Knowledge Base

Articles and Examples

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Training Classes

Introduction

Welcome to Ensign's training class. Today we are introducing the new Ensign which will be called Ensign 10 (E10). The current version that you are now using will be called Ensign Windows (EW) so we can discuss both and compare.

We have been very busy for the past year redesigning Ensign' charting package to incorporate significant changes and suggestions received from traders. I know many of you have similar questions and so we have prepared a page with FAQ about the new Ensign. Please read those questions and answers

We have been in alpha phase testing for the past 5 months and thank the several users who have used the program, and offered suggestions and other feed back which helped us arrive at today's beta release. We call it a beta release because there are more features that we want to add and polish off before having Ensign 10 be the official product for new users to start with. Because Ensign 10 is significantly different than Ensign Windows, we want to migrate existing customers to the new program on a gradual basis so that we can provide the assistance you may need. Over the coming months we will release more training videos for E10 and add to the documentation so that it is more complete. Right now we have 9 videos and around 500 pages of documentation.

Spare-A-Dime: Would you consider allowing us to run both versions live simultaneously? This may attract more beta testers and give us an environment in which we can accurately test and compare our (sometimes complex) DYOs/Templates ?

We agree with you and in fact encourage you do just that..... run both programs side by side and migrate your system from one to the other. I helped a customer yesterday with his installation and conversion of his templates, and did a remote to his computer to give that help. We ran E10 on one monitor and EW on the others, and both programs were connected to the Interactive Broker feed he uses..... got along just great with the side by side.

taku: Once you get used to the new locations for the old menus, E10 is a piece of cake.

Steve: One question not answered on your FAQ: How do we get our hands on it?

We wanted the exposure to be limited so we can help you more adequately. So you are the special ones because you came to the class today. Lets go ahead with how to get the program, and then staff can help you in this chat room if you have an installation question.

The program can be downloaded by putting in your Internet Explorer this URL:

http://www.ensignsoftware.net/files/setup10.exe

Install in the default folder which will be C:\Ensign10 and thus it is kept separate from your current EW installation, which is in C:\Ensign. Installing E10 will not affect or hamper your use of EW. If you have difficulty, try the URL with the setup10.exe omitted, then on the directory listing you get, scroll down and click on the setup10.exe link in the list.

bl2: Does it backup to a different folder also?

Yes, it backs up to a different folder.

Spare-A-Dime: Have you carried out performance testing and/or can you make any observations about the relative performance and resource requirements of E10 vs EW ?

Yes we have. E10 has many performance improvements, and one of our alpha testers is a power user with 24 32-inch monitors running around 60 charts and each dressed with around 40 chart objects. He runs significant trading systems built in DYOs, and he loves the new features and will not go back to the old EW.

Spare-A-Dime: Thx looking forward to it.

JJ: Is E10 Windows x64 compatible?

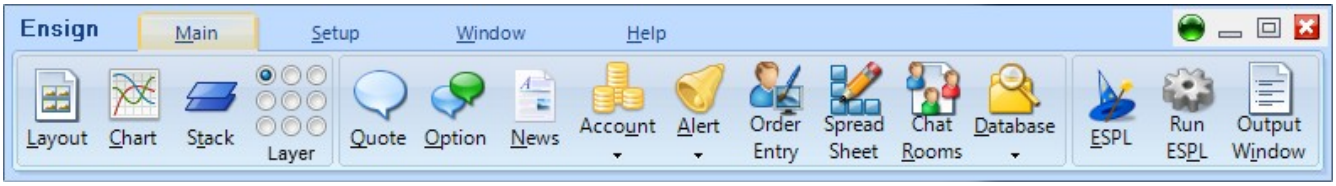
Yes, we have run E10 on different hardware, and operating systems, and get along beautifully with Window 7 and 64 bit computers, as well as XP and 32 bit computers.

JJ: Nice Splash Screen... looks like Utah

That photo I took on my trek through the Grand Teton National Park in 2005.

Dblue: Opens as a toolbar!
JJ: Ahh! Wow... talk about minimalist interfaces.

Ribbon



When Ensign runs you arrive at this Ribbon bar, and that is the program. Ensign has moved away from the desktop design which was MDI based and that kept charts from free movement outside the desktop. We can emulate a desktop if you really want it, but I have used it without a desktop for 9 months and love the new freedom of moving forms anywhere. So that is the 1st significant change to the design of Ensign.

Steve: Looks like it's going to be a very easy transition.
curt: OK tool bar is the ribbon bar so you do not have to stretch Ensign out to move windows.

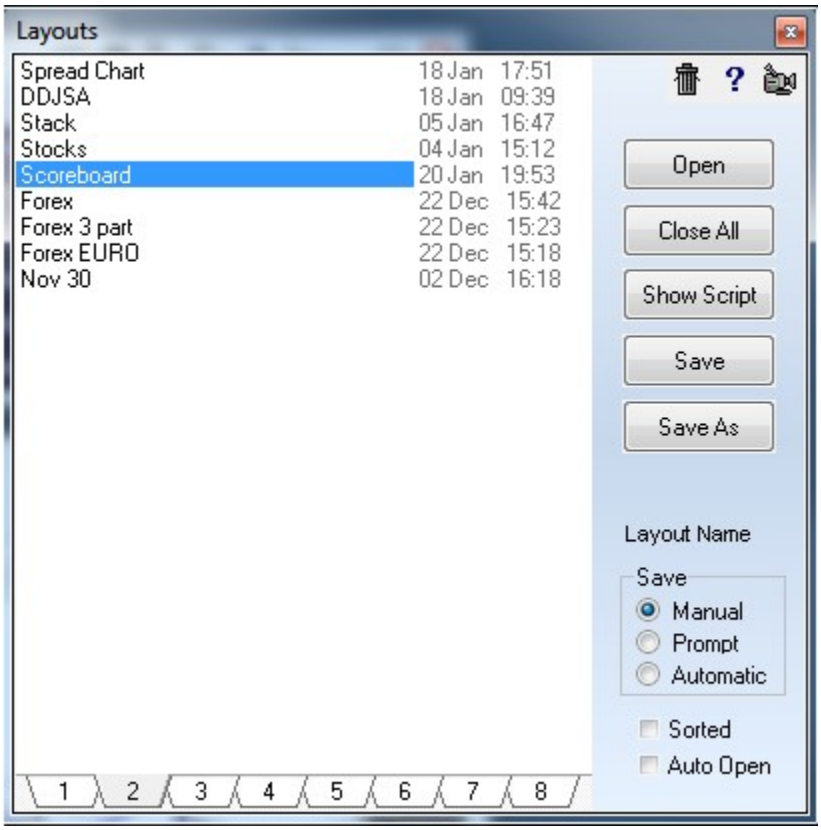
Lets take a brief review of the Main ribbon..... there are 4 tabs to group all the button selections. Several of the buttons have a chevron at the bottom which implies there is an accompanying drop down menu if you click on the chevron.

The 1st button is the one for a layout. Layout is our E10 term for the EW Workspace term. This is similar to the EW workspace form.

Notice the form shows the date of when the layout file was saved, which is helpful. The Save and Save As buttons are same as before. To reorganize the list you drag the name up or down, and thus we eliminated the blue arrow buttons. To move a layout file to another folder, drag the layout name ONTO one of the tabs at the bottom of the layout form.

Buffy3: sweet w/b faster

Note the new toolbar in the corner with the garbage can, help, and video buttons. These are pretty standardized through out the program. The garbage can is the Delete button. The help button will take you to the documentation, and that is now in PDF files instead of web pages. We made the decision to document in PDF files so that the material is easier to search, and prints a beautiful colored manual if you choose to print it. The documentation is in 7 manuals, and they will download 1st time you access them and reside on your computer in the C:\Ensign10\Manuals folder. You can use the Internet Services form to download upgrades to the manuals.

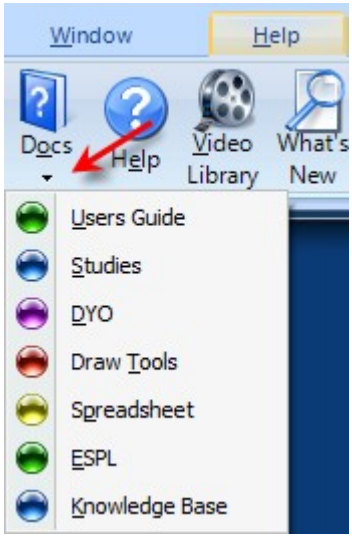


I mentioned we have 9 videos, and more are coming. If the video button on a form is enabled, like it is on the layout form, there is a companion video that will train you on the used of the form. Most videos are around 4 minutes long. When a video button is disabled, that just means one is planned for but has not yet been created. As they become available, the buttons will be enabled in future upgrades.

Internet Services

Lets go to the Setup tab on the ribbon and click the Internet button.

Your form will show the word NEW on several of the lines indicating you do not have the latest version. You are invited to select a bullet by a manual and click the Download button to get the manual or to update the manual.

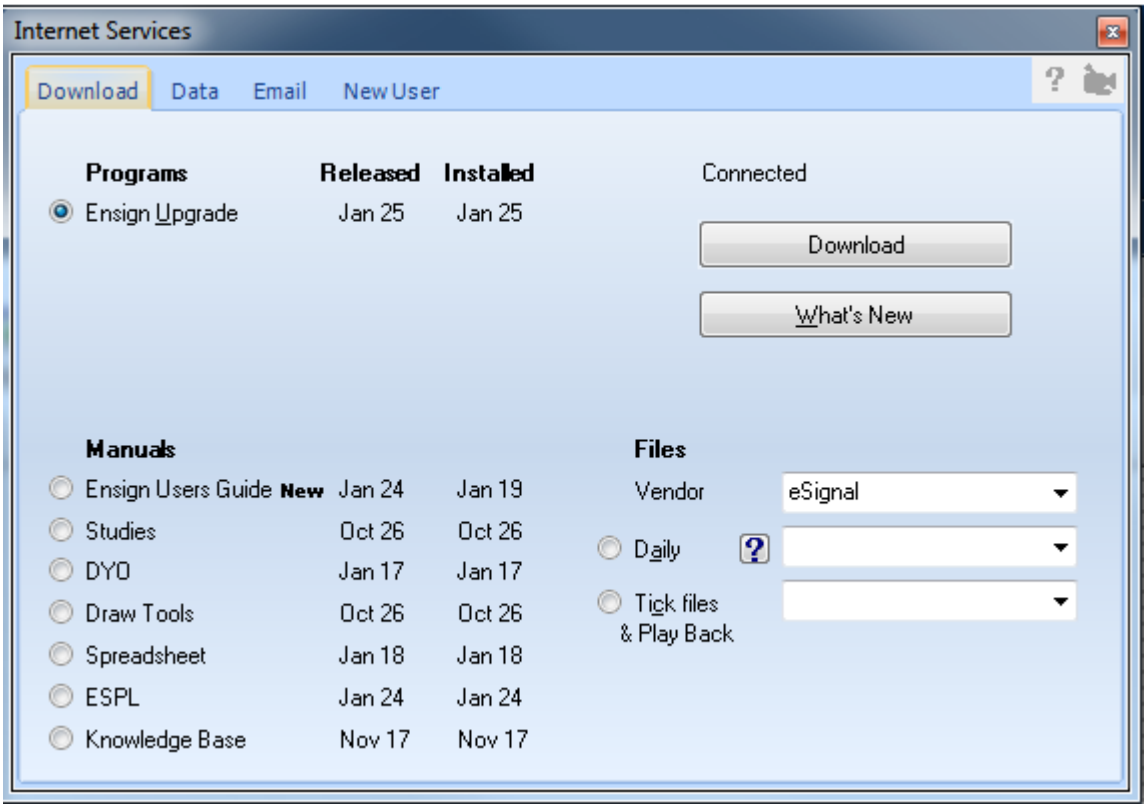


Dblue: Is adobe reader required for manuals or will others like foxit work?
Scylnx: dblue, I use foxit, s/b no problem

Dblue, I use adobe reader, and can also read the PDF on my Galaxy Tab or iPhone with the readers they have.

Buffy3: This might be silly question but can't find how to read the manual I downloaded.

scooter2: Click ribbon Help | Docs | Users Guide, Buffy



Spread Sheet

On the main ribbon is a new button for Spread Sheet, and there is a great manual on how to use this new feature. The Spread Sheet is a grid of cell which can display text or numbers. The cells can also contain formulas and function very much like the Excel spread sheet program.

Spread Sheet is a major addition to Ensign, and should eliminate the need to try to export or import data with Excel. The spread sheet could be used as a scoreboard to show a collection of study values, trade system results, quote values, etc.

scooter2: Like excel spreadsheet?

Spreadsheet SCOREBOARD

	EUR/USD	B	C	D	E	F	G	H	I	J
1	1.36713	High	Low	prior High	prior Low	STO %K	%K/%D	RSI	RSI/AVE	TREND
2	5 min bar	1.36736	1.36704	1.36743	1.36707	90.78201	Above	50.7179(	Above	↓
3	60 min bar	1.36743	1.36594	1.36733	1.36619	69.55415	Below	56.8735!	Below	↑
4	Daily	1.36878	1.36594	1.37030	1.35717	95.28088	Below	75.7636-	Above	↑
5	Weekly	1.37030	1.35391	1.36233	1.32434	77.77264	Above	58.0030-	Above	↓
6	Monthly	1.37030	1.28578	1.34969	1.29696	61.20027	Below	52.6438:	Above	↑

The spread sheet has full math capability for cell operations, very much like Excel. You will not need to try to export data to Excel when you can probably accomplish the same right here in the Ensign program.

One of the beautiful things about the Spread Sheet is its interface with the DYO feature in Ensign. The DYO has full control to manage the spread sheet for sending data, reading data, changing cell content, and controlling cell colors and font colors. The DYO Action category has statements like these for use with a spreadsheet.

Find Spreadsheet – The text in the Label field, or Message field if the Label is blank, is the name of the spreadsheet to find. If the spreadsheet is not found, this statement will open a spreadsheet form with the name.

Cell(col, row) := #2 – This statement will do Text, Marker and Cell Color. The Text will be a value from Selection #2, instead of the Label field.

Using statements in the DYO like these, we are able to implement the Scoreboard example. The Scoreboard example shows the data from 5 different charts, and things regarding bar values, study values, study flags, etc. I have a collection of charts and they each contribute to the content of this scoreboard. This example is documented in the spread sheet manual and provided as an example layout. The spread sheet is getting its data from a collection of charts, and I have that collection in the new Stack feature.

This example is available for download using the Package feature. The package name is Layout-Scoreboard in Ensign's Official Folder on the package server.

The Spread Sheet has its own 23 page PDF manual which you should read to understand it better.

Harriet: Usually, I pass parameters in a template by assigning GV at the beginning of the template - could I put those in a spread sheet so that I can read different sets to the same template depending on what I want to to?

Harriet, the answer is YES, and that would be a good use of a spread sheet. The spread sheet is a convenient place to manually edit values. And the templates can pull values from the Spread Sheet with this statement.

V := Cell(col, row) oper #2 - A cell's value is used in the expression with Selection #2 and assigned to the variable V.

The DYO statement will provide the column and row values of the cell to be read. The value from the spreadsheet can optionally be combined in an expression with the Selection #2 field of the DYO, and this expression result is then assigned to the V variable of the DYO statement. So you could have a DYO that reads several cells, one cell per DYO line, and there are 12 DYO lines to work with in a DYO form.

Harriet, has this answered your question to your satisfaction?

Harriet: Oh, YES - very good - nice work!

Stack

To group these charts into the same frame, I opened them, placed them on top of each other, and clicked the Stack button which is the 3rd button on the main ribbon.

The stack is created, and this container can move the collection of chart to any monitor. To change the surface view you click on the buttons on the top of the stack. Note in this view the stack has its toolbar on the top header, and the chart has its toolbar on its header. The charts have the buttons on their caption row for quick access to Objects, Studies, Templates, Draw Tools, Color Bars, Time Frames, Controls, and Properties.

curt: I see the draw tool tool bar moves with the active chart. Can I add draw tools to the tool bar?

You cannot add or remove the buttons. The toolbar will show on the chart who last had focus, and auto hide on other charts. By having the buttons on the chart, you do not have to try to return the mouse to a main toolbar like was the case in EW. Thus the design is friendly for those with large screen real estate, such as my friend with 24 monitors.

scooter2: So these 'stacks' are free to move around the screen like a chart in this new version?

Yes scooter. You you can read in the documentation that the order of the button is rearranged by dragging a button sideways, and charts can be unstacked by double clicking on their button in the stack, and more members can be added to the stack by several ways, the easiest of which is to move the new form over the stack, and click

the Stack button again.

scooter2: What happens when unstack? Do they cascade over the previous real estate?

When you unstack the window is then above the stack and you can move the unstacked chart elsewhere. You will have time to play with it and become comfortable.

curt: jj move your mouse over the other charts and the tool bar follows.

All charts will have toolbars..... again the chart will show its toolbar when it has focus or the mouse moves over it. So it auto shows, auto hides. That way you do not have 60 toolbars being a visual clutter on 60 charts you see on 24 monitors.

JJ: oh... I have to 'touch' the chart face to show the tool bar...

Chat Room

The Chat room is on the main toolbar, and many of you will use the new chat. It is backwards compatible with EW chat so you can continue your conversations in chat. You will note that there is no 2nd room watch in the new chat. The reason is because the design is to open multiple chat forms if you want to see multiple rooms. You could have 3 or 4 chat forms open now, which is even more flexible.

And the viewer on the top of the chat happens to be another docking site for stacking charts. That means you could open a chat room, and then move your favorite charts over the chat viewer and click the Stack button and they will dock on the chat form. There will be a button for the chat viewer, ie the image of the post to the room, and the other buttons are then your docked quote pages and charts. This feature might be very helpful to the notebook user that has limited screen space. Now they can have the chat full screen, and quick select what is shown in the viewer, either the chat room image or their own live charts and quote pages.

