting the Excel button will download the data to an excel spreadsheet.

![Excel Download Example]
Top Assets by Groupleader, Station, and Top 3

All 3 have the same 3 view options to choose from. Selecting preview will open a preview window within the reporting window. Choosing Excel or PDF will download and open the object data to the chosen format.
Top 3 Pallets (AVG)

This opens a window with a drop down to select the date. It also has the choices of Preview, Excel, and PDF. Preview is shown in this example.
Reporting and Dashboard

Overview

Reporting and Dashboard modules are features of Envision that allows a user to design, personalize, setup, and configure customized reports. You can also have it send reports at specific times and choices of reports.

Opening the Module

Open the Envision browser. In the upper right hand corner, select the BI button. This will open the Starting page menu. From there, is a side menu with a Report Tab and a Dashboard Tab. In the main window, there is a menu that consists of a list of previously designed report templates, that can be sorted or filtered based upon category.
The Reports page has a list of previously configured report ready to be utilized. You can create and design a new report to suit your needs. To use an already configured report, select the **Run** button (green) and it will open the setup window for the configured report selected. To open the Edit report window, select the (yellow) **Edit Report** button to open the reports editing window. To delete a report template, select the **Delete** button (red), and this will delete the report template selected. You can make a copy of a report by selecting the **Copy** button (black), and this will create another copy to use. To subscribe to a report, select the (blue) **Subscribe** button.
Reports

- Creating a New Report
- Report Editor
- Configuration Menu Panel
- Properties
- Formatting Rules
- Field List
- Report Explorer

Creating a New Report

Click on the [Create New] tab to open the Create New Report information window. In this window you can input the necessary information needed to create a report template. Input the Name of the report, then the Description which appears under the name of the report on the Report List Window. Select the appropriate category for the report. Choose the orientation of the report, to choose Portrait or Landscape (default is Landscape).

After selecting [Save] on the Create New Report information window, Report Editor Board window will appear. From here, you can setup, configure, and populate the report with the necessary information that you desire.

After the data in inputted on the Create New Report information window. The Report List window will be shown if you select the [All] on the Report Menu.

Note: As you can see the Name and the Description is under it in smaller fonts.
Report Editor Board

The Upper menu consist of typical commands common to a windows program. On the left side is the types of objects to install on the **Report Editor board**. Once an object is placed on the **Report Editor board**, they can be configured by using the menu on the right hand side of the window. In default, the configuration menu pane is open. If not **Click** on the arrow in the top left hand corner to reveal the configuration menu pane.

Report Explorer

This is a table of all the Object and functions available based upon what you select to be displayed in the Report Editor Board.
Configuration Menu Panel

Overview

The Configuration Menu Panel is separated into three parts needed to setup and configure the parameters installed in the Editor/Designer window. They are Properties, Field List, and Report Explorer.

Properties

The Properties are, Actions, Styles, Appearance, Behavior, Data, Design, Navigation, Layout and Page Settings. Each of these can open up to reveal many different options depending upon what object parameter is chosen. In other words, there are different options for different types of parameters. Not all parameters use all the same Properties Parameters.

ACTIONS

Select an Object on the Editor Board (example below: [assetname]). Once the object is selected, the Properties Menu will update to include the data, setup and information on the selected object. On the Properties menu you can change, configure, and view the setup information for that item.

Areas of the Report Editor Board can be collapse to hide or temporarily remove from view until restored. Simply double Click on the Header of the area you would like to collapse. Double Click again to restore the collapsed are back to open.
All the data pertaining to the object selected will be in the Properties Menu area. The ACTION Menu has several configuration and data that can be inputted based upon needs. To the right of every parameter is a small button. When this button is highlighted (light or darkened), that shows that there is data for this parameter and is in use. You can **Click** it and it will reveal a dialog box that will offer you a choice to **Reset** the parameter. If the button is not highlighted, you may input data to configure the object selected.

Select an object `[assetname]` on the **Detail1** area. When selected, the Priorities Menu to the right will update the **ACTION** Tab to the object selected.

Double click on the **Area Header** to collapse the **Page area**. The area will then have a label (**BOTTOMMARGIN1**).

The **Text** will read `label4` in the edit box.

The **DATA BINDING** will show the actual Object Select and that has been tasked to that position.