Scylnx: Nice, and can still use eChat? Prefer eChat on separate machine.

Yes, eChat can still be used. But now you can move a form anywhere, the need for a separate eChat has gone away. You are better off resource wise to have chat in E10 on the other monitor instead of running the independent eChat.

scooter2: The need has not gone away if you want eChat on a separate computer. Run eChat on a junk machine.

Ok, separate computer is the difference.

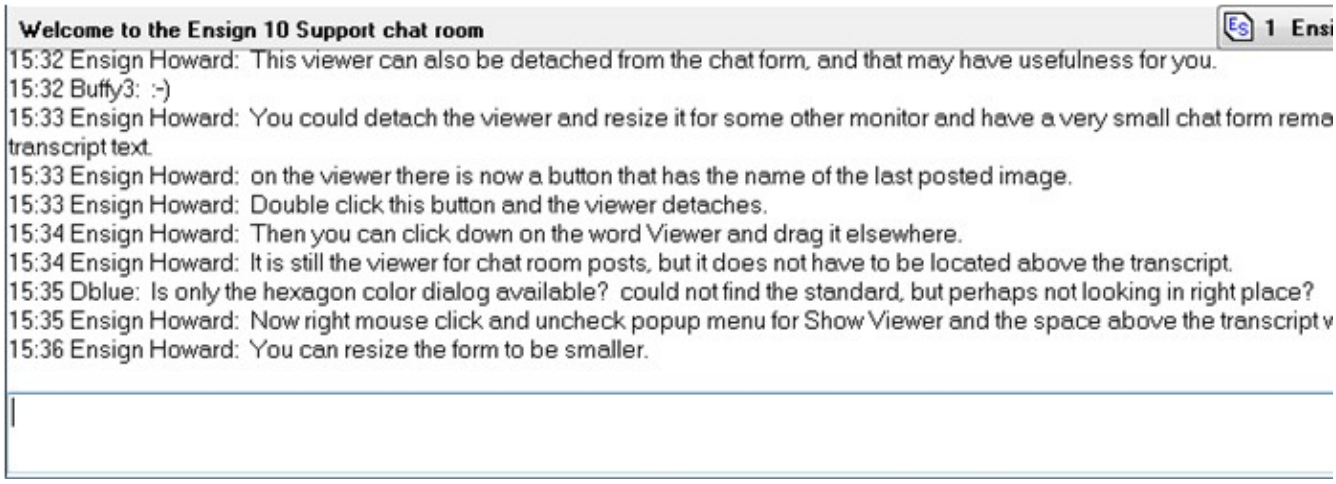
Chat Room Viewer

Next topic is about the Chat room changes, which I mentioned included no 2nd room watch. In E10 you would open a 2nd chat form to have a 2nd room. You can open multiple chat forms now.

Each form has a viewer on the top, and this viewer is a docking site which means you can dock other forms by moving them over the chat viewer and click the Stack button , or right mouse click on the chart or quote page and select Dock on Stack on the pop-up menu. The viewer then shows buttons for each of the forms on its stack. This viewer can also be detached from the chat form, and that may have usefulness for you.

You could detach the viewer and resize it for some other monitor and have a very small chat form remaining that you use just for the transcript text. On the viewer there is now a button that has the name of the last posted image. Double click this button and the viewer detaches. Then you can click down on the word Viewer and drag it elsewhere. It is still the viewer for chat room posts, but it does not have to be located above the transcript.

Now right mouse click and uncheck the pop-up menu for Show Viewer and the space above the transcript will be reclaimed for transcript. You can resize the form to be smaller.



Here is then an image of my smaller chat room without the viewer, which I detached and moved to the side.

scooter2: So can we still use the standalone chat correct?

Yes, scooter. And you can reverse the process to redock the viewer. Recheck the Show Viewer so the chat form opens space above the transcript. Drag the viewer over the chat form, right mouse click and select Dock on Stack, and the viewer is then back inside the chat form. Now all that is perhaps excessive for how you want to use chat, but I point it out because some will want an independent viewer and smaller text entry.

JJ: Good work... are stacks used a lot throughout the product?

Yes stacks can become a staple of how you use the program if you want to. I use them and users who have had the program for a few months seem to have evolved to using them too as a staple in how they use Ensign.

JohnA: One client has 5 stacks with 15 charts per stack.

Database Manager

The Database manager has a button on the main form and it is basically the same. As stated in the New Ensign web page the paths now have added layers because each vendor has its own folder. This was the design change so that Ensign could be designed to follow all supported vendor feeds simultaneously. This means that finally you can follow eSignal and Interactive broker feeds together. The symbols will not be confused and will store data in separate vendor folders. On the Internet Services form you may have noticed a new selection box to pick the vendor for the file download. Our web site has just one set of files for playback or tick update, but you can select the vendor folder for where the files are to be placed in the download. You could download ES #F tick data to the IB folder, or to the TransAct folder or to the eSignal folder, etc.

On the top of the Ribbon is a round green ball by the minimize button. This is a data feed lamp and will be green if any feed is seen alive. It will glow yellow after 30 seconds of no feed, and eventually glow red when there is no feed after a minute. You can then check the Setup | Feeds forms.

ESPL

scooter2: Is the old ESPL good with the new version???

ESPL is another area of significant change. The EW ESPL files cannot be read, but you can use a side by side to cut the script to the clipboard in EW and then paste the script in E10 and transfer that way. Then try to compile and resolve compiler errors. Most of the code is the same. There are some minor name changes to menus, buttons, etc.E10 has new features, and obsoleted some old EW menus and buttons. So those are minor changes. Those alpha testers who have converted code in this manner did not find the task overwhelming. They converted scripts without much trouble. And I converted the samples collection from EW to E10 with similar ease.

Speaking of which, let me show you how to get the goodies we have in store. The goodies are both useful and informative as you learn the new program. The DYO is the most significant change to the program and will be well liked once you embrace the new design changes. Begin by reading the DYO manual, which is around 60 pages of excellent training and examples. All manual examples for the DYO are available for download as templates.

Packages

The download in E10 uses a new feature called Packages and the advantages of packages are these. The package can be a collection of files, and will be compressed for a smaller upload size. On download and extraction they are distributed to the proper folders. And that distribution is wonderful. You no longer have to write an email telling a friend where to put things so it works for him.

Click on the Setup tab and then on the Package button. Click the Server tab on that form.

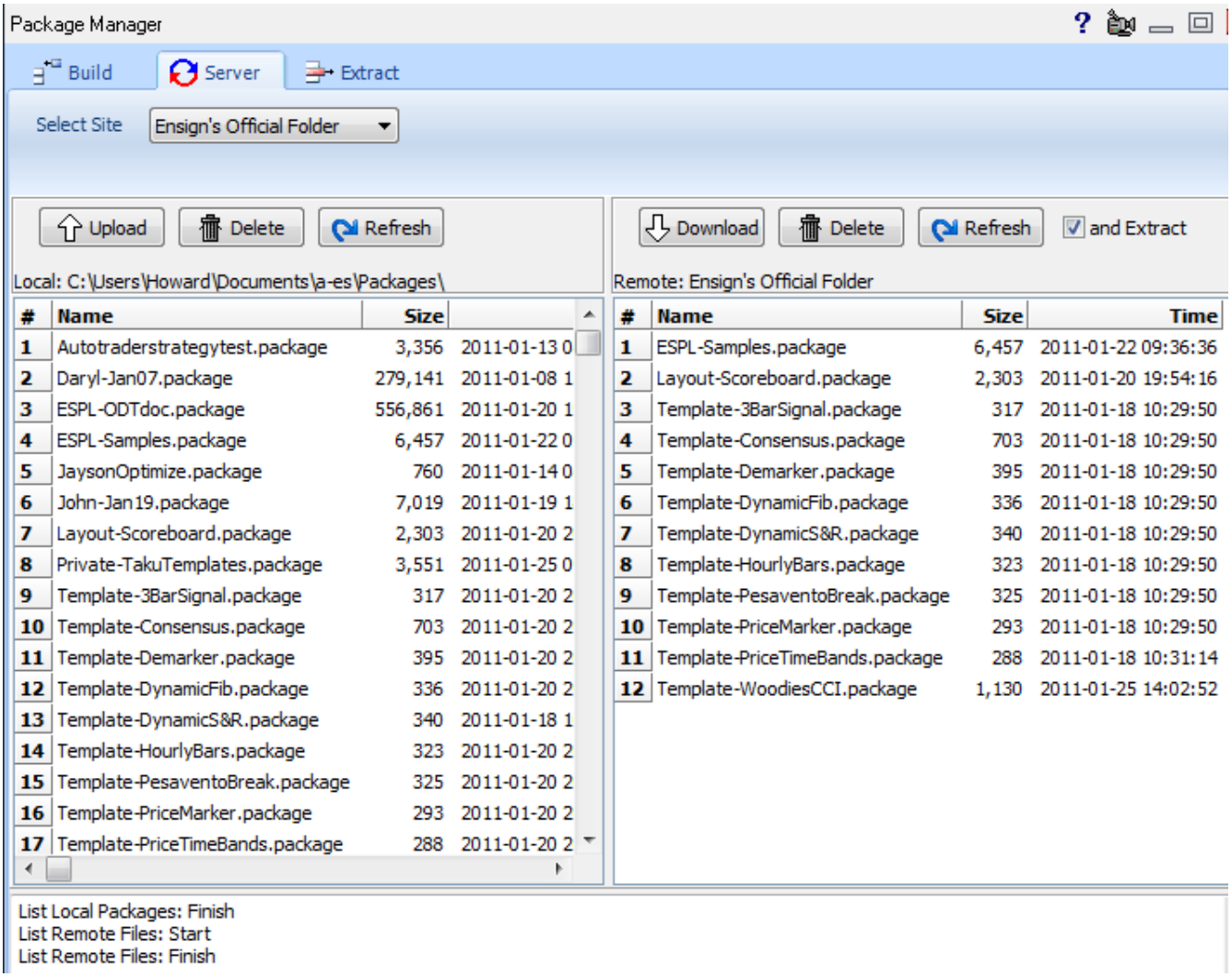
You should see a form like this. We have a server for use with the package feature, and the site has multiple folders. The primary folder is the Ensign's Official Folder where packages created by Ensign are available for download. The list on the right side is the directory content on the server. You can click on a package and click the Download button and it will install on your computer.

testing: Very well thought out.

I am using the notation of a prefix for what kind of package it is, such as Template- or ESPL-. This cool feature is the brain child of Mike Lamont..... so give him the kudos. Way to go Ensign Mike! I love it and users will come to love it too as they use it. On the Build tab of this form you can create your own packages. This could be of things you want to back up or it could be a collection of files you want to share with others. Packages can be password protected when built, and thus require a password to unlock.

There is a General Public folder where you can upload your package. Try to give it a good informative name.

And password protect it if its distribution is to be restricted. We will have more features for the package tool in the coming months such as private folders for each user and folders for use by Mentors so that they can truly restrict who can download or even see what packages they have for their clients. Those private folders are disabled in the beta until we have polished off their security protection measures.



In summary, GO READ THE MANUALS. They show you many many things that I cannot possibly mention. The ESPL manual is 200 pages long. The Users Guide manual is lengthy too. The DYO and Spread Sheets have their own separate manuals. The templates you can download via the Package feature have the cool examples shown in the DYO manual. Play with the program today, and tomorrow we will start in on the exciting new DYO design and how it is so much nicer than the EW DYO.

DarthTrader: tnx Howard for all this new stuff
rin: The manuals in pdf sounds really good!
JJ: GREAT WORK! Thank you!
MakesOwnWeather: Thanks Howard.

PDF Documentation

The documentation is in PDF files, and a PDF reader is needed to read these files. The PDF files are on our server, and they too get downloaded to be resident on your computer and are stored in the C:\Ensign10\Manuals folder. These can be opened by clicking on the Help buttons found on various forms, or from the Help ribbon by clicking the Docs button or on one of the drop down menu selections on the Docs button.

Let me help with the issue of needing a PDF reader. I encourage you to use the free Reader X available from Adobe. The URL to put in your web browser is:

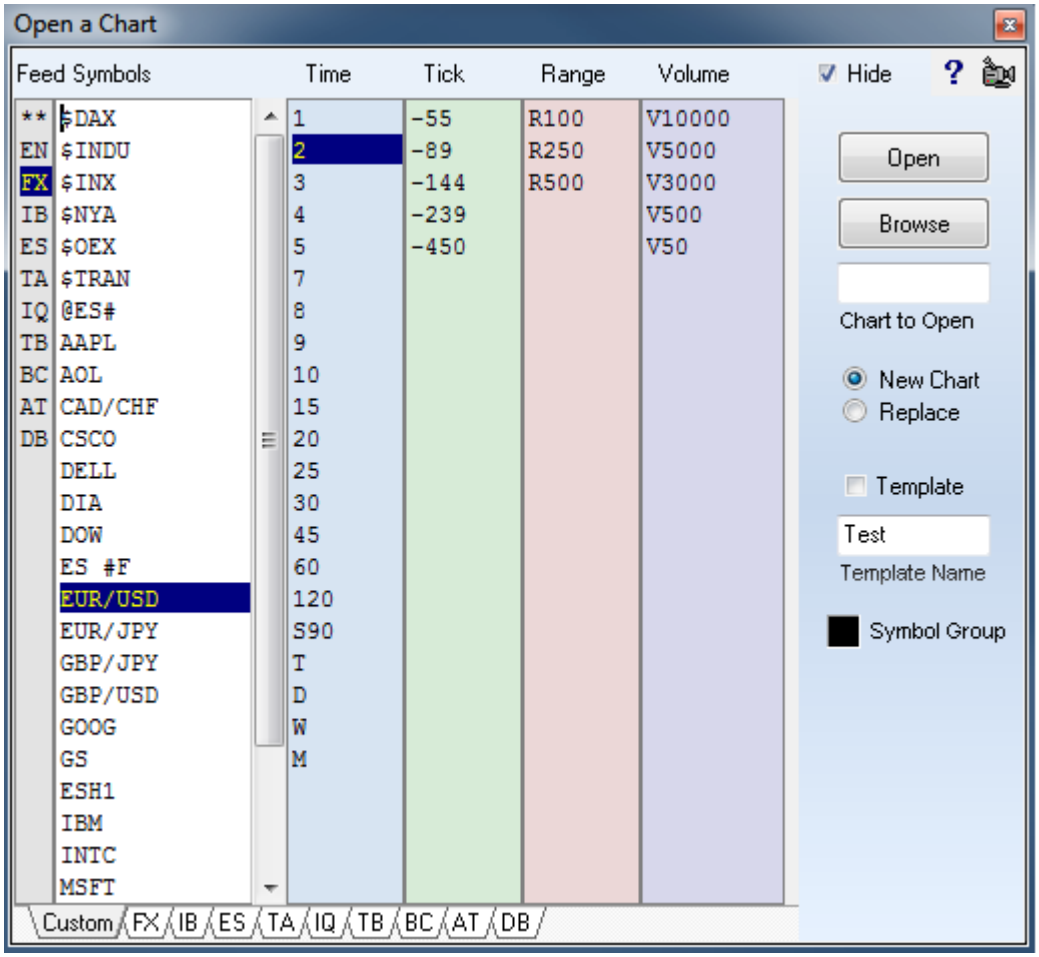
http://www.adobe.com/downloads

On the right side bar is the section for Readers and Players, and you click on the Get Adobe Reader button and follow the download instructions. For me, and probably for you, my brower shows a pop-up bar at the top of its viewer with a warning about proceeding, and you click on the bar to accept and give permission for Adobe to install an ActiveX object with is their Download Manager and then the download proceeds. Use the default installation location, which then permits Ensign to open the PDFs in the reader and locate bookmarked pages. This way the Help buttons go right to the correct page of documentation for the form the Help button is resident on. PDF files can be viewed with other readers, but you then will lack the built in navigation of Ensign being able to open the reader and jump to a bookmark. You can decide what is best for you and your reading the documentation.

The documentation also evolves to reflect changes in the program and additions to the documents. The documents can be upgraded using the Setup | Internet form. This forms will show the date of your download and the date of the files on the server and tag your download bullets with the word New when the server has a newer edition of the files.

Charts Panel

The next topic of training is how to use the Charts panel, which is the 2nd button on the main ribbon.



This form is easier to use for entering and organizing symbols and time frames than the EW form. We do not have an input edit box on the form. Instead you type directly in the columns where you want to make changes. Each column is like a memo where you can edit, cut, paste, backspace to erase, drag across to highlight and select.

For example, I keep my intra-day times in the Times column organized numerically so they are easy to find and select. I have on the list 10, 15, 20, 25, 30 etc. If I wanted to add a new time such as 34 minutes, I could click in the Times column, say after the 30 entry, press the Enter key which opens up a new row between 30 and 45, and type in the new time frame of 34. If I no longer need an entry, drag across the row entry and press the backspace key to delete. Changes you make to the lists are saved when you close the form.

The 1st column on the form is labeled Feed and is a new column for selecting the vendor feed. In EW all symbols had to be unique, so that ES on the TransAct feed needed a prefix to make it unique and not be confused with the same symbol on the eSignal or Interactive Broker feed.

The E10 keeps track of each symbol by an associated vendor feed tag, so we have eliminated the need for a prefix to make a symbol unique. An entry on the list for ES #F might be a symbol for eSignal or for Interactive Brokers, or the symbol EUR/USD might be for the FXCM feed or for the dbFX feed. Use the 1st column of the vendor to select the feed so we know which chart to open. I would select FX, then EUR/USD, then the Time Frame and click the Open button.

Now most of you will not have multiple feeds that broadcast the same symbols, and then you can use the ** selection on the top of the Feed column. This is the mode for Ensign to auto determine which vendor symbol list contains the symbol and we will then assume to use that vendor for the chart. If you have only IB and not eSignal, then we can guess that ES #F belongs to the IB feed and not to the eSignal feed. You would have ES #F on the symbol list on the Vendor feed form for IB and clear off the symbols that installed with Ensign on the eSignal symbol list.

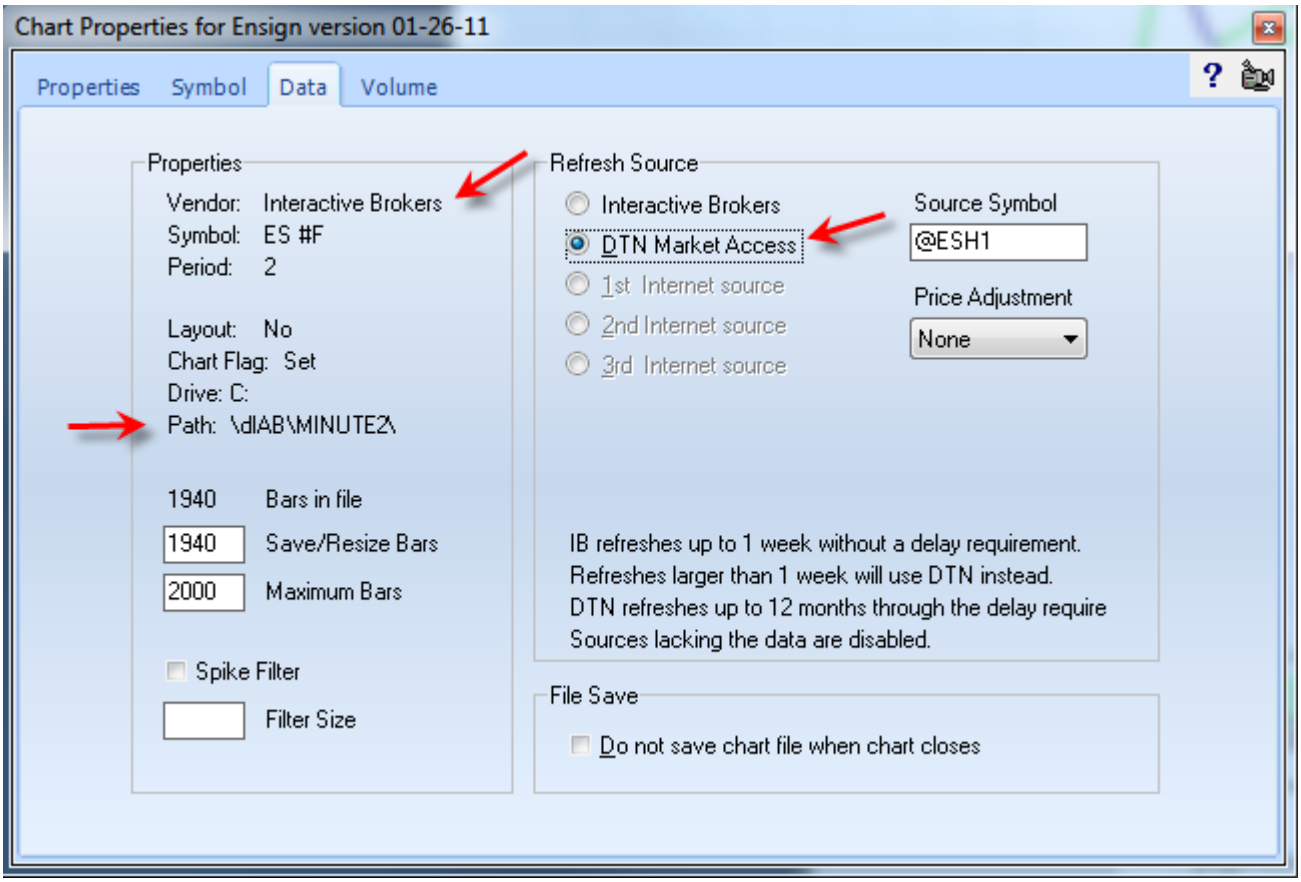
For those vendors who have empty lists, their tag will not show on the Open Charts panel, which shortens the list to what you do have. So the suggestion is this: After your initial installation, go through the Setup | Feeds forms and for those vendors you do not have a feed for, erase their symbol lists so they are blank.

Refresh Source

You can select EN as the source when you want to open a chart and it would refresh from Ensign Internet. When you open a chart for any vendor, on the chart property form on the Data tab are selections for where to fetch a refresh. Though the chart is updating live from IB, you can select to refresh it from either IB or from DTN or from the Internet if it is a daily chart. Let me post a picture of this property form.

Here is an intra day chart opened for the IB feed, and I clicked the Properties button on the chart toobar to get to this form. I selected the Data tab and I can change the source to be DTN Market Access for the refresh. Notice that the path for the chart file shows it loaded from \dIAB\MINUTE2\ folder. The dIAB is the folder structure holding all database files and chart files for Interactive Brokers. You would see this dIAB folder as a sub-folder in the \Feeds folder in your Ensign10 directory. The other popular tags would be dFXC for FXCM dSig for eSignal dACT for TransAct Futures, etc.

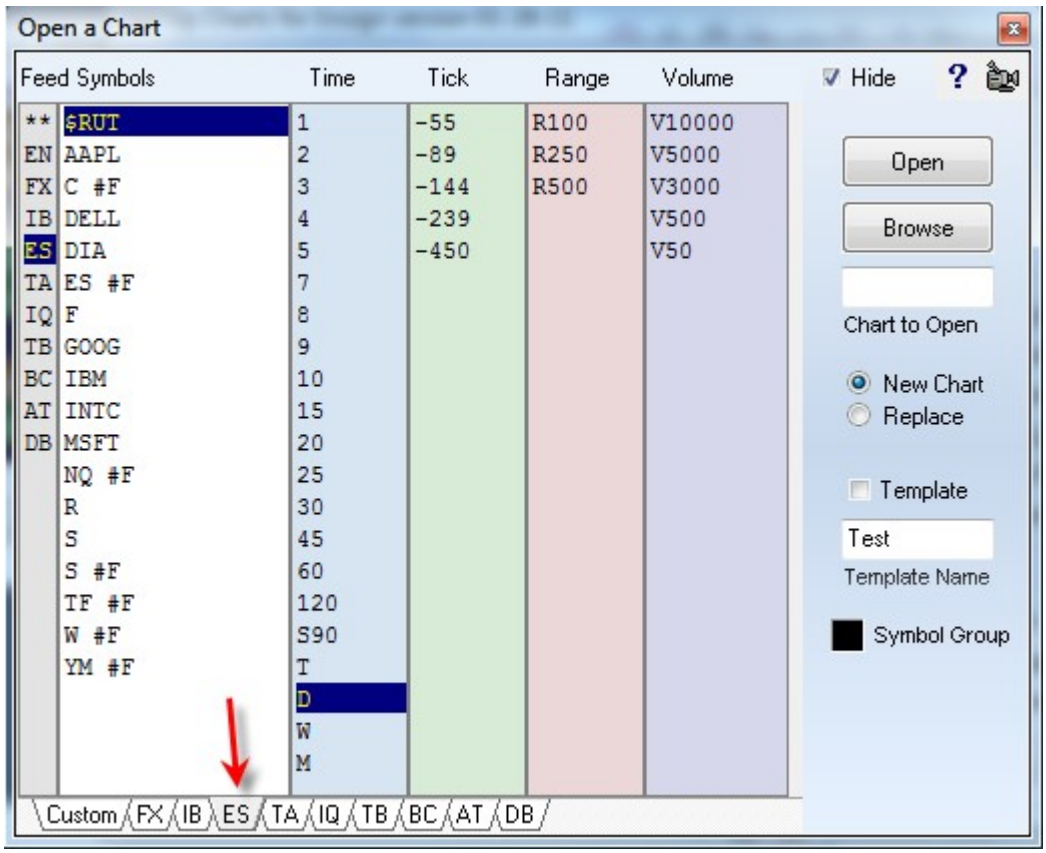
The folders have 3 letters like FXC and ACT where on the charts panel they are shortened to 2 letter tags. These same 2 letter vendor tags show as button labels on the bottom of a quote page, like this.



Quote Page

You can observe the button hints for the vendor name as you hover the mouse over the buttons on the bottom of the quote page. The buttons will show the quote page for all symbols being watched on that vendor feed. Click the ES button to view the eSignal quote page. The symbols on the vendor pages are alphabetical. Move the symbols to custom quote pages if you wish to have a customized organization or to mix symbols from multiple vendors. Note the 1st column is the feed tag, and each symbol on the eSignal page has a ES vendor identifier.

On this custom quote page, you see the 1st column as mixed vendor tags because I have grouped symbols from DBfx, FXcm, ESignal and IB on the same page.



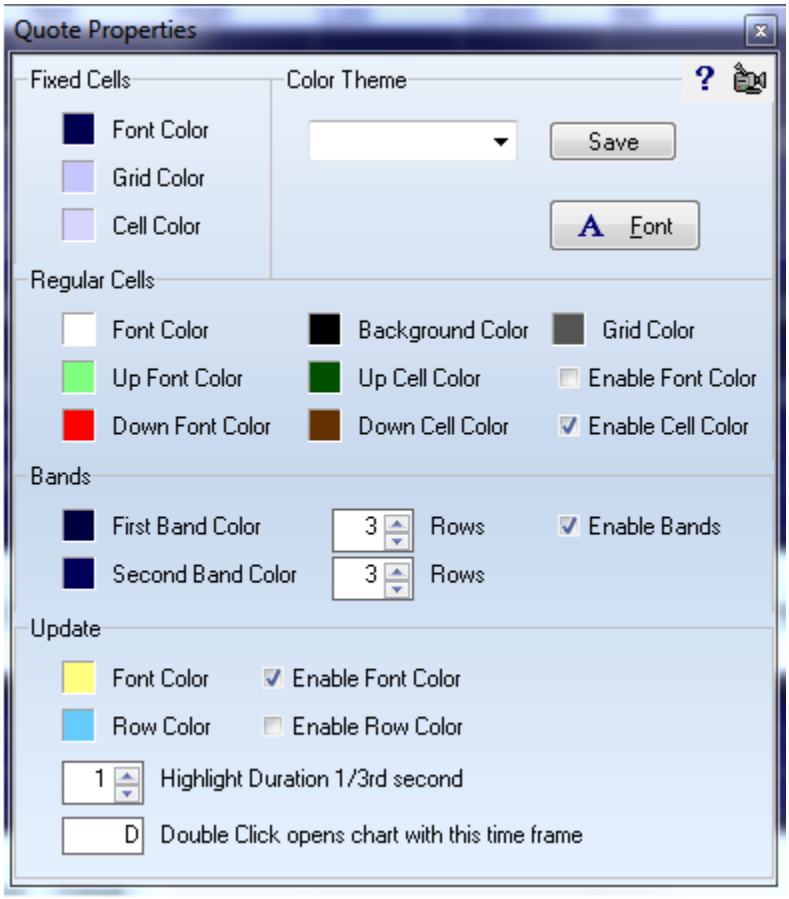
MakesOwnWeather: Fabulous organization, Ensign Howard!

On the charts page, you have tabs at the bottom for having different lists. There are tabs for each vendor which as a list of symbols, and I could click the ES tab to see just a list of symbols on my eSignal feed. In this view I clicked the ES tab and am now looking at an alphabetized list of the eSignal symbols on my eSignal watch list. Make changes to the eSignal watch list on the Setup | Vendor form if you want to add or remove symbols. The charts panel will then follow your changes.

There are help and training video buttons on the charts panel to help you in using the Charts panel to open charts.

Since I talked some about a quote page, let me add a bit more. You can create new custom pages by typing in a name for the page in the Custom combo box on the top of the form. And the entry will create a new tab at the bottom of the form. One tab is automatically added and that is the Variables tab which is a view of the 400 variables used in the program for use with studies and DYOs. Click the Variables tab to show the Variables values and names used in the program. This is the way to see them in one place.

The quote page has a toolbar for common things related to a quote page, such as a button to show a Times Panel for opening a chart from the quote page. The T button is for opening a Time and Sales form. Hover the mouse over each button to see a hint for the name of the button. The Properties button is the page with the blue check mark in the image. This Property button is found on many forms and is the standardized way to change properties for the form. The properties for the quote page is where you can change the color scheme or theme.



Use the Color Theme drop down box to select one of the other themes, or enter our own name in the box and then proceed to change the selections. When done, click the Save button to create or update the file whose name shows in the Color theme box.

Quote pages are considerably more customizable in E10 than in EW. You can change the colors of cells, fonts,

etc. One great new feature is the color bands which I like to help in the visual eye movement across a quote page. The bottom section controls the update effect, such as blinking the font color, or blinking the row color to represent a quote update.

I like the Blue theme best, and its blink is to do a color change on the font from white to yellow for a third of a second. But you are welcome to try out other themes, and customize your own theme for the colors used and the update effects employed. Again, read in the PDF documents about these property forms. The Help button takes you directly to the right page, and there is a training video to watch.

Safe: I did not understand "third of a second". Do you mean that is all it takes in time?

The resolution for the number in the selection box is 1/3rd of a second. So the value of 3 is needed if you want the duration of the update effect to last 1 full second. Enter 6 if you want the highlight for an update to remain for 2 full seconds.

The training video for the quote page demonstrates adding symbols to a custom quote page, rearranging rows and columns, changing column titles, etc., so I will not cover that in the class.

DYOs

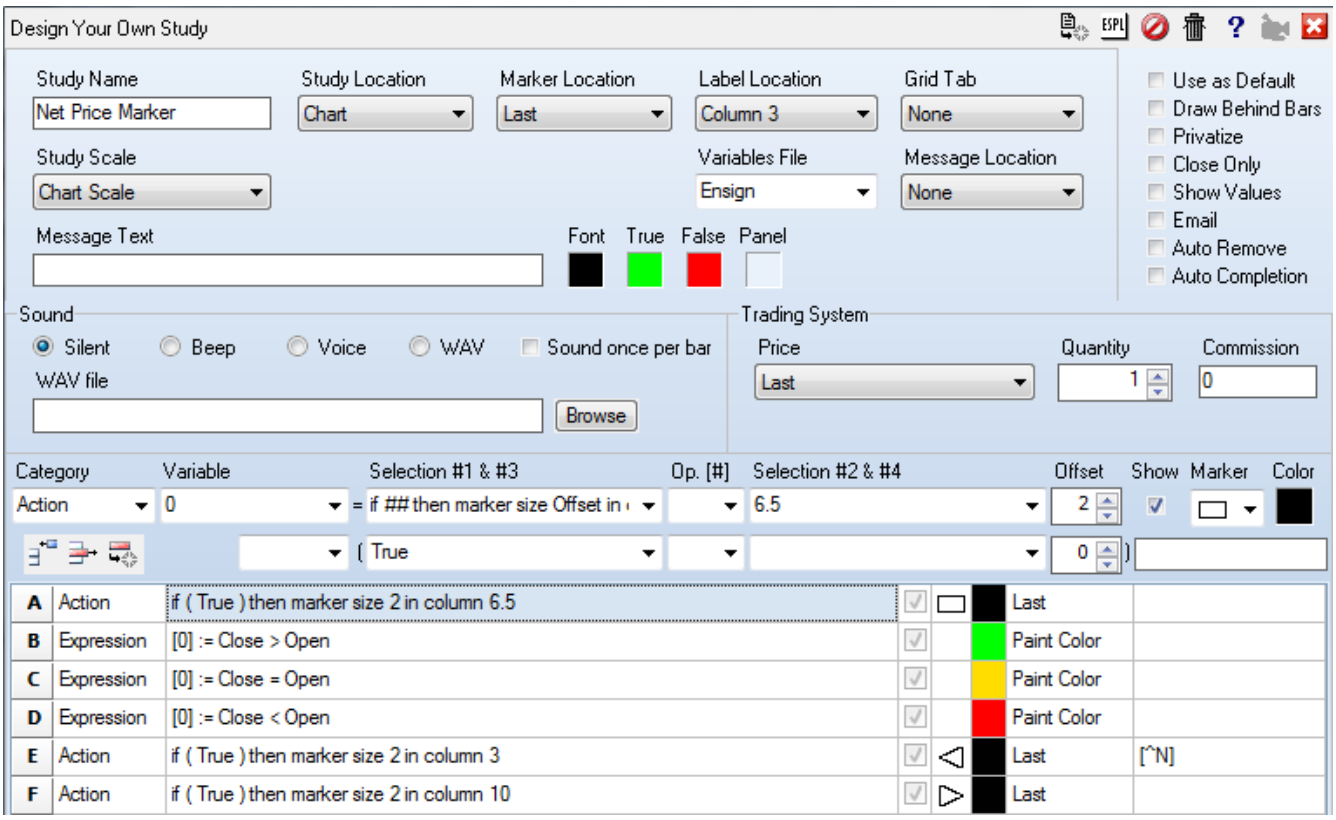
There are many foundational changes to the program such as the free floating windows, and processing any number of feeds simultaneously. Among the major changes is the redesign of the DYO and these changes are the primary reason why E10 cannot just import your existing workspaces and templates.

The old DYO is out and the new DYO is its replacement. The new DYO incorporates what previously was done by Study Alerts, so Study Alerts are out as well. The new DYO is very flexible and powerful, and you can do much more with it in fewer lines of code than in the older EW. For example, I converted a template which had 41 chart objects, many of which were DYOS and Study Alerts and the equivalent replacement was 16 chart objects. The study objects like RSI, Bollinger, Move Averages are one for one replacements with identical property forms, so you will not have trouble converting those from your EW design to the E10.

But it is a different task involved to evolve your Study Alerts and DYOs form EW to E10. The task is doable, and once you are using the new DYOs you will feel it a pain to ever return to the EW DYO. Believe me, the new DYO is really so much better.

For example, in the EW DYO we had lengthy selection lists for study flags, like CCI >= 200, CCI >= 100 and CCI >= 166 etc. The number of choices were limited , and that was not flexible if you wanted a flag that was not on the list. There were workarounds but that involved using extra lines to invent your own flag test.