Click on this to open a window to reset the parameter. This button is to reset the object. It is highlighted when an object is data present.
STYLES

Styles controls the formatting of the selected object. To start formatting, double Click the Styles drop down. There it will offer you a few choices. You can Create a new style by selecting the Create New Style tab or select the xrControlStyle1. If you selected the Create New Style, then it will initially name it xrControStyle2. Either way, they both can be renamed easily as needed.

Now that it is selected, you can go through each item and customize it to your needs. In this example, we selected xrControlStyle1. This will read in the EVEN STYLE box. To do this, Click on the EVEN (ODD or STYLE) STYLE drop down to open the STYLE Configuration menu.

In the Name box you can personalize the object by naming it, otherwise it will default to the system name xrControlStyle1. Click on the FONT drop down to reveal the editing menu for Font Name, Size and Unit. It also has a tab for formatting using Bold, Italic, Underline and Strikethrough.

PADDING controls how much space you would have around the object selected. Click on the drop down to reveal the setting for the objects border.

Color Design of the object is controlled by the next group of parameters. You can choose the colors of the Background, Foreground, and the border. You can also choose the style (line, slash, dotted) of border you need, with the width at your control.
All these configuration can be done for the **ODD STYLE** and **STYLES**. Other types of objects will have similar configuration and different ones.
Appearance controls the formatting of the selected object. To start formatting, double **Click** the Appearance drop down. There it will offer you a few choices to add to the appearance of the object selected. The choices are **Background Color**, **Border Color**, **Border Dash Style**, **Border Width**, **Foreground Color**, and **Text Alignment**. The **APPEARANCE** tab also contain Sub Menu Tabs for **FONT**, **PADDING**, and **FORMATTING RULES**.

Once an object is selected, you can go through each Tab in the Appearance Menu and customize the appearance to your needs.

**Background and Foreground Color**

The first tab is the Background Color. **Click** on the drop down, to open a color configuration window. In this window, First select the **Vertical Color selector** to choose the color you would like to create. Now, move the **Color Target Reticle** to the Hue you desire. Next, use the **Alpha slider** to set the opacity of the color of the object selected.

You can also manually input the color coding the **R**, **G**, and **B** if you have a specific color to match. Alpha can be set this way as well.

Once the color is correctly configured, you can **Click** **OK** to set the Background color to the object selected.
Border Color, BorderDash Style and Border Width

The Border Color Tab works the same as the Background Tab above it. Simply configure the color you would like the border to be.

The Border Dash Style is used by **Click** on the drop down to reveal the choices of several types of borders to choose from.

The Border Width is set by either **Clicking** up or down on the Border Width Tab. **Click** up to increase the width or down to decrease the width.

![Border Width Tab](image)

**FONT**

**Click** on the **FONT** drop down to reveal the editing menu for Font Name, Size and Unit. It also has a tab for formatting using Bold, Italic, Underline and Strikethrough.

![FONT Tab](image)

**PADDING**

This feature controls how much space you would have around the object selected. **Click** on the drop down to reveal the setting for the objects border.

![Padding Tab](image)
FORMATTING RULES

Formatting rules are used in conjunction with an object to change the output data of the object selected to increase or decrease the detail of the output data. You can type the expression manually or select functions, operators and operands using editor controls. Note that the Expression Editor supports numerous standard functions, allowing you to easily perform different **string**, **date-time**, **logical**, **aggregate**, and **math** operations over data.

[Image of Expression Editor interface]
Field List

The Field List has two choices, SqlDataSource and Parameters. Each of these can open up to reveal many different options depending upon what object parameter is chosen. Simply Click, hold, and drag the object over to the Editor Board and drop. Click on the object and go to Properties to configure.

SqlDataSource

There are four sections under the SqlDataSource Tab. They are Cycles, Hotspots, States, and Notes. Click on the drop down to reveal the objects under them. Once revealed, the objects now can be dragged and dropped onto the Report Editor Board.
Parameters

Under the Parameter label are **NumberDays** and **Baseline**. These are objects that can be dragged and dropped onto the Report Editor Board.
In these screenshot examples, we selected *assetname* under the cycle label. **Click** and hold, then drag it over to the appropriate place on the Reporting Editor Board.

**Click** on *assetname* under **Cycles**, then drag to the Reporting Editor Board and **Drop**.

**Click** on *NumberDays* under **Parameters**, then drag to the Reporting Editor Board and **Drop**.
Report Explorer

The Report Explorer is a tool that can allow you to view the data, character and information of the objects on the screen.

The Editing Board is separated into several different areas representing an area of a structured document report. From top to bottom from a default view, it starts with the Top Margin (1), Report Header (1), Detail (1), Report Footer (1), and Bottom Margin (1).

Some of these can be duplicated and added to the table for additional content if needed. For example, if you wanted a second Detail area, you can add it by Click on the Detail (1) area of the Editor board, then go over to the Report Explorer on the right menu and Click on Detail (1).

When you Click on it, a pencil icon will appear. Click on the pencil Icon and this will change the Report Explorer, to the Properties Menu. Under the Actions Tab, hover over the icons on the upper part of the menu until you reach the Detail Report Band. This will install another Detail Band below Detail (1) band. This one will be called DetailedReport (1), with Detail (2) below it. The same can be done for the other areas on the Report Editor Board.
While in the Report Explorer, you can view the data, character setup and status of the objects on the Editing board. Simply **click** on an object on the screen and right side menu will update to the object you’ve select. When an object is selected, the **Report** section if closed, will open and display the section where the object is located and the actual objects below it.

In the image below, this shows the objects and setup of the Report Editing Board. What you **click** on the Editing Board will be highlighted on the Report Explorer menu to the right.
Dashboard

Dashboard Reports

Open the Dashboard Reports by Clicking on the Dashboard Tab on the left hand side of the window. Once selected, it will reveal the Dashboard Reports Tab. Click on tab, and it will update the window to the right of the menu with a choice of preconfigured reports to utilize. Click on the thumbnail of the report to see a full sized, fully detailed report template. There is also an option to Install Desktop Dashboard Designer. The Desktop Dashboard Designer will be cover in another manual.

Select Run to open the displayed report. A window will open with the pre made template. Just navigate the Object Tree and select dates to view the data based on the premade Report.

Click the Subscribe button to open another window that you can Configure your Subscription.

The Category filter will separate the Report templates by category.
This is an example of a Report template from the Dashboard Report screen labeled as “States”. To close the displayed thumbnail, *Click off to the side* of this display sample to close it.

Below the thumbnail display is two buttons, *Run* and *Subscribe*. They are used to run the template or have the template sent to you.
Run

Selecting the Run button will open a Report Parameters window. This window configures and selects the data for the report. In this window, you have the options to set the date range, select an object from an object tree, and filter the report data by Status, Shift, Shift Crew and Classification.

Select a Date Range by clicking once on the start date, then click again on a later date. Click the close button when finished.

Menu Shortcuts

Click on the edit box of the Select Date Range, and a 2-month calendar will open. Choose the start date by Clicking on it, then Click again on the end date. This will highlight the date range you select. On the bottom of the 2-month menu, are some shortcuts that can be used as well.

This will sort the results by status of the cycles viewed.

Choose between Night and Day shifts.

A list of Shift Crews will be added to have a choice based upon how many shift they have.

Choose the Classification of object that is being selected.
Once the date ranges are set, you can now navigate to the object of your desire, by using the **Object Tree** located below the **Select Date Range** menu. **Click** on the \(+\) sign to reveal the object below the current selection. Once you reach the level intended, **Click** on the **Title (label)** desired. After it has been selected, you can also filter and/or sort the results of your report by utilizing the selection menus on the right hand side of the windows. You can sort by Status, Shift, Shift Crew, and Classification. These are optional. **Click** the **Save** button and the report window will launch and display the data based upon the report selected (or based upon how the report was setup).
After **Clicking** the **Save** button, the Dashboard will update the data to the template chosen as seen below.
Subscribe  

Overview

The Subscribe button opens a window to setup and configures a way to send reports via email automatically. Simply fill out all the fields and select the time you would like to receive the report. Once set, it will send a report of the time that was selected. The report you receive is for the time you specified.

Configuring Subscription

Select the drop down menu in the **Range** dialog box. It will reveal a range of choices. The choices in the drop down, with the letter “N”, when chosen, will open a dialog box under that will allow you to enter a number that represents the “N”. This allows you to specify an exact amount as opposed to Hour, Day, Week, or Month. In the example, 9 is selected, so the “Last N Days” will see it as the “Last 9 Days”.