In the E10 DYO, we have flexible fields and you can pick left and right side arguments and the operator that goes between them. Continuing with the CCI flag example, we can put any number in the right side field and any operator ahead such as > , >= , <>, = , <, <=. This flexible structure has enabled a huge reduction of selection choices. Lets have a look at an example DYO and discuss.



The DYO is accessed from the Study list of available studies. Many of the items on the top portion of the form are similar to old EW DYO, such as a field to name the DYO, and buttons for where to show the study, marker and label. The Sound frame and Trading System frame are additions so we could obsolete the Study Alert which

had similar frames on their forms.

The bottom part is all new. There is a set of boxes for creating a row of script, and then we show 12 rows of script below. Clicking on any row populates the selection boxes with the previous entries the script is created from. One HUGE advantage is you can print the DYO form and have a beautiful piece of readable documentation for what the DYO is doing.

I converted a template which was based on the WoodieCCI and had 41 chart objects, and in the conversion to E10 it ended up using 16 objects. That efficiency is all due to the improved DYO design. So that is less memory and a huge speed improvement for calculation.

Safe: So, our 1000 object templates could go to 300 or less? And use less memory?

YES, E10 will be running faster for several reasons, and one is the reduction in the number of chart objects to implement your systems and templates.

scooter2: Do we go to room zero when slow trading to get help converting ESPL and template objects?

Scooter, come to room #1 for conversion help. Paul will man room #0 and Jayson and I will be here is room #1 to help with E10 beta

JohnA: Note - new DYO's have NAMED global variables and thus become self documenting and very easy to read your logic.

Good point John. You are one who knows very well as you have been using E10 for 5 months. Thanks for all your help John, in the design and testing of the program. There is much more to discover over the coming days and training classes. I think I have saturated everyone with enough for today's class.

Sniffy: 400 GVs ? How many private to a specific chart?

200 public, same as before, 200 private which is a big increase from EW having 56 private. Read in the DYO manual how you can now name the variables. So old way is [10] and new way can be like [Rule1a]. Here is snippet of a DYO in the WoodieCCI template you can download.

Category	Variable	Selection #1 & #3	Op. [#]	Selection #2 & #4	Offset	Show	Marke
Function	143 Angle	= abs(#)			0		
		([Deg25Lsma]	+	[Deg34Ema]	0	)	

A	Action	Label Font Size := -8				
B	Function	[Angle] := abs(([Deg25Lsma] + [Deg34Ema]))				
C	Expression	[0] := [Angle] < 50	●	10% Grid		[B]` Flat
D	Expression	[0] := [Angle] >= 50	●	10% Grid		[B]` Normal
E	Expression	[0] := [Angle] > 70	●	10% Grid		[B]` Trend

CIA: That is so Sweet!

This small example has a readable script in the DYO. Everything in [ ] is a variable, but much more readable to use names instead of just numbers, as in [Angle].

rin: the action area looks really promising there

It indeed is promising,and that is an understatement. And you will really love the new power of the DYO. Go start with the DYO manual and try the examples.

CIA: Marvelous - I have died and gone to heaven today with Named Variables --- solves all our problems.

There is more too than just that. We will train on DYOs tomorrow, but go get a head start today. I have to keep holding myself back.

CIA: Yes, I can see (just a little - in looking it over). Just the tip of iceberg today, I see.

Good analogy with the iceberg. This redesign has been a year long project, and our biggest design overhaul since 1993 when we migrated from DOS to Windows platform.

JohnA: Typical use of new spreadsheet combined with DYO's to push data from chart to the spreadsheet.

Spreadsheet DDJSA

	A	B	ATR	D	E	F	G	H	I	J	Color	Color	M	Position	Profit	Stop	Max Profit	Equity	Trades
1	C	EUR/JPY.2	3.92				Nnet 10 A		RSI 54	MACD Spr>0	Mov Avg	PDT Avg		OUT 1	0	26.40	26.40	1397	64

JohnA: This chart pushed the data to the spreadsheet.

Price Marker

This example is the 1st example in the DYO PDF manual, and is the Template-PriceMarker package you can download using the Package feature. This DYO does the following of showing a price marker in the margin of the chart, which looks like this.

The marker will move up and down as ticks are received. The colors change from green to red to yellow depending on the net with the bar's open and the daily net value is shown in the body of the marker. Lets see how that all came about with a few lines of DYO code.

Row A displays the rectangle marker and the vertical position for its location is at the Last price. The rectangle marker is new, a larger size and can be colored in its interior with the color selected on Row A, which is the color black. So this marker draw a solid black rectangle. It draws in the margin because of the selection used in the Action. This selection says to put the marker in column #2.

Category	Variable	Selection #1 & #3	Op. [#]	Selection #2 & #4	Offset	Show	Marker	Color
Action	0	= if ## then marker size Offset in		6.5	2	☑		
		(True			0		)	

A	Action	if (True) then marker size 2 in column 6.5	☑	Last		
B	Expression	[0] := Close > Open	☑	Paint Color		
C	Expression	[0] := Close = Open	☑	Paint Color		
D	Expression	[0] := Close < Open	☑	Paint Color		
E	Action	if (True) then marker size 2 in column 3	☑	Last	[^N]	
F	Action	if (True) then marker size 2 in column 10	☑	Last		

The #2 in the notation is referring to the 2nd selection field, which is the edit box with the value 6.5. The form has 4 selection drop down boxes and our notation is to identify them as #1, #2, on the top row, and #3 and #4 on the 2nd row of the input area.

Lets discuss the notation in selection #1. This came from the drop down combo box after selecting Action in the Category combo box. The wording on the selection list is shown in box #1: ' if ## then marker in column #2'. The ## is a notation to say the logic will come from the 2nd row, and in our case I have the True flag selected in field #3 so the expression is always True and draws for every bar or tick update. So learn that ## means the 2nd row expression which has 2 operators and 2 input arguments.

The #2 is the 2nd Selection input field, which in the example is a manually entered value of 6.5. The margin on the chart is divided into columns of about 8 pixels per column, so this is moving the marker into that margin 52 pixels to the right from the last bar's drawn position. If the value in #2 were say 4 then it would be moved close to the last bar.

Now this particular statement has an Offset on the top row of a 2, which you can read in the documentation will super size the marker to a larger size. Size 0 is the normal size, a 1 for the offset will make it larger at a medium size, and 2 is the super size. Several of the markers can be resized using this one statement for when they are placed in the margin. For all other expressions, the Offset is a bar offset backwards from the current bar, such as

-1 would be to reference the prior bar.

Row B is an expression and the resulting script is assigning the result to variable [0], which I use as my throw away place. The #1 selection is the Close from the drop down list The #2 selection is the Open from the drop down list for the 2nd Selection box, and the operator between these two fields is the > which is a Boolean operator. The result of the expression is a Boolean flag because a Boolean operator was used.

The Row B script reads: if the Close is greater than the Open then do the show marker because the Show box is checked. No marker happens to be selected, and that means we are just setting the Paint Can color to Green when the Close is greater than the Open.

rin: Where is the drop down list referred to?

Note that for the input fields are combo boxes with a drop down chevron on their right hand side. You click the chevron and the list of choices drops down for you to click to select. Thus you do not have to remember what fields are available, and there are several hundred. Just use the drop down list to find your selection.

rin: So line b, c, d etc were created in the action area?

That is correct. When you click on row B it populates the boxes for you to create or edit, and as changes are made the script shows itself on the selected row. You DO NOT type in the script on the rows. Instead you make selections in the combo boxes and the program will write the script for you. Thus you cannot make a syntax error it mistype a name. Now you can could have errors in your design logic, but the form prevents you from having syntax or spelling errors.

Row C changes the paint can color to Yellow if the Close is equal to the Open and change the color to Red on row D when the Close is below the Open. Then Line E and F draw more parts to complete the marker. E will draw the left triangle marker, in column 3, and it happens to be super sized too. The color is black, and that is a special selection that says to use the paint can if color was put in the can, which is the case in our example. Though you have selected black on the form, it uses the green, yellow, or red that was put in the paint can by row B, C or D.

Row E has a label to print as well and the label is the [^N] token which reads the daily net from the quote page and that is the source of the net showing on the rectangle put down by row A. Row F complete the marker with it right side arrow, with the interior filled with the paint can color. So in 6 lines of code we have created a clever marker using new markers, paint can, and location of the markers with different offsets in the margin.

MakesOwnWeather: Ensign Howard, point out again how the super size is taken in E and F.

If you click on row E or row F, it will populate the input boxes, and in the input boxes you will see the super size of a 2 in the offset box.

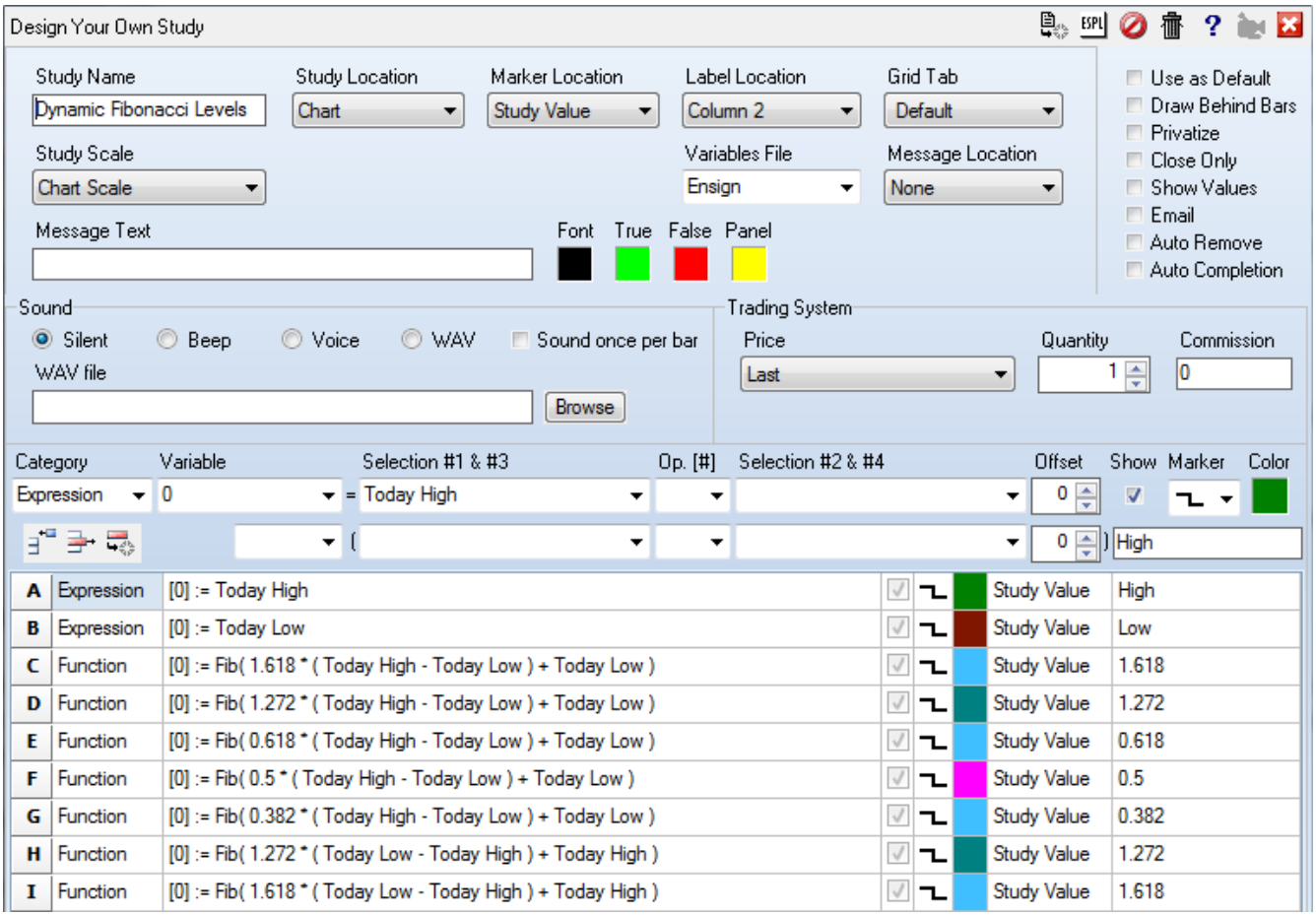
Again, this form has a Help button which takes you to the DYO manual. This example is documented on pages 18 and 19. And the documentation with its illustrations is superior to the spontaneous things I am saying about it in this training class. But it introduces you to how the DYO form works.

Buffy3: Thanks good to know as not seeing where to put information used now in our DYOs.

Buffy, you will have to do some reverse engineering to look at an EW DYO row, understand what it is doing, and then implement the equivalent logic using the new DYO form. It is not a plug in operation, but rather what is the logic, and redo the same thing in the new DYO. You will find the new DYO design to be more flexible, and much easier to read than working with the old DYO. The new will be readable, and the old is decipherable.

Dynamic Fibonacci Levels

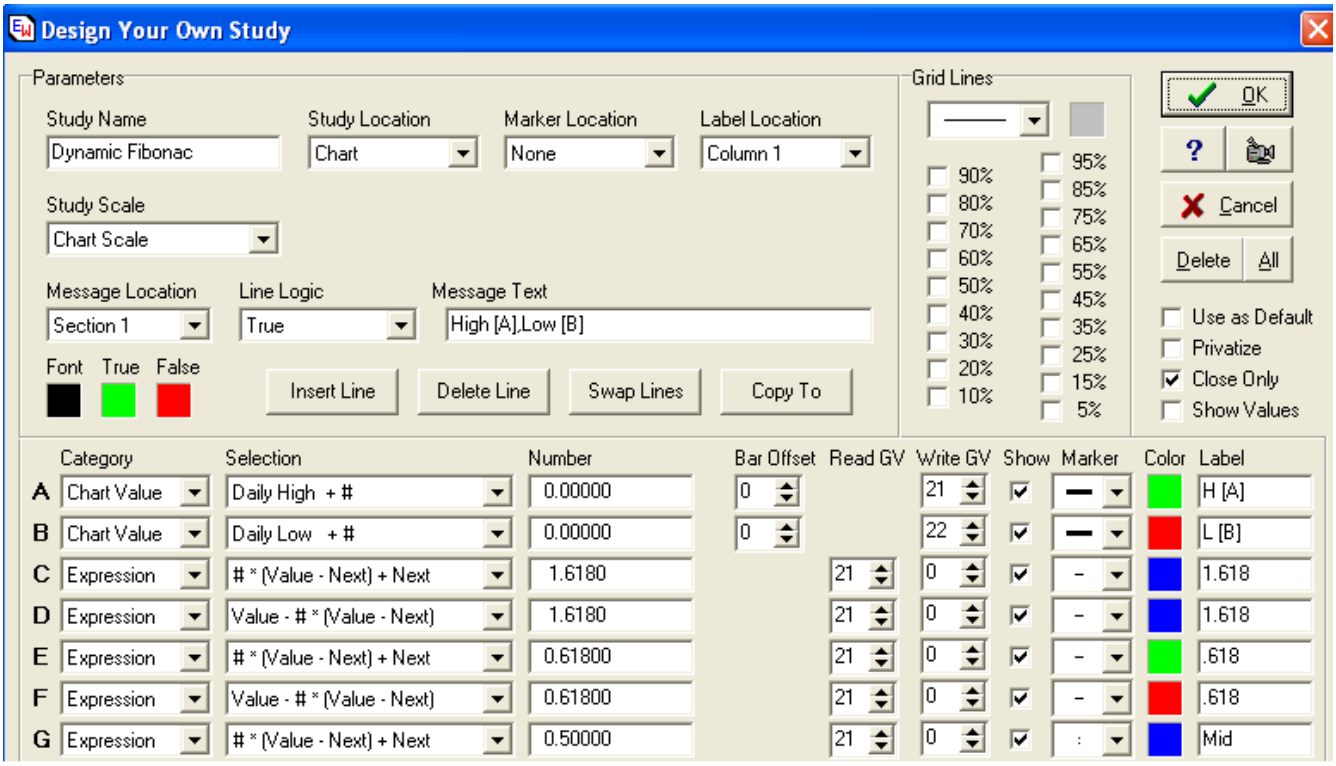
Now let me show another example also in the manual that starts to show off the power of the new expressions.



\This example is a conversion of the Dynamic Fibs example in the old EW you can find that example in our DYO Library. Compare this with an image of the old so you can see the new is nicer

Here is the entry form for the Dynamic Fibonacci in the EW. You can compare readability with the new design, which I will return to. In the Dynamic Fib DYO for E10, Row A and B read values for Today High and Low and plot lines at those levels in green and red. The selections for Today High and Today Low were picked from the drop lists for field Section #1. No additional math was needed so the other input boxes were left blank.

The example shows Row A selected and populating the input boxes. Row C through I are all the same formula, which is the Fibonacci formula. Fib is one of the built in selections in the Function category. This formula uses a parameter for the percentage multiplier and then two prices, which again were selected to be Today High and Today Low.



bl2: On row A and B - Can we add [a] and [b] to High and Low - printing values on chart margin too

Answer is yes. The row A and B labels show just words, but we could expand the label to have variables, tokens and row values. So [A] or [a] would resolve to the row A value which is Today High.

Lets read the script on row I together. The first column is the row, 2nd column says this item is from the Function category, then the 3rd column has the script created by the input selections. The expression returns a result which is put in variable [0] by the [0] := assignment. For me this is a throw away in that I do not need the value elsewhere. If the value is wanted elsewhere some other variable could have been selected, and possibly named as well. But my style is to use [0] when it is a throw away.

Buffy3: Works like old global variables?

Yes buffy, GVs in EW are now referred to as just Variables in E10. The first 200 are global or public in scope, and the next 200 are private to the chart and only accessed by that chart.

DarthTrader: Howard, so [0] is like EW write to 0?

DarthTrader, answer is YES to EW write to 0. Same use.