N=The Number Entered in the Range* edit box (Enter number of days)
Next, below the Range field, navigate the **Object Tree** to go down to the object desired. You can also use the filters to the right of the Tree to sort and/or filter the object selection.

- **Status** - Select the status’s that you would like to view.
- **Shift** – Select the shift you would like to view.
- **Shift Crew** – Choose a crew if this field is populated by the users.
- **Classification** – Choose which classification to view.
- **Recipients** – Enter an email address of the Recipients that you want to send the Dashboard report to.
Setting up the Subscriptions

Select the day and hour when you would like to receive the report. **Click** on a cell and it will reveal a timestamp highlighted in green. The time stamps are hourly but can be edited to make and send a report at a specific time. After selecting a time, enter the specific minutes you would like to select. When finished, check over all fields, then select the **Save** button. From this example, the recipient of this subscription will receive reports on Monday at 5:00 a.m., Tuesday at 6:00 a.m., and Wednesday at 7:15 a.m.

[Diagram showing how to set up subscriptions with timestamps and selecting the save button.]
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All legal actions against Beet Analytics Technology must be filed with the appropriate judicial jurisdiction within two (2) years after the cause of action has arisen.

7. Term and Termination

7.1 Term: This EULA shall come into force on the Effective Date and shall remain in full force and effect for a period of three (3) years from its Effective Date, unless terminated earlier as provided hereunder. Each Affiliate Participation Agreement shall expire concurrently with the EULA, unless terminated earlier in accordance with the provisions herein.

7.2 Termination of the EULA
   a) Material Breach. Either Beet Analytics Technology or Licensee may terminate this EULA and/or any licenses granted under this EULA, if the other is in material breach of any of its obligations and has failed to remedy such breach within thirty (30) days of receipt of written notice.
   b) For Convenience. Licensee may terminate any license to any Licensed Software by providing written notice to Beet Analytics Technology. Such notice may be provided at any time for perpetual licenses. Notices for term licenses shall be provided sixty (60) days prior to the Anniversary Date of the License. Licensee shall not be entitled to any refund or credit for termination of a license for any reason.

7.3 Effect of Termination of the EULA
   a) Effect of Termination of the EULA for Non-Payment. If this EULA is terminated by Beet Analytics Technology for breach by Licensee of its payment obligations, termination of this EULA shall also result in the termination of (i) Licensee's rights to use any licenses for which payment has not been made; (ii) the right of Licensee and (iii) Licensee's right to submit any further Ordering Documents under this EULA. All licenses for which Licensee is not in breach of its obligations shall remain in full force and effect.
   b) Effect of Termination of the EULA for Other Breach. If this EULA is terminated by Beet Analytics Technology for material breach by Licensee of any other obligations hereunder, termination of this EULA shall also result in the termination of Licensee's rights to use all Licensed Software ordered hereunder.

7.4 Effect on Licensed Software of Termination or Expiration of the EULA and/or Affiliate Participation Agreement Upon expiration or termination of this EULA and/or any Affiliate Participation Agreement or any licenses granted hereunder as a result of Licensee's uncured
material breach or by Licensee for convenience, Licensee shall immediately destroy or return all copies of the terminated or expired Licensed Software and associated Documentation in their entirety, and duly certify the same in writing to Beet Analytics Technology. Expiration or termination of this EULA and/or any Affiliate Participation Agreement or any license shall not relieve Licensee of its obligation to pay all fees that have accrued or are otherwise owed by Licensee under any Ordering Document. The expiration or termination will not prejudice the rights and remedies of the non-breaching parties.