The Fib function is the expression shown which is 1.618 * (TL - TH) + TH. The parenthesis are added for readability and you know the order of evaluation.

JJ: Howard -- is there still a Limit on # of characters available for text labels as in ew dyo?

The EW had structure space for around 75 characters and in E10 that has been increased to around 125. So there is still a limit, but it is higher, and with the rows and variables basically being self documenting the use of comments in labels has been greatly reduced. My brother made the comment today that in all of his conversions and designs, he has not run into the character limit yet with E10. The DYOs he writes are much more readable and he has stopped trying to use labels as a comment area.

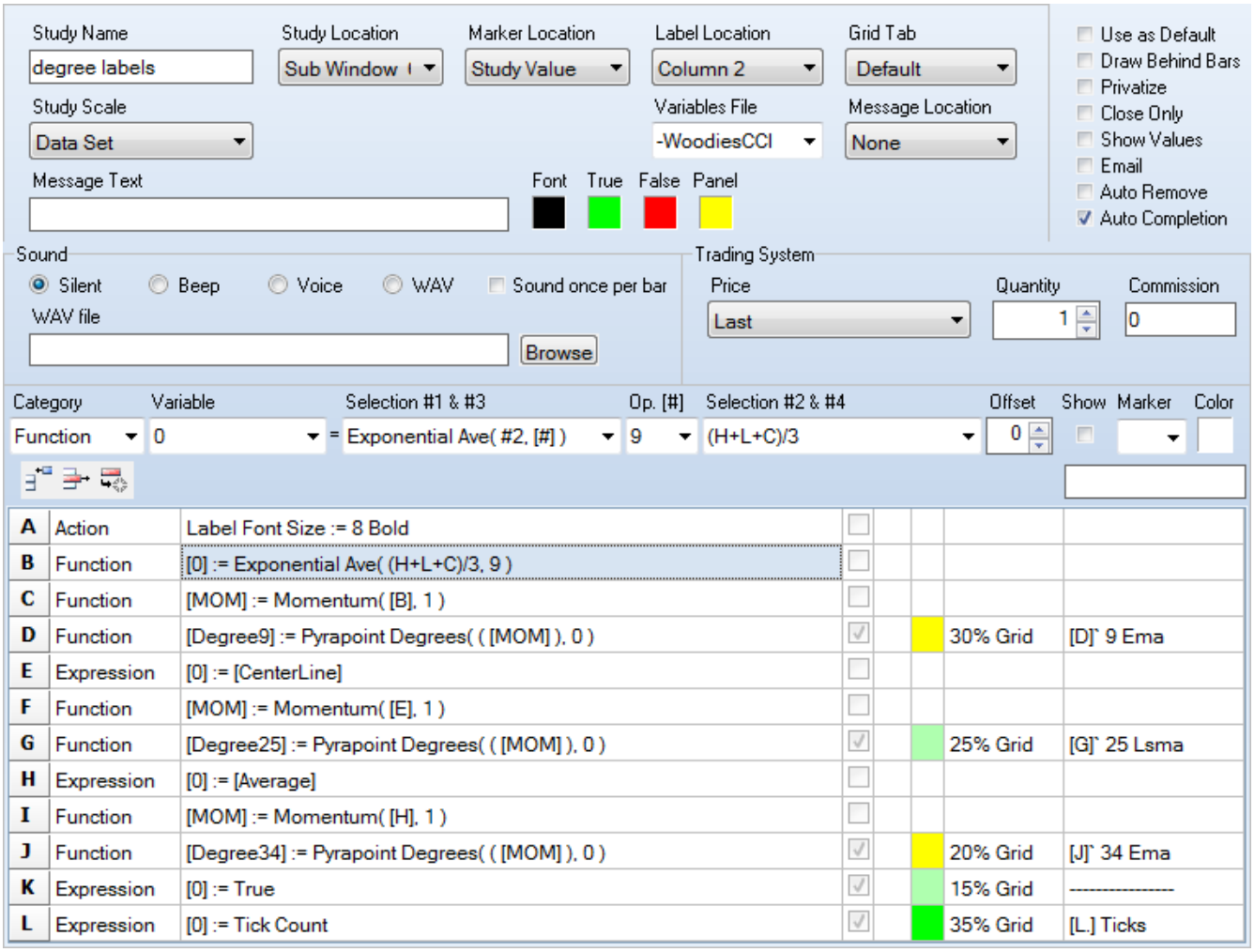
rin: Are the variable names impacted by the 125 character limit?

JohnA: rin - NO - variable names are unlimited and separate from the DYO strings.

Woodies CCI

Let me show one last example, again which is a package for download and that is the WoodiesCCI template. That template had several DYOs to do labels in the margin.

A separate DYO was needed in EW for each label location. Those are all combined into a single DYO, like this.



In this example row D posts one answer to the 30% Grid location and row G posts another answer to the 25% Grid location, etc. Row J posts to the 20% Grid location and Row K to the 15% Grid. This DYO has consolidated into one what takes 5 DYOs in EW to accomplish. That is both a huge savings in space, and execution speed, and in readability to maintain your templates and systems.

Row B is a Function for the Exponential Ave and it has 2 parameters, first of which is the data point and (HLC/3) is picked, and the 2nd parameter is the period and 9 is entered. Row B is very readable now, much more so than the same logic in EW DYO. Row C is another function for Momentum, and this function result is assigned to a variable that has been named with the word Momentum. Then row D uses that variable from row C as one of its parameters.

All variables are shown in square brackets. So a variable that I have named to be [Momentum] is receiving the function result on row C. Then this variable [Momentum] is an input to the function on row D for the Pyrapoint Degrees calculation. Note that the row C function referenced row B with the [B] tag for its input stream.

Safe: Howard, there was a question yesterday about "someone being sad" about not being able to cross time frame values, but it seems to me that with the variable name variables, that is not a problem anymore. I means if

I have a variable 5MinMomentum, I can do a cross transfer. No? Or am I reading E10 wrong?

Safe, you can put values in variables and name them for clarity. The issue is in the transfer you have just the current value in the variable to transfer and not a history of values at each bar location in the past. So that is the same limitation as in EW.

Safe: Oh, OK. I get it.

In real time moving forward it all works well because calculations are made, passed, and used. The challenge is in having a history in the past to plot.

Safe: So, it is just in back testing that we have the challenge. Yes. Still sad.

JohnA: This new DYO structure is very flexible, more powerful and extremely fast - these DYO scripts compile to execute as indexed case statements and are VERY FAST.

Buffy3: Yes excellent thanks. Thanks for comment John. Sure does help. Classes are good thing.

CIA: Excellent Howard. Spoon feeding us helps a great deal. :)

Again, upgrade Ensign to have the recent improvements and come to chat room #1 to report challenges or get help from Jayson.

Tillson T3 DYO

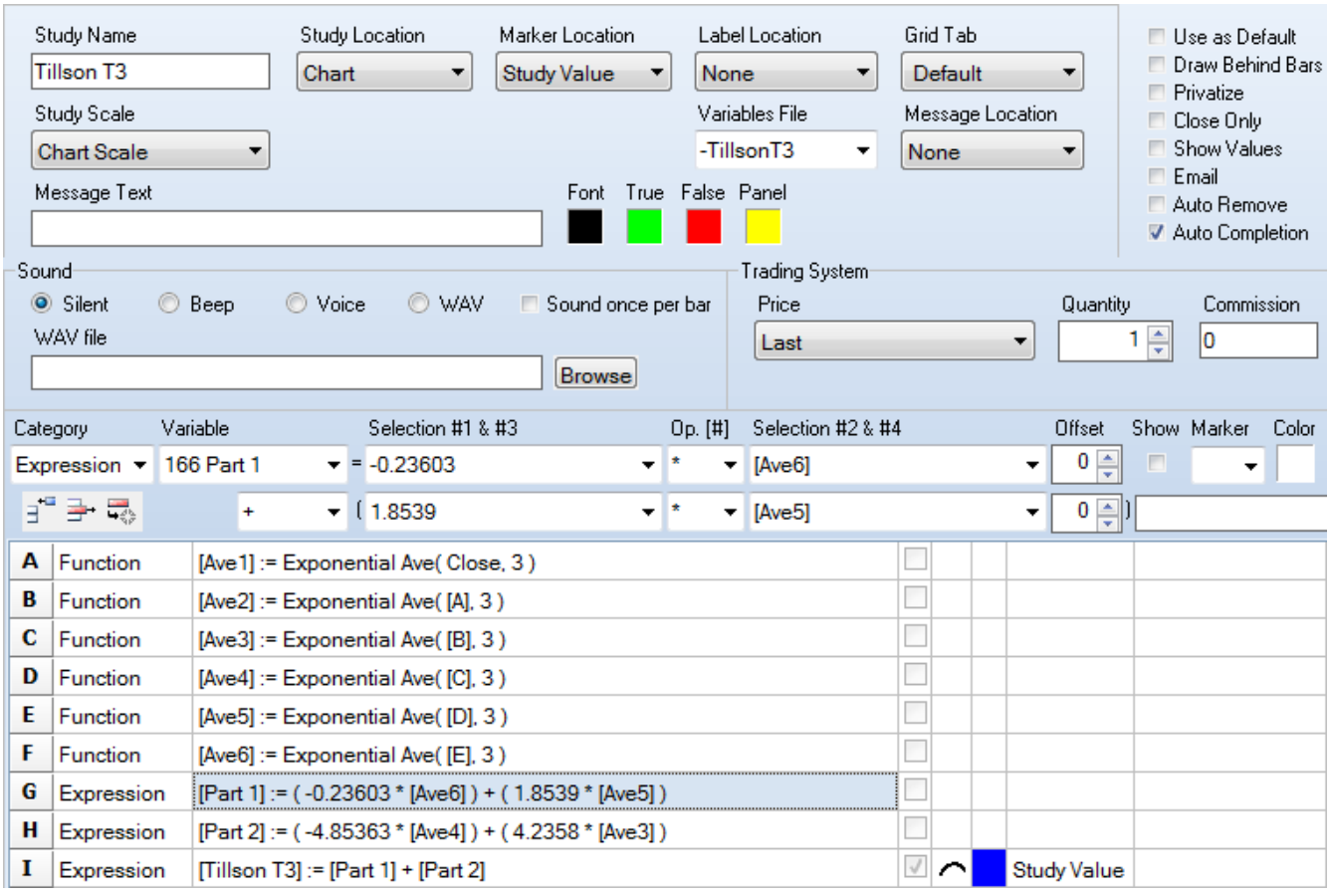
I encourage you to read the DYO manual, which is a great introduction to the redesign of the DYO feature. The more you know about the redesign, the more you will like it and that helps to get over the disappointment that your layouts and templates from EW are not compatible with E10. The new DYO is too radically different in its design and approach to attempt to programmatically convert EW's DYOs.

Lets take a DYO example from EW and convert it in this class so that you can see the process is not something to be feared. The DYO example I would like to convert in the class today is the Tillson T3 Average example. The EW library web page for Tillson has the formula, chart example and DYO pictures for us to work with.

http://ensign.editme.com/1573

This study has several nested moving averages, and then an expression to weight each of the averages back to a composite average for plotting. EW The EW implementation used 2 DYOs. Lets get to work and do this conversion in class, and see how it goes for us.

I will put a DYO on a chart and post images of the DYO and discuss it line by line. You can follow my progress, and when I am done, I will post the final result as a template in a package for you to download if you want this example.



The first formula is a 3 period exponential moving average of the bar's close, and in EW that is implemented by Lines A and B in the EW web page image. I have done the same thing in E10 with Row A, which used the Function category to find the Exponential average formula, which takes 2 parameters.

The #2 parameter is the Selection #2 field entry, and is the data point the average processes. In Selection #2 I used the drop down list to select Close, which is the bar's Close. The period for the formula is the [#] parameter which is the field between #1 and #2, labeled Op.[#]. This field can be used for a number parameter like is done

in this example or it can be a drop down list for selecting a math operator. I manually typed 3 in this [#] combo box field.

The 2nd formula for the Tillson is a 3 period exponential average of this 1st average. In the EW example that is Line C. The new Row B implements the average of the 1st average. And am naming Variables to make the script easier to read.

Sniffy: Could you explain the variable entries please, especially the naming?

Clicking on Row A selects it which populates the input boxes. I use the Variable drop down list box to go find an unnamed variable and I happened to choose variable 160. After selecting that index in the list, I then typed e1 after the 160 that showed in the combo box. That action of typing text gave the variable a name, and the name given was the text 'e1'. On row B, I did the same thing to give the name e2 to variable 161 in the drop down list.

For the Row B Selection #2 field, type [in the field and that switches the drop down list from a list of data points to a list of variables. Use the list to find variables, or just type in the variable name or reference tag, and finish with the] bracket. I typed in [A] which a reference tag for the DYO Row A array of values.

So this Row B average is using as its data point the data from Row A. Selection field #2 needs to reference row A, and not the variable e1. The subtle reason is known to me, the programmer, and it is this. [A] is the array of values used by Row A, whereas [e1] is a single value in a variable. We need a row of values, not a single value, to calculate the exponential average on.

I manually put in Selection field #2 a tag to reference Row B. Each DYO row can be referenced by putting the Row letter in square brackets. It looks like a variable, but is a reference tag for a DYO row. This does point out that you must not use single letters A through L as variable names when you name your variables. We need to reference the row so that we have an array of values, ie. a value at every bar position, so the average can be calculated.

Now lets write the 3rd formula, which is an exp average of row B, and is the Line D in the EW DYO. The new Row C is the 3rd formula. On Row C I named the 162 variable to be e3 and have this average use Row B as its input values to average. e4, e5, and e6 are the same pattern, so let me whip out all of them.

The Tillson formula has some constants C1 through C4 to multiply 4 of the averages by, and then sum these 4 parts. We could use lines to create the constants, but that is a waste of CPU processing to calculate the constants over and over again. I suggest you use a calculator to multiply out the 4 constants and use in the final formula.

This is basically what was done in the EW example. Lets start an expression for C1 * e6 + C2 * E5.

Row G name a variable 166 to be a useful name such as Part 1. I typed in the C1 constant in field #1, selected the multiply operator in the drop down box, and typed in our exponential average [e6] by name which is the result of Row F. The expression continues with a + operator on the 2nd row of the input fields, the C2 constant and the [e5] variable from Row E. The parenthesis added by the program show the order of evaluation.

Now lets write the 2nd half of the expression, similar to row G's expression. Based on the training given so far, you should understand how I created the expression for Row H. Now lets add these 2 parts for the final line to plot, and plot it.

Category	Variable	Selection #1 & #3	Op. [#]	Selection #2 & #4	Offset
Expression	166 Part 1	= -0.23603	*	[Ave6]	0
	+	(1.8539	*	[Ave5]	0)

A	Function	[Ave1] := Exponential Ave(Close, 3)	☐				
B	Function	[Ave2] := Exponential Ave([A], 3)	☐				
C	Function	[Ave3] := Exponential Ave([B], 3)	☐				
D	Function	[Ave4] := Exponential Ave([C], 3)	☐				
E	Function	[Ave5] := Exponential Ave([D], 3)	☐				
F	Function	[Ave6] := Exponential Ave([E], 3)	☐				
G	Expression	[Part 1] := (-0.23603 * [Ave6]) + (1.8539 * [Ave5])	☐				
H	Expression	[Part 2] := (-4.85363 * [Ave4]) + (4.2358 * [Ave3])	☐				
I	Expression	[Tillson T3] := [Part 1] + [Part 2]	☑	⌒			Study Value

For Row I, I named a variable with the text Tillson T3, which makes the line more readable, and wrote an expression that referenced the variables for the 2 parts saved on Row G and H. The Show box is checked saying this line has something to plot, picked a marker and color. The Marker Location is on Study Value so it plots the value calculated on this row.

CIA: Object technology operators and everything!

Here is an example of our new study creation for Tillson T3.

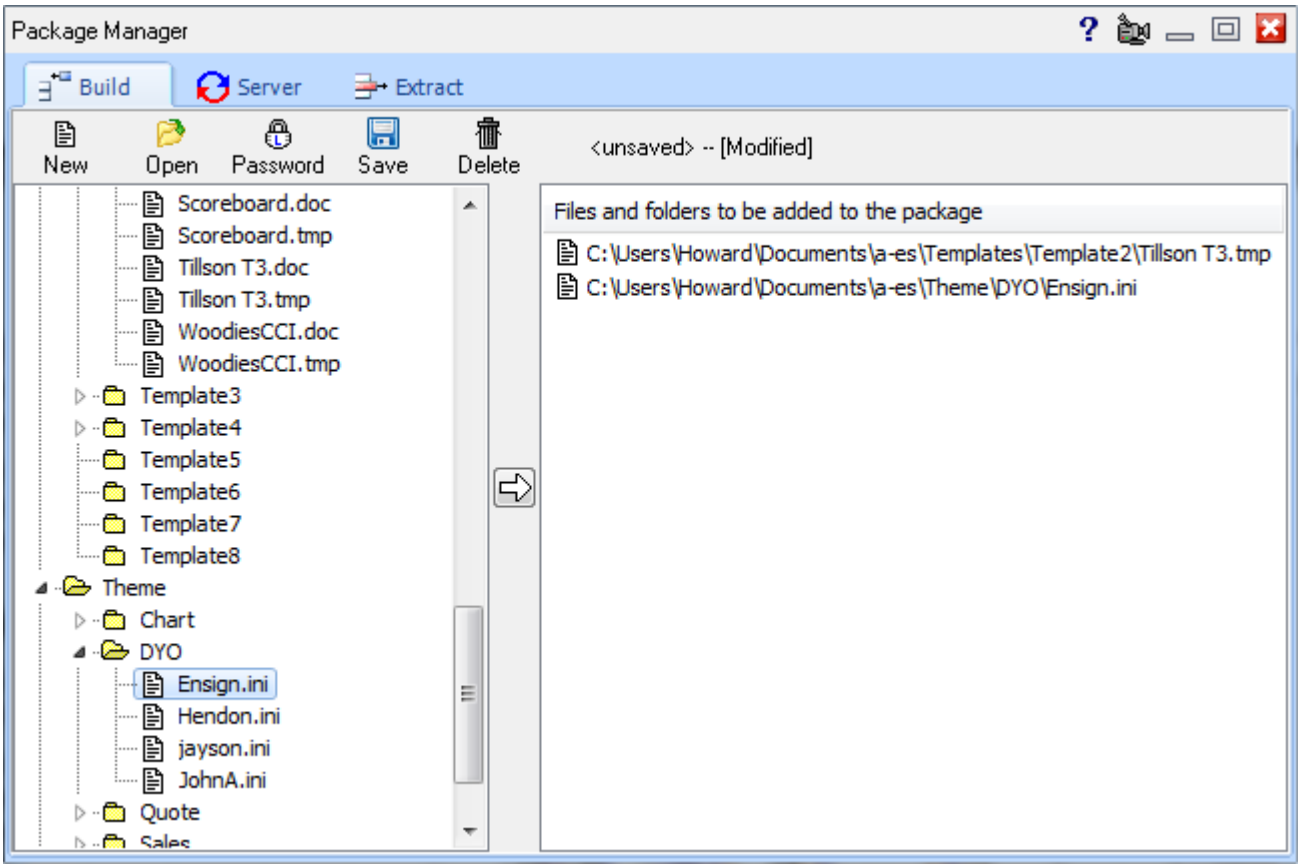
The chart in the EW web page example had a line that passed through the chart bars with quick response, so I think our new E10 conversion of this example is correct. Of course it would help to do a side by side of the EW template for Tillson to compare with this new DYO written for E10.