7.5 Termination of Software Maintenance Services

a) By Licensee: Licensee may terminate Software Maintenance Services for a Licensed Software subject to the following conditions: (i) Licensee notifies Beet Analytics Technology with at least sixty (60) days prior notice, and (ii) such termination shall apply to Software Maintenance Services related to all licenses of said Licensed Software held by Licensee under any license agreement then in force between Licensee and Beet Analytics. In such case for all such licenses described in the preceding sentence: (x) Licensee shall have no further obligation to pay the Software Maintenance Services fees related to the corresponding Licensed Software; (y) Licensee shall duly certify in writing to Beet Analytics Technology that all copies of all Releases of the Licensed Software other than those of the latest Release of the Licensed Software installed by Licensee, have been duly destroyed or returned to Beet Analytics Technology in their entirety; and (z) Software Maintenance Services for such Licensed Software will terminate at the expiration of the thirty (30) day notice period. Beet Analytics Technology shall have no further obligation to provide any services or deliver any Release in support of any such licenses, except for providing license keys if necessary. Licensee may reinstate Software Maintenance Services, provided such reinstatement is activated for all licenses of a given Licensed Software held by Licensee under any license agreement then in force between Licensee and Beet Analytics Technology or any other Beet Analytics Technology, and Licensee pays all fees that would have been due in respect of Software Maintenance Services from the date of termination of Software Maintenance Services to the date of reinstatement of such Software Maintenance Services plus a reinstatement fee.  

b) By Beet Analytics Technology: Beet Analytics Technology may terminate Software Maintenance Services related to all Licensed Software under this EULA if Licensee fails to pay Software Maintenance Services fees when due, upon thirty (30) days prior written notice. Fees related to Software Maintenance Services shall be due by Licensee until termination of such Software Maintenance Services.

8. Miscellaneous

8.1 Purchase Orders. Licensee's purchasing terms and conditions shall not in any way supersede, modify, vary or otherwise supplement the terms of this EULA.
8.2 Notices. All notices required hereunder shall be in writing, in English and shall be deemed to have been given (i) the date delivered in person or by reputable express courier service, (ii) three (3) days after sending the notice if sent by certified or registered mail, (iii) the date sent by confirmed facsimile, addressed to the parties at their addresses in the Ordering Documents, or at such other address as either party may designate to the other by notice served as hereby required, or contained in the relevant order form.

8.3 Force majeure. Neither Party hereto shall be liable for any default in the performance of its obligations under this EULA resulting from (i) a case of force majeure as defined by the law governing this EULA and the courts in such jurisdiction and (ii) the following causes: strikes (whether previously announced), war (declared or not), riots, governmental action, acts of terrorism, acts of God (fire, flood, earthquake, etc.).

8.4 Severability. If any part of this EULA is found to be invalid, illegal or unenforceable in any respect, the remaining provisions shall nevertheless be binding with the same effect as if the invalid, illegal or unenforceable part was originally deleted.

8.5 Transfer, Assignment & Subcontract. Licensee shall not subcontract, assign, delegate or otherwise transfer (including without limitation, by way of merger or contribution) any or all of its rights, duties, benefits or obligations under this EULA, or sublicense Licensed Software to any third party without Beet Analytics Technology’s prior written approval. Any approved transfer of licenses to another country may be subject to an adjustment in price, as prices are specific to each country or region. This EULA shall be binding upon, and inure to the benefit of Beet Analytics Technology and its successors and assigns. Beet Analytics Technology may assign, delegate or otherwise transfer (including without limitation, by way of merger or contribution), any of its rights or obligations hereunder and/or otherwise subcontract any of its obligations, in whole or in part, to any Beet Analytics Technology and/or to any third party, without Licensee's consent.

8.6 Amendments & Non-Waiver. No waiver, alteration, modification, or cancellation of any of the provisions of this EULA or of any Affiliate Participation Agreement shall be binding unless made by written amendment signed by all parties. A party's failure at any time or times to require performance of any provision shall in no manner affect its right at a later time to enforce such provision.
8.7 Audit. During the term of this EULA and for a period of three (3) years thereafter, Licensee shall establish and maintain accurate information records relating to the use, and when applicable, destruction of the Licensed Software. Beet Analytics Technology shall have the right at any time, at its own expense and under reasonable conditions of time and place, to audit and copy these records. Licensee also hereby authorizes Beet Analytics Technology to verify its compliance with the terms of the EULA. For such purpose, Beet Analytics Technology may conduct an audit on Licensee's premises during normal business hours, in a manner that minimizes disruption to its business. Beet Analytics Technology may require Licensee to provide it or any third party Beet Analytics Technology engages to conduct such verification, with machine access, copies of system tools outputs, or other electronic or hard copy system information as appropriate. If the audit reveals unauthorized use of any Licensed Software, Licensee shall promptly pay to Beet Analytics Technology any amounts owed as a result of such unauthorized use at the then current list price. In the event such unauthorized use is five percent or greater of Licensee's authorized licenses for the applicable Licensed Software, then in addition to Licensee paying the applicable charges, Licensee shall reimburse Beet Analytics Technology for the cost of such audit. In a joint effort to prevent software piracy, Licensee shall comply with any changes in the Licensed Software licensing security mechanism that aims at preventing fraud. By invoking the rights and procedures described above, Beet Analytics Technology does not waive its rights to enforce this EULA or to protect its intellectual property by any other means permitted by law.