Of the two examples, I find the E10 design to be very readable, quite like the formulas shown at the top of the article. The example used 9 DYO lines in a single DYO in E10 whereas 2 DYOs were used in the EW implementation. Print the DYO form to make a very nice page of documentation of the implementation.

Make a Package

Give the DYO a name, save as a template, and make a package of it for distribution. I saved this DYO as a Template using the Template button on the chart, clicked the Save As button and entered a name of Tillson T3.

Now I will make a package of it by clicking the Package button on the Setup ribbon. I will use the build tab, and navigate to my template folder and find the Tillson T3 template file. Drag this file to the right side list for building. I am also going to put in this package the Ensign.ini file from the Theme\ DYO folder because this is the file that has the variables I named in the DYO.



Now, I suggest that when you do your DYOs, you use your own private variables name file and distribute your private names file with your template. That way you are not in competition with the names used in my Ensign.ini file, which will be the file used in all my examples.

CIA: Please tell us more about that INI file.

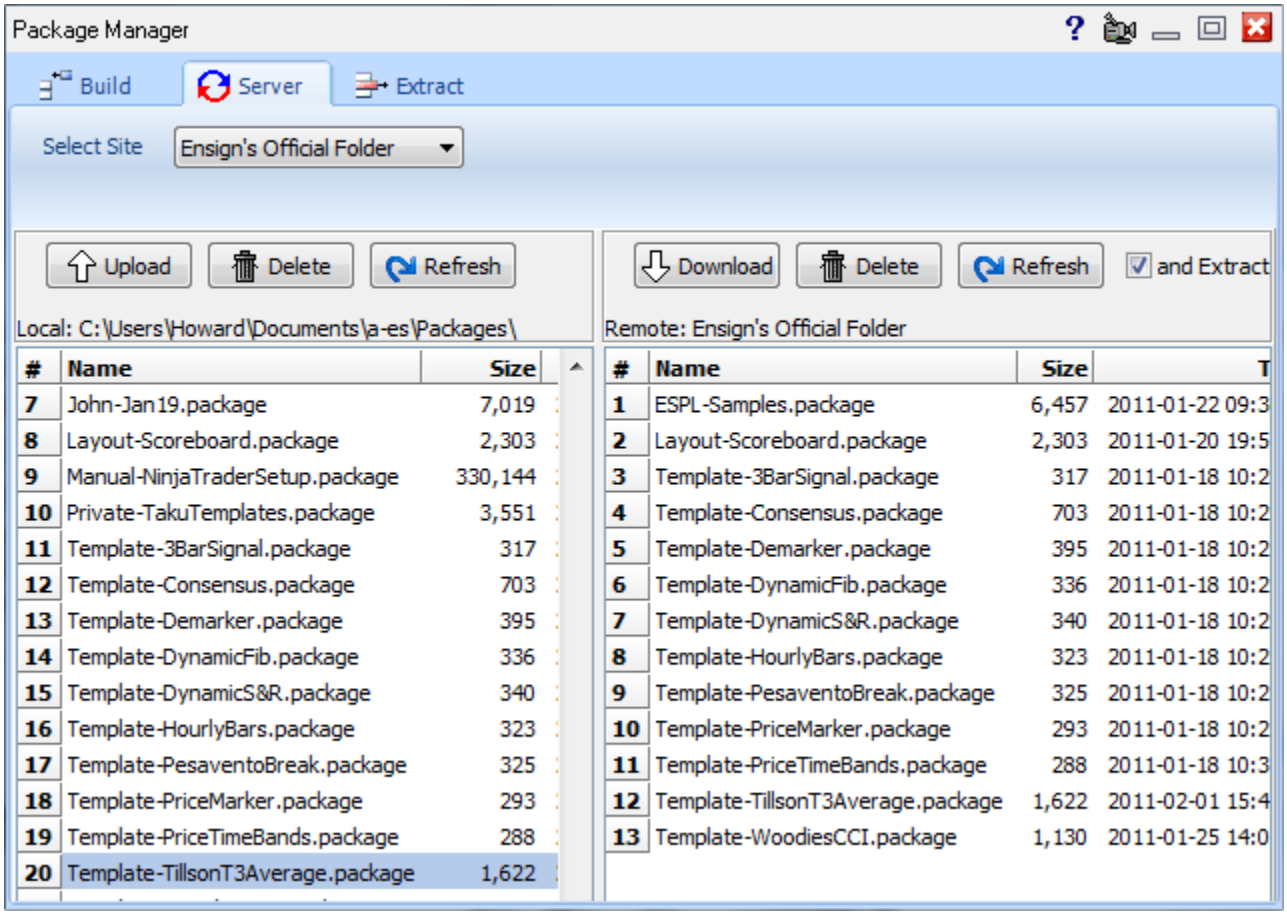
The 1st step when you start your DYO would be to pick the Variables File. To start a new variables file type in a name in the Variables File combo box. Then your Variable names will be in this Variables file which you can distribute with your Template. Other will see your name variables on the DYO form. The variable name files are save in the C:\Ensign10\Theme\DYO folder.

I have selected 2 files for the package. The template is the .tmp file from the templates folder where I saved it. If you take time to write a description in the template form, then also include the .doc file with the same template name you find in the folder. And I have added the Ensign.ini file so you have the names of the variables I used in the example. Now I will click the Save button with creates the package using a name I enter.

Buffy3: So this is like attaching to email?

Better Buffy, because a package compresses the files, and when downloaded from the server all files are decompressed and placed in their correct folders. There will not be any confusion about where the files belong.

I built the package with the Save button and now will change to the Server tab to upload it to our server.



I have the package selected on the left, and will click the Upload button. Since I am an official of Ensign, I can upload it to the Ensign's Official Folder. You as a user can download from this official folder but not upload to it. You would have to post your uploads to the General Public folder.

If you want this package, or any others, go get it by clicking the Package button on the Setup ribbon. Select the Server tab, select the TillsonT3Average package on the right side list and click the download button. Because the 'and Extract' box is checked, it will also extract and put the files from the package in the correct folders.

The template will go to the Template2 folder because that is where it was created from, and the Ensign.ini will go to the Theme\Dyo folder. You will be prompted to overwrite the Ensign.ini file that is already there. Answer the prompt by clicking the Yes button.

Ok, that is it.... enjoy... we did something useful in our class today of converting the Tillson template from EW to E10, and published our new template to the Ensign servers for you to download if you want to get it.

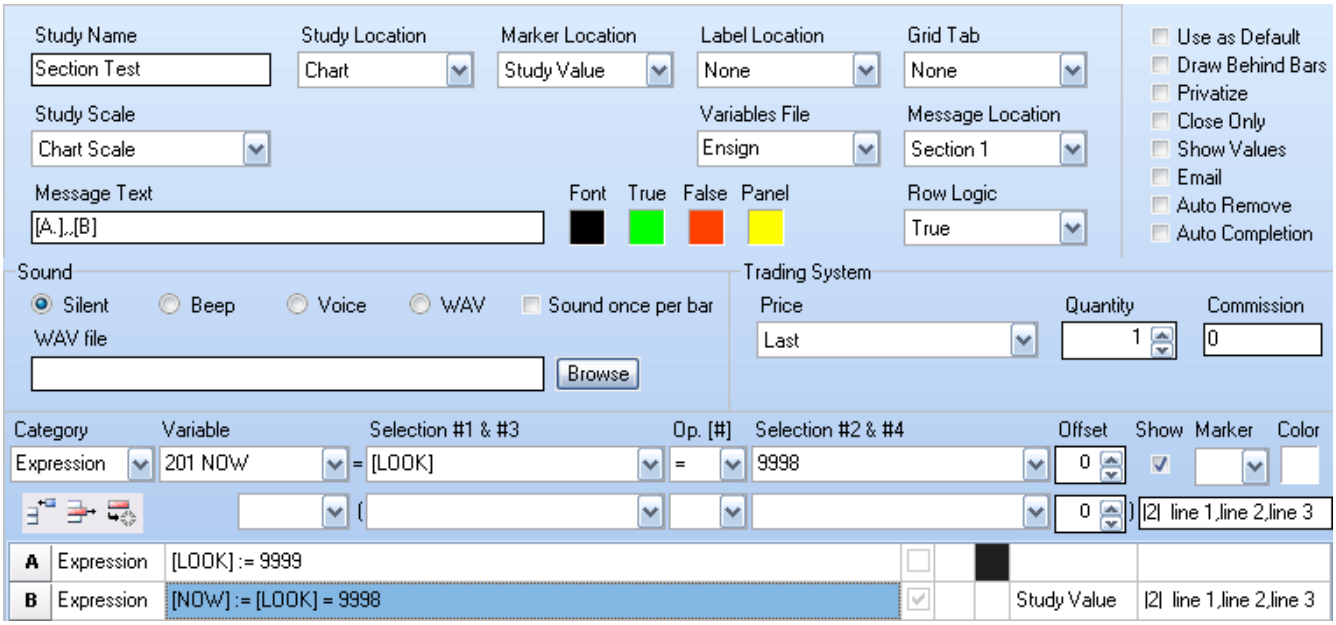
Expression Flags

Sniffy: Is there a simple Flag to test a variable for a specific value (like [200] = 999 or [200] > 999 etc) ?

Yes, Sniffy. One of the operators is the >= operator on the Op list. You would use the category of Expression. Expression could evaluate to a number result or to a Boolean result. It will be Boolean because of the Boolean operator you use.

Sniffy: Ah, not the Flag selection then.

Correct. The majority of your math and Boolean work with be with Expression category. The Flag category is for finding pre-written flag tests associated with studies. After the top row has been used to fetch the study flags, you can still do a bit more of an expression on the flag using the bottom row of the input area.



Your example is correct, Sniffy. 9999 is not equal to 9998.

Sniffy: Yep. That is expected result, and it colors the section 2 Red for false, while section 1 retains the True color of Green from the row logic.

DarthTrader: That last example by Sniffy was very helpful - answered some questions.

You accomplished some big steps forward in your understanding with your example Sniffy. Congratulations.

bl2: Did we lose the "count false" line in DYO?

You can sum the row of Boolean flags, and the sum is the count. The Boolean False is the value 0. The Boolean True is the value 1. So if the last 10 flags were 0 1 1 0 0 0 1 10 1 the sum is 5 for True

The particular statement for Count has been replaced with different logic and selections, but you can accomplish the same thing.

Relative Slope

This was documented for EW in this web page.

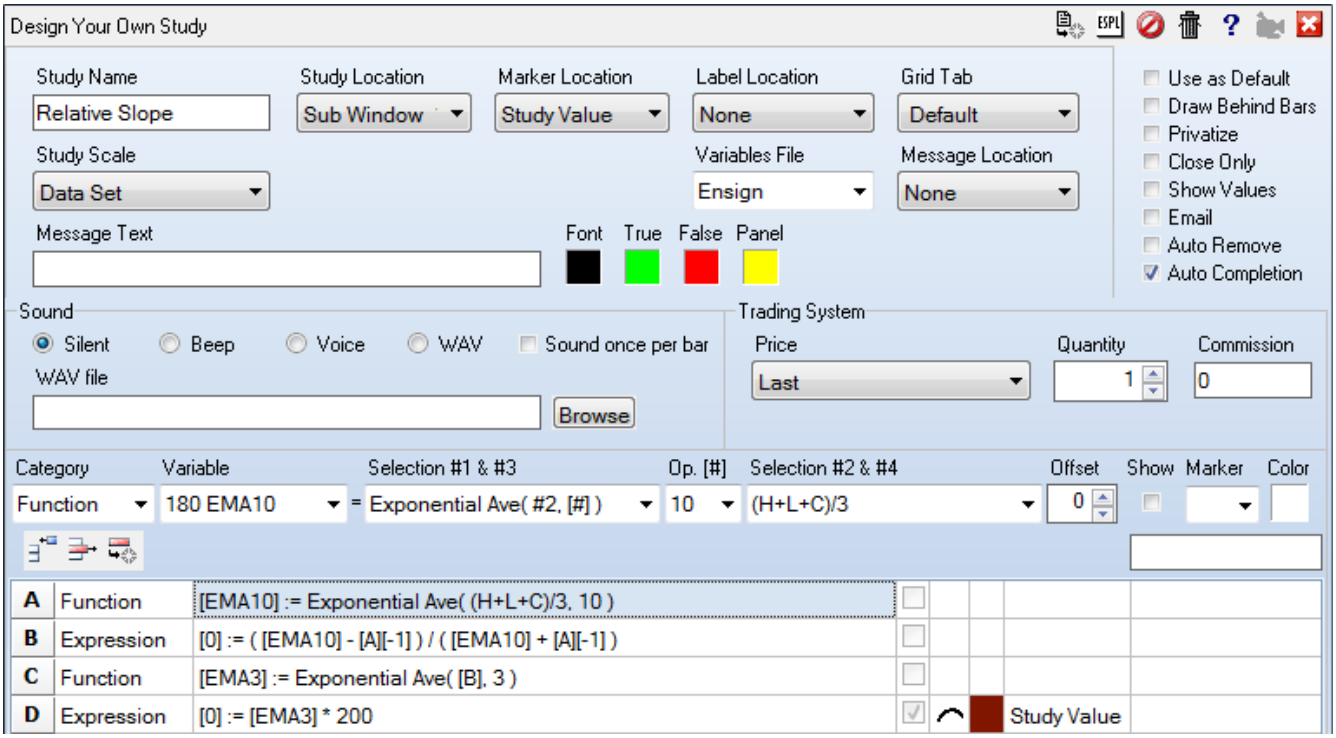
http://ensign.editme.com/q1347

Scroll down to show the formula and the study line. The web page also shows the EW DYO implementation.

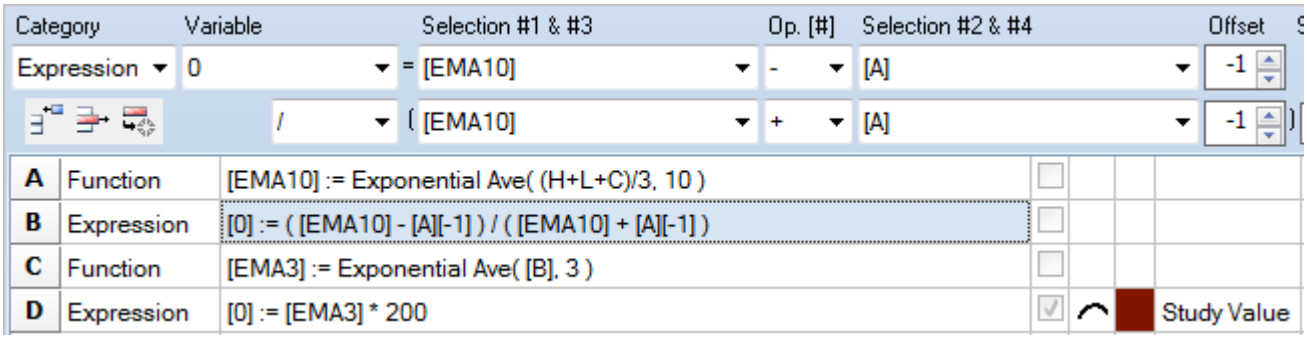
Relative Slope

```
K=EMA((H+L+C)/3,10);
S1=2*(K-REF(K,-1))/(K+REF(K,-1));
RS=100*EMA(S1,3);
GRAPH0=RS;
```

Here is the conversion of this study to use the E10 DYO. This example and other examples are available for download from our web site using the Package feature.



Row A implements the Exponential Average, with a period of 10, and a data point of the (H+L+C)/3. This is a direct equivalent of the K= formula shown above.



Row B is the clever part of this example, and it implements quite directly the S1 = formula. Row A is the 10 period average and that is placed in a variable named [EMA10]. This average is used in the row B formula in two places as shown. The formula also needs the prior value of the average. In the documentation this is listed as REF(K,-1). The equivalent in E10 is to reference Row A which has a series of values, and use the Offset selection which is set to -1 to refer to the PRIOR value from Row A. In the script that shows for Row B, this shows as [A][-1].

The reason I did not use [A] where I used [EMA10] is because the Offset of -1 on the top row would have applied to the [A] placed in the 1st selection field as well. That is not what is wanted. We want a current value of the average in Selection #1, and so the Variable is used. Variables ONLY have a current value and would not be affected by the use of the Offset parameter. Offset parameters will affect Row references, like the [A], and affect bar data points, such as High, Low, Open, Last, Volume, etc.

In summary, Row B as written gives us the formula we seek of:

(Average - PriorAverage) / (Average+PriorAverage)

Function Data Points

Row C then calculates a 3 period average of Row B. It may be a subtle point but an important one that we cannot use the Variable that is assigned on row B as the data point in Row C. There is a temptation to do that, but it would be a calculation error. The functions for the Averages, Standard Deviation, Sums, etc, need a set of values for their calculation. A variable would be a singular value just calculated. The Variable has no history. You MUST reference the row to have a set of values, ie. a value at each bar position.

This is an important concept to grasp, otherwise you will make mistakes in your use of the built in functions.

Sniffy: Would an error show if we used a single point value erroneously instead of an array reference?

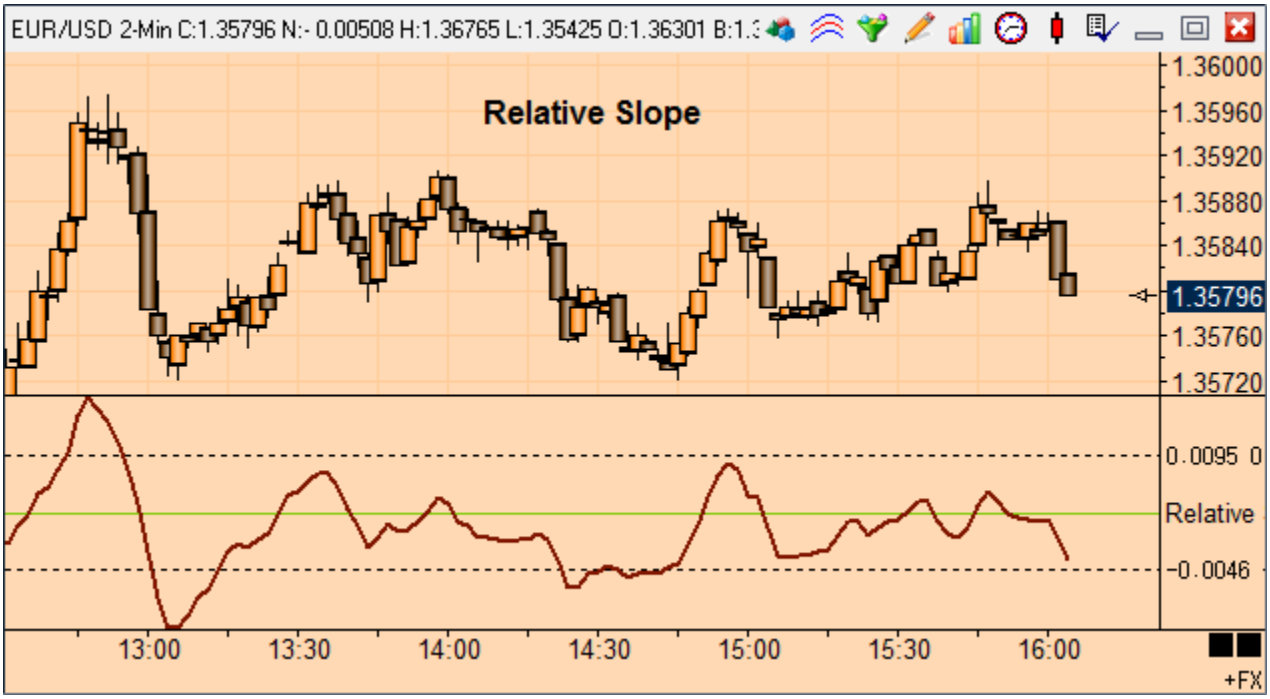
Sniffy, the program does not now generate an error or a warning, but I can see that it could because it does know that you have put in a reference to a variable in a parameter position where an array is needed. I can improve the program to show |error| in the script when the wrong type of parameter is used in these functions.

Sniffy: I think that would be very helpful for many of us, thx.

That would be a good improvement and help prevent some of the support calls that failure to understand this principle will result in.

And then the formula for the Relative Slope had some scaling to magnify the lines values, and this is done in our example by row D. I multiply by 200. No this is not a mistake. In the original formula they multiply by 2 on the S1= formula and then by 100 on the RS= formula. I just did both in the final step, which is equivalent.

The original EW DYO required 8 lines of script and the E10 implementation was done in 4.

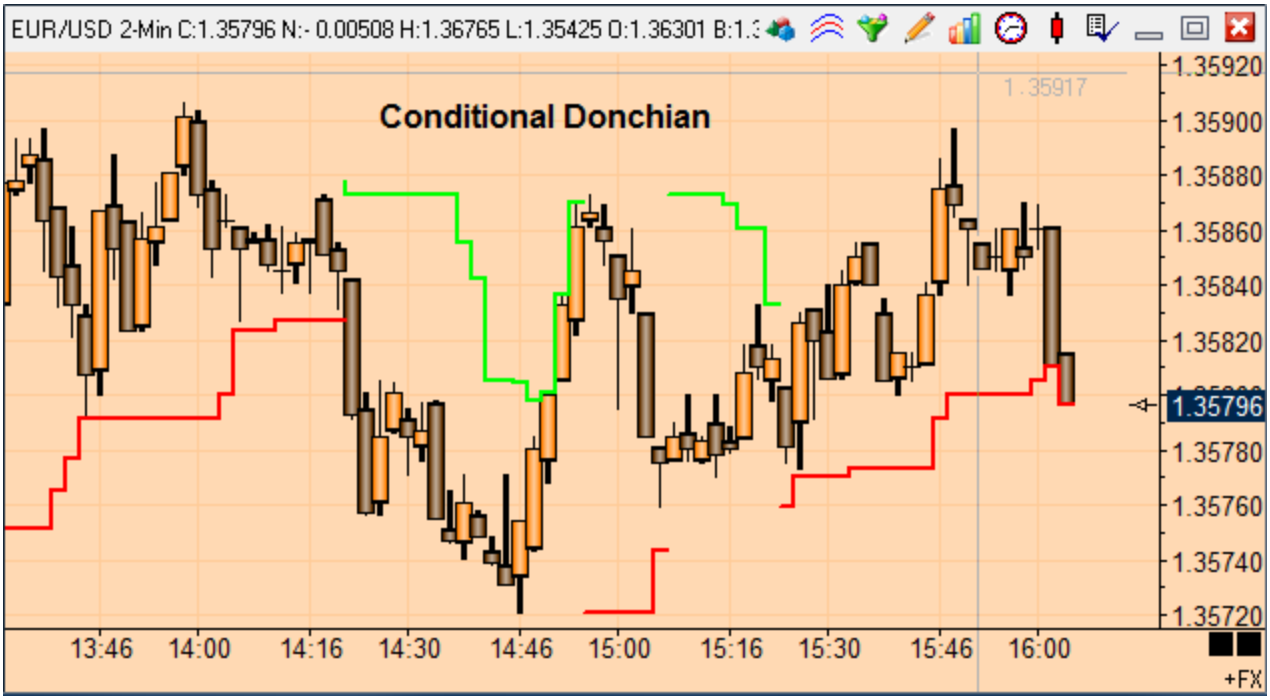


Conditional Donchian

The next example basically tests a MACD study to see if it is above or below zero, and then plots one of the Donchian study channel lines. The chart is set up with a MACD study, but no lines are plotted, and a Donchian Channel study, again with no lines plotted.

lys: Will the studies selection still show selections for those of us unfamiliar with programming?

Yes, the drop down combo boxes have the selections that you can use, with the exception of reference tokens, such as the [B] to reference the row B data set. There are other reference tags you can type directly on the combo boxes, and we have examples of that in the documentation. For the most part, the lists have the selections you would use. A list might have 200 entries, and be nicely grouped by similarity.



A normal Donchian study would plot channel lines on both sides of the chart bars. This example is doing a conditional test to decide which side of the channel to show, and which to hide.

Category	Variable	Selection #1 & #3	Op. [#]	Selection #2 & #4	Offset	Show	Marker	Color
Action	0	= V := ##; if #2 oper 0 then pl	>=	[MACDvalue]	0	☑		
		([DonLower]			0	)		

A	Study	[MACDvalue] := MACD.MACD value	☐			
B	Study	[DonUpper] := DON.1st Upper band	☐			
C	Study	[DonLower] := DON.1st Lower band	☐			
D	Action	[0] := ([DonLower]); if [MACDvalue] >= 0 then plot V	☑		Study Value	
E	Action	[0] := ([DonUpper]); if [MACDvalue] < 0 then plot V	☑		Study Value	

Rows A, B, and C harvest study values from the MACD and Donchian studies that are on the chart, but which are not plotting any lines. These study values are then assigned to named variables for use by Rows D and E. The named variables could be using any of the variable indexes, and the particular index used is not important. Once named, use the Variable names on later DYO rows

Line D and E are similar. They use the statement that reads a value from Selection Field #2, and tests this value

against ZERO using the operator selected. Zero is the assume test parameter. That part is fixed by the statement.

So the Row D test is: if the [MACDvalue] >= 0 then plot the value just assigned to the variable, which was the expression from the bottom row of the input fields. The only item in this expression is field #3 which is [DonLower].

Sniffy: Does ## refer to the result of selection 3 and 4 operations?

Exactly Sniffy, and that is key to understanding these statements, and is covered in the DYO documentation. The notation of # will refer to the expression that can be created by the selection fields #2, #3, and #4 and the operators between them. The ## notation will refer to the expression that can be created by the bottom row of the input fields, which is Selections #3 and #4 and the 2 operators on the bottom row.

Lets read together the text in Selection field #1. This is the structure for this statement. V := ##; means the Variable selected in the Variable combo box will be assigned the expression from the bottom row fields and operators. Then there is a 2nd statement which is an IF statement and its test is Selection #2 compared with 0 and the comparison logic is selected from the Op. drop down box. In the example the operator selected was the >= operator. The final statement is scripted as IF [MACDvalue] >= 0 then plot V, and V is the Variable just assigned.

This action statement is 2 statements on 1 row, and is one of the efforts to make the lines more efficient so you can do more with a single DYO. The row D and E statements basically saved a couple lines by being double statements per row. The Script that is written is very readable. You read both statements in the script that are generated by the input selections. The Boolean part of this result from the IF statement then does the plotting, and the balance of the row shows the marker to use, color, and plot location.

Here is the original article to reference from the DYO library.

http://ensign.editme.com/1279

The original also used 5 lines. You can quickly compare row by row the EW and the E10 implementations, and conclude the script in E10 is more readable.

Demark REI

The conversion of the Demark REI study required 2 DYOs in E10. The EW implementation used 3 DYOs. This is the original EW article I used to convert.

http://ensign.editme.com/q1392

I worked from the original formula shown in the article, instead of reverse engineering the EW DYO implementation.

```
HighMom = H - Ref( H, -2 );
LowMom = L - Ref( L, -2 );

Cond1 = ( H >= Ref( L,-5) OR H >= Ref( L, -6 ) );
Cond2 = ( Ref( H, -2 ) >= Ref( C, -7 ) OR Ref( H, -2 ) >= Ref( C, -8 ) );
Cond3 = ( L <= Ref( H, -5 ) OR L <= Ref( H, -6) );
Cond4 = ( Ref( L, -2 ) <= Ref( C, -7 ) OR Ref( L, -2 ) <= Ref( C, -8 ) );
Cond = ( Cond1 OR Cond2 ) AND ( Cond3 OR Cond4 );

Num = Iif( Cond, HighMom + LowMom, 0 );
Den = Abs( HighMom ) + Abs( LowMom );
TDREI = 100 * Sum( Num, 5 )/Sum( Den, 5 ) ;
```

Bar Offset

I see in the formula a need for a reference to a High 2 bars back, and so I used Row A to assign a variable which I called H2 to be the High with Offset -2. And Row B is assigning a variable named L2 with the Low with an offset of -2. Note in the script the test of High[-2] and Low[-2].

Category	Variable	Selection #1 & #3	Op. [#]	Selection #2 & #4	Offset
Expression	190 H2	= High			-2
		(			0)

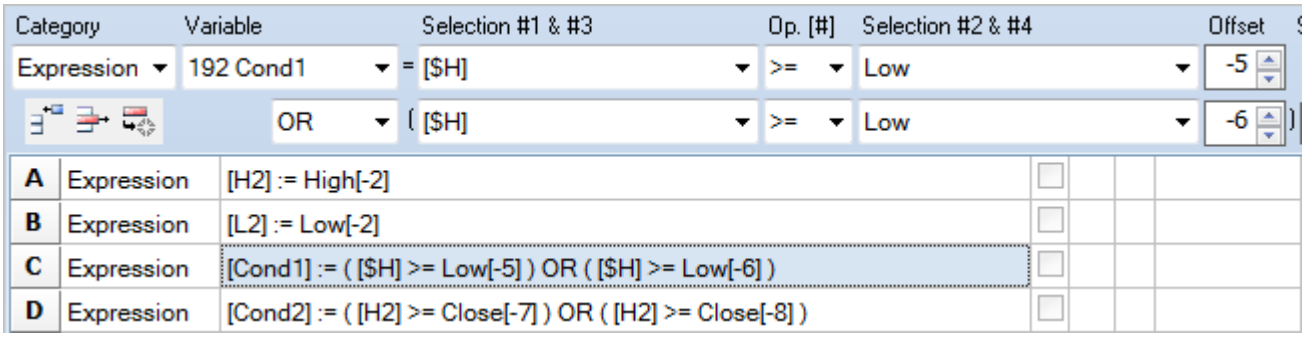
A	Expression	[H2] := High[-2]					
B	Expression	[L2] := Low[-2]					
C	Expression	[Cond1] := ([$H] >= Low[-5]) OR ([$H] >= Low[-6])					
D	Expression	[Cond2] := ([H2] >= Close[-7]) OR ([H2] >= Close[-8])					
E	Expression	[Cond3] := ([$L] <= High[-5]) OR ([$L] <= High[-6])					
F	Expression	[Cond4] := ([L2] <= Close[-7]) OR ([L2] <= Close[-8])					
G	Expression	[HighLowMom] := (High - [H2]) + (Low - [L2])					
H	Function	[HighMom] := abs((High - [H2]))					
I	Function	[LowMom] := abs((Low - [L2]))					
J	Expression	[Cond] := ([Cond1] OR [Cond2]) AND ([Cond3] OR [Cond4])					

The negative offset means the bar values are read from prior bars, and in this case the bar ahead of the prior bar.

FastSmartAction: Howard, you used a + offset in the calculation of the Price Marker example. How can an indicator use a + offset? I only use plus offset for display, not for a chart indicator. What am I seeing incorrectly?

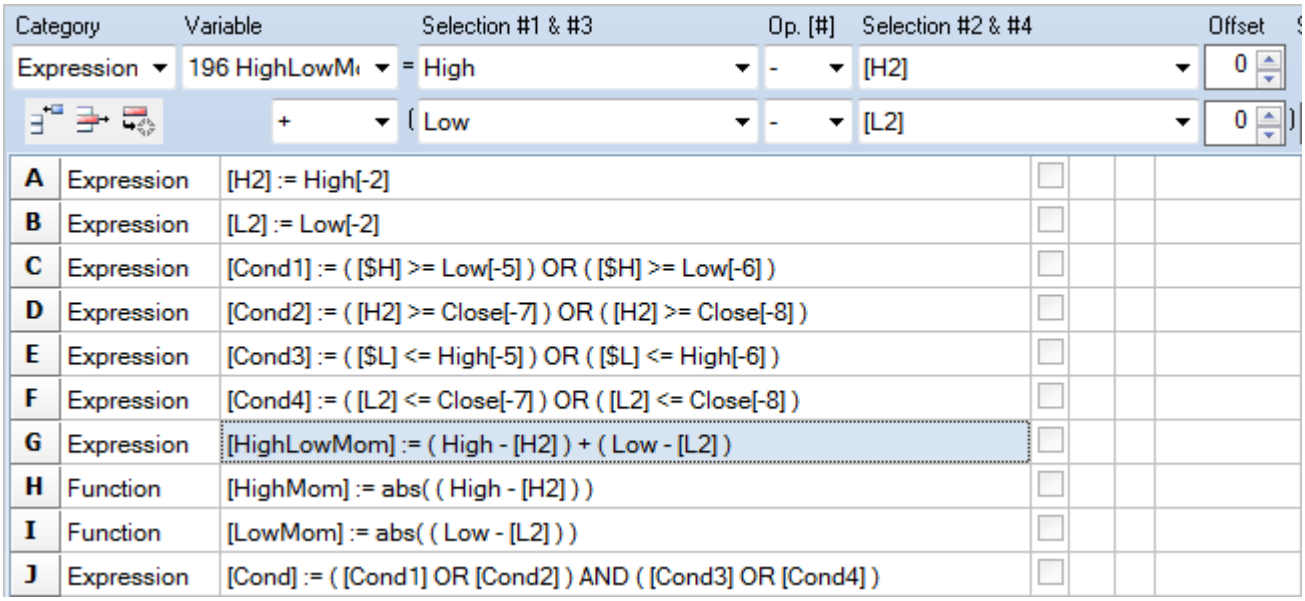
FastSmart, we do have one Action statements that uses the Offset with a positive value to specify an offset into

the right margin for the placement of labels or markers, as in the Price Marker example. For that statement the + offset would be correct and is an alignment value and not an offset in the arrays of data points for a backward reference. The Offset would apply to only the statement it is used with, and even then there is an offset for the top row of input fields and a 2nd offset for the bottom row of input fields.



Cond1 is quite a direct implementation of the formula. I used reference tags of [$H] to get the current bar's High. This is because the Offset on the top row of the input fields is -5 and I want that offset to apply ONLY to the Low selection. If Selection field #1 had be the selection High then the script would read High[-5] >= Low[-5] since the offset applies to both fields #1 and #2. I avoid the High[-5] by using a token for the current bar values and the token for the High is [$H]. That is just a clever trick. You could have used more lines to accomplish getting the current bar high to compare with the Low 5 bars back.