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8.9 Entire EULA; Order of Precedence. These General Terms together with the Ordering Documents comprise the complete agreement between the parties relating to the subject matter hereof and supersede all prior and contemporaneous proposals, agreements, understandings, representations, purchase orders and communications, whether oral or written. If there is a discrepancy, inconsistency or contradiction between any Licensed Software and terms contained herein, the provisions of the corresponding Licensed Software Terms shall prevail, but solely with respect to those Licensed Software described in such Licensed Software Terms. Licensee acknowledges that it has full knowledge of all terms herein and incorporated herein, and agrees to be bound by and to comply with such terms and has not relied
on the future availability of functionality or product updates with respect to any Licensed Software in entering into this EULA thereunder. The terms of this EULA shall have no force or effect with respect to any claim based on the use of any intellectual property rights of Beet Analytics Technology outside the scope of the licenses expressly granted herein.

8.10 Governing law and jurisdiction. This EULA shall be governed and construed in accordance with the laws of, and the legal relations between the parties shall be determined in accordance with, the laws of State of Michigan, United States of America, without regard to any conflict of laws principles and excluding application of the United Nations Convention for the International Sale of Goods. The parties irrevocably waive all rights to trial by jury for any such litigation between them. All actions and proceedings arising out of or relating to this EULA shall be exclusively heard and determined by the Courts of the State of Michigan, United States of America. Notwithstanding the foregoing, Beet Analytics Technology may, in its sole discretion, bring any claim or dispute (including but not limited to seeking injunctive relief and/or equitable remedies) arising out of, or in connection with the validity, interpretation and/or performance of this EULA before any courts and or administrative authorities having jurisdiction over the subject matter of any such claim or dispute. This provision shall survive any termination or expiration of the EULA. Licensee acknowledges and agrees that the paragraph immediately above shall not prevent, restrict or otherwise limit in any manner, Beet Analytics Technology's rights to seek equitable remedies, including injunctive relief before any competent court in any jurisdiction.

8.11 Survival. The following sections of these General Terms shall survive termination thereof: "License Limitations", "Intellectual Property", "Warranties, Limitations and Disclaimers", "Limitation of Liability", "Term and Termination", "Miscellaneous", "Glossary".

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8.13 Counterparts. This EULA may be executed simultaneously in two (2) or more counterparts, each of which will be considered an original, but all of which together will constitute one and the same instrument.
9. Glossary

"Authorized Users" means (i) the employees of Licensee, including employees of Licensee's directly and indirectly wholly-owned subsidiaries within the USA that are controlled by Licensee and unincorporated divisions of Licensee, but not employees of other legal entities (including employees of any legal entity that is a part of a group of companies affiliated with Licensee, but that do not qualify as direct or indirect wholly owned subsidiaries of Licensee), and (ii) Licensee's consultants, agents and contractors who are working on Licensee's premises, provided they are not competitors of Beet Analytics Technology and they have agreed in writing to restrictions on the use of the Software and obligations of confidentiality no less stringent than those set forth in this Agreement. For the purpose of this definition, "controlled" is defined as the direct or indirect ownership of more than 50% of the voting securities of an affiliate. Licensee shall hold Beet Analytics Technology harmless and shall indemnify Beet Analytics Technology for any loss, cost, damage or expense (including reasonable attorney's fees) incurred by Beet Analytics Technology as a result of the failure by an Authorized User to abide by the terms of this Agreement. Documentation means, at any time, the current user documentation in any form or media as delivered together with the Licensed Software by Beet Analytics Technology for use in connection with Licensed Software.

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Glossary

EAS
Envision Application Server

EDC
Envision Data Collector

OEE
Overall Equipment Efficiency

VPS
Virtual Private Server

xls
Excel spreadsheet
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