Line C is quite a condensed expression that in EW required several lines to implement. It starts to show off the new flexibility of the E10. So lines C, D, E and F read very much like the original formula.

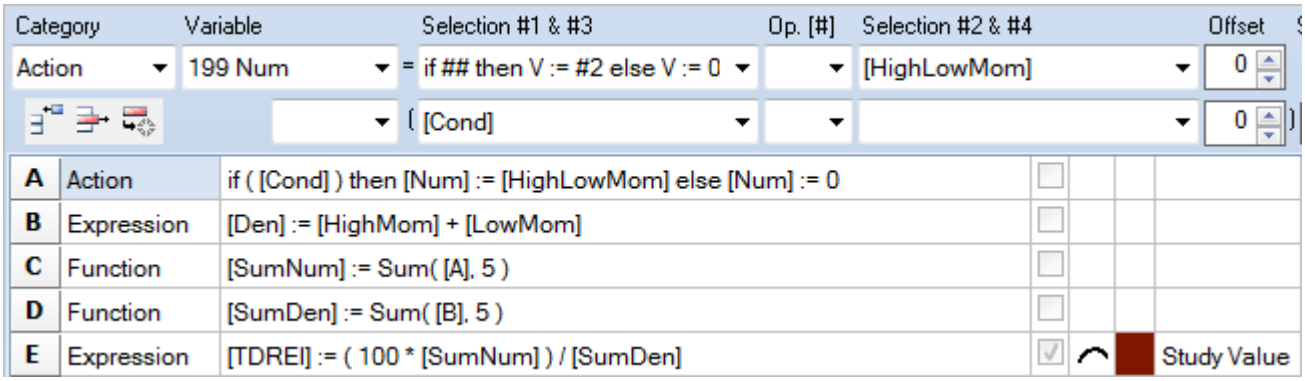


Line G is the sum of the original formula HighMom and LowMom This is assigned a variable so it can be used in the 2nd DYO, which we will get to.

Line H and I implement the functions to return the Absolute values of the input arguments.

And Line J is the final Boolean result of the four condition statements. You will see this is equivalent to the original formula, and much more readable than the EW implementation.

Now I switch to show the 2nd DYO and finish the discussion of the design.



Row A is our implementation of the original formula of Num = IIF(Cond, HighMom+LowMom,0); which means the 2nd parameter is returned when the Condition is True, and zero is returned when the Condition evaluates to False.

The DYO Row A does just that, IF [Cond] then [Num] := [HighLowMon] else [Num] := 0

The variable HighLowMon was our line G in the 1st DYO.

Row B is the sum of the 2 variables that have the absolute results from the 1st DYO rows H and I.

The TDRIE formula needs a couple of sums to divide, and the sums are prepared by Rows C and D, and the final expression is put together on Row E and plotted.

The E10 implementation of this slightly more complex study used 15 lines in 2 DYOs.. The reason Row A and B were done in the 2nd DYO was so that the Sum functions could reference data sets from these rows. The EW implementation used 3 DYOS and a combined 27 rows.

IN summary, it should be apparent that the E10 DYO design is more flexible and powerful, more can be accomplished in few rows of logic, and the resulting script from the input selections is much more readable than EW DYO design.

Hopefully you can appreciate the difficulty that it would be to try to do a programmatic conversion of EW DYO designs to an E10 equivalent when the two programs have different characteristics, structures, and selection choices.

Variables File

You do not have to type any of the DYOs that have been shown. If you want these examples, click on the Setup tab on the ribbon, and click on the Package button. On the package form select the Server tab and the templates posted can be downloaded. They will unzip into the correct folders and it is Template folder #2 I used for my creations.

Flag: Howard, when we download these packages it asks us if we want to overwrite Ensign.ini. Won't a single common Ensign.ini fill up with obsolete variables? Does each package need its own INI, suggesting the need for matching an ini name for each named package?

Flag, the packages have the SAME Ensign.in file present. My creations all use Ensign.ini, and I encourage you to write your DYOs using your own separately named Variables file. I will change my Ensign.ini from time to time, and yes it can fill up, but you can enter a name to start a new names file. Perhaps I will go back to each template and use a unique file name for each... Do not know if I will, but it is a possibility if we get too cluttered or confused.

Debugging

That was a lot of material was covered today. The templates converted were suggested by patrons of this room earlier this morning. I probably spent perhaps a half hour on each conversion, made some mistakes, debugged, took phone calls, etc. I know it would be slower going for you as you have to discover some things by hunting for them, and figure out other things by trial and error. And sometimes the approach or answer to your question is eluding you and you have to get help from other users or from my staff. Sorry, but that is the nature of learning, and with each project attempted you will get faster and more confident.

On one of the implementations, I was stumped and resorted to using the Quote form's Variable page to view all my variable results. One of them was posting Boolean True / False when a number value was expected.

CIA: The variable page is VERY helpful.

I found I had a wrong category selected and was trying to write a 4 field expression in a Function category and field #1 is intended for picking a function. When I change the category to use Expression, then my results returned what was expected.

And another time I was stumped for awhile over a missing value and what that problem was was this. I had use the SAME name for a variable earlier in another implementation, and the variable that was being double assigned was [EMA]. The Variable assignment looked correct for the new assignment, but the fields that then tried to use [EMA] were finding the 1st occurrence and not the new one I just named. Once I debugged that problem, I renamed my new variable to be [EMA10] and then my formula needing [EMA10] found the correct variable and I got the expected results.

I share these experiences to show that I too am human, make mistakes, get stumped, and have to figure it out. Hopefully my mentioning my mistakes it will help you overcome yours and not make the same mistakes I a make.

CIA: Howard, Ensign is such a fine program and the E10 improvements of multiple simultaneous feeds and the terrific organization possibilities with the floating windows and the new DYO expansion/ease-of-use are a drastic improvement. Absolutely wonderful thought to human engineering! These E10 capabilities just raise Ensign to a whole new level!

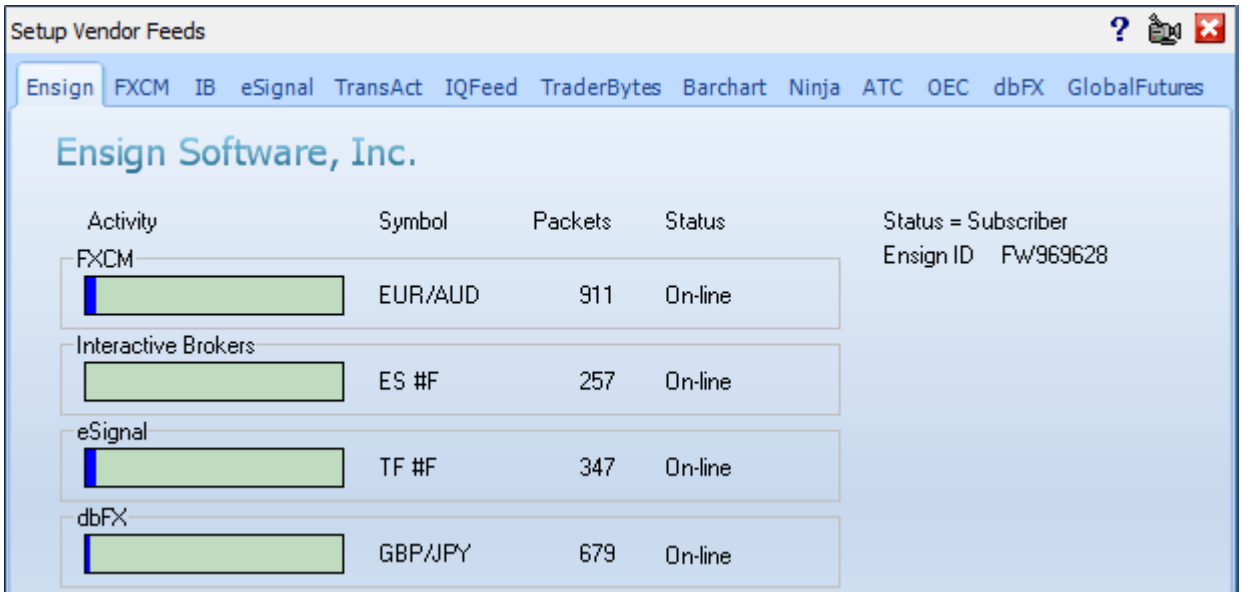
CIA: Especially with the debugging/trace improvements and DYO/template naming, documentation and sequence suggestions made by users Buffy, Scooter, Dblue and Harriet since classes began. Of course, there is the problem of converting, which is a challenge. Most E10 implementations are more clear except, I believe, the Donchain/MACD EW was, for me, clearer in EW.

CIA: Besides conversion, however, there is one difficulty which I, my wife and a number of other trades with us and in various eChat rooms have had and difficulty is the inability of Ensign to import ASCII into "ticks" folders. Currently, importing only goes to chart files of a specific time frame and is slow. This importing to ticks folders ability would definitely put Ensign in a class by itself as both a trading and research tool. Will adding this ability get more serious focus, once E10 is more stable?

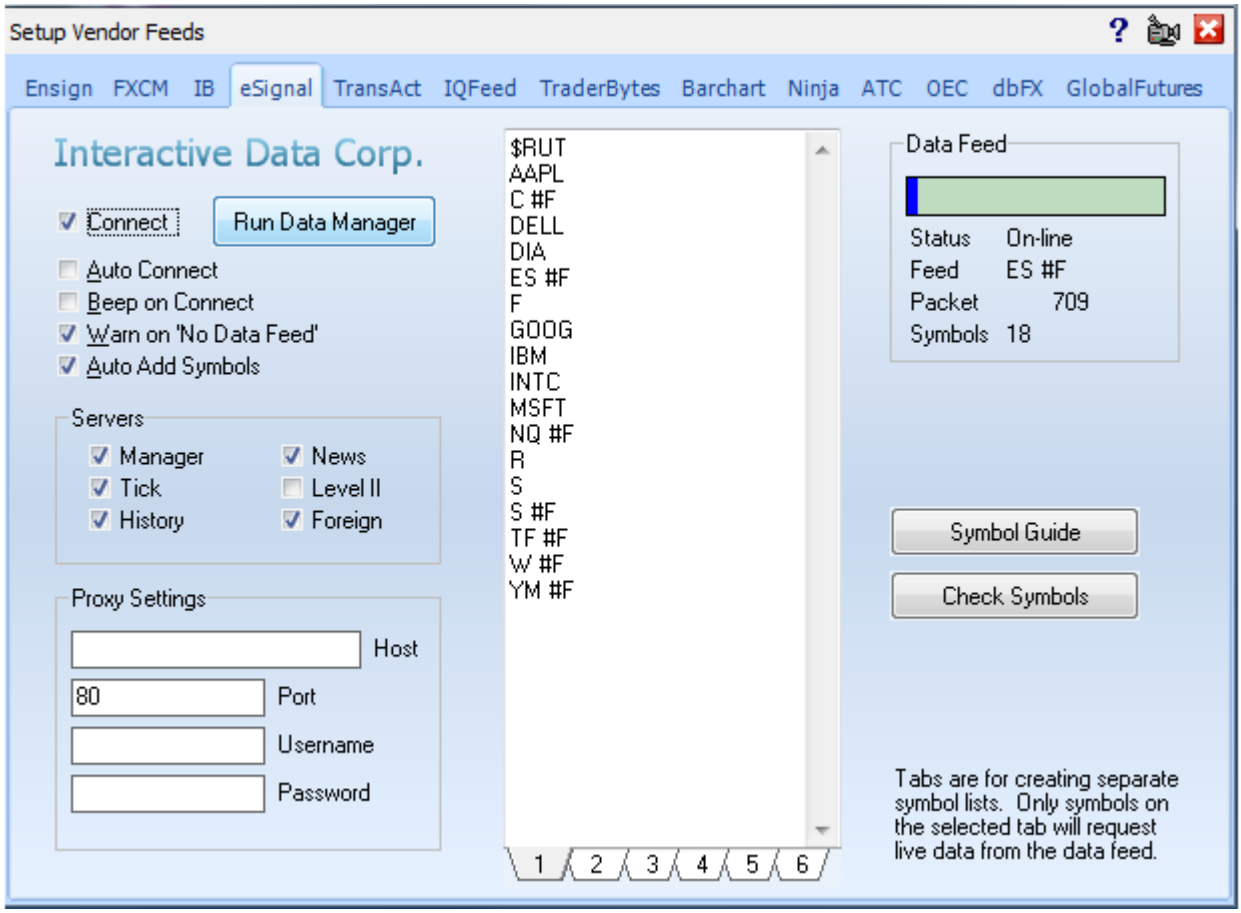
Yes, CIA, the importing to the databases is a worthy goal to be acted on as time and priorities permit.

Data Feeds

Ensign 10 supports simultaneous reception and processing of all supported data feeds. This means you can have feeds from Interactive Brokers, IQFeed, TransAct Futures, eSignal and FXCM all being received. Click on the Setup tab on the ribbon and click on the first button for Feeds.



The first tab on the Setup | Feeds form shows activity for the feeds currently being received. This is a quick visual via the gauges that the feeds are live. Across the form are tabs for each of the supported data feeds. Click on a tab to configure a feed, and I will use eSignal as the example today.



The middle of the form has a watch list where you enter the symbols you want to follow. Type directly on the list to add or remove symbols. There are 6 tabs for organizing lists. Only the symbols on the selected tab are being watched and received from the data vendor.

All data vendors require subscriptions with them, EXCEPT the feeds from FXCM and dbFX. Those two feeds are real-time Forex currency pairs and are provided for free. The data is received from these dealers and distributed by our servers located in Salt Lake City, UT.

The data for the other vendors is received from the vendor to your computer, and usually have a small client application that runs on your computer that Ensign 10 connects to to receive the data. The client application for eSignal is called Data Manager, and shows on your task bar as another program running. The Data Manager receives a compressed feed from eSignal and passes it to Ensign 10, which we process to update quote pages, news stories, and update charts.

The Connect check box is checked to connect to the vendor feed and unchecked to disconnect from the feed. The 2nd check box is Auto Connect and you would check this box to have Ensign automatically connect to the feed upon program run. In the case of eSignal, Ensign launches the Data Manager and then connects to it. The process is similar for the other data vendors where Ensign runs the needed client application and then connects to it.

The live flowing feed is shown in the Data Feed frame as updating symbols, an increasing Packet count, and the gauges that shows green to indicate data is being received. The blue on the gauge is just an indication of a packet size or how busy the feed is. The blue progress bar in the gauge will typically hover close to the left side of the gauge.

Esignal has 6 servers that the Data Manager gets data from, and a connection to each server is reflected by a checked box in the Servers frame. Most vendors have a single server and thus we do not show a Server frame on the other vendor forms.

The Tick server is the source for Tick and Minute bar refreshes, and if Refresh from eSignal seems to have stopped, you can come to this form and uncheck the Tick box and a new connection will be made and probably the tick and minute refreshes will work again. The History is the server for refreshing daily, weekly and monthly data sets. The Manager server is the source for the live data feed for the symbols on the watch list.

Buffy3: Nice improvements.

The box for Warn on 'No Data Feed' would be checked if you want Ensign to pop up a warning message box when data has not been seen from this vendor for a minute. The Auto Add Symbols box is typically checked and when checked will add a symbol to the watch list when you open a chart for a symbol not currently on the watch list.

For example, CSCO is not on my list and if I opened a CSCO daily chart, it would add to the eSignal watch list, and start to receive data, and I can refresh the chart to get back data. Since each vendor has its own watch list now, it is much cleaner now than Ensign Windows which had one list which contained symbols for all feeds in one mixed list. If you need help with a symbol, click the Symbol Guide on the vendor form and it will take you to that vendor's web site's symbol guide. So the Symbol Guide on this example goes to the eSignal web site.

It was oft requested to follow more combinations of feeds simultaneously, so in the redesign it was a major consideration and part of the foundational change to the design of Ensign. Now, both eSignal and Interactive Brokers have symbols that are the same, such as IBM and ES #F.

Ensign keeps these as separate symbols, separate databases, and separate charts. There is a vendor associated with each symbol, and the data file structure places chart and database data files in separate vendor folders on the hard disk in the \Feeds folder. So refreshing ES #F for eSignal is not changing the database for another vendor. You would have to do a different refresh for the other vendor to update its database or charts.

Any questions at this time regarding data feeds?

CIA: 1 - When running EW and E10 on the same machine with eSignal feeding both EW and E10, I received a message symbol list exceeded. But, it was the same list of symbols that I was using with EW. What to do?

2 - How do I put my existing EW ticks and minutes data into E10?

File Paths

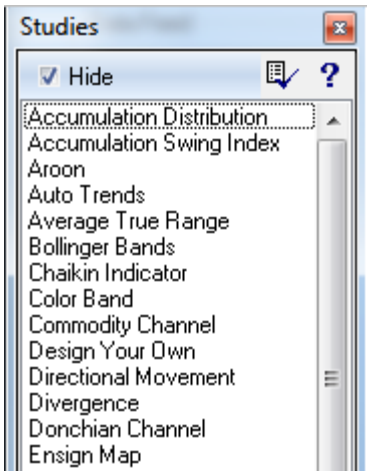
CIA, I will have to investigate the EW and E10 both connected to eSignal..... I am not sure if 10 symbols from each program is counted as 20 being watched though the 10 are the same from both.

In EW your database files for eSignal are in the Ticks and the Minutes folders. Those folders, sub-folders, and files in the sub-folders can be copied to the E10 because they are unchanged in their content. However you need to find the correct new path. For eSignal the Ticks folder would be 2 levels lower, namely located at C:\Ensign10\Feeds\dSig\Ticks

So EW path to C:\Ensign\Ticks\ES #F is now in E10 C:\Ensign10\Feeds\dSig\Ticks\ES #F

And the same answer where the Minutes folder would be in the position of Ticks in these examples.

Studies Form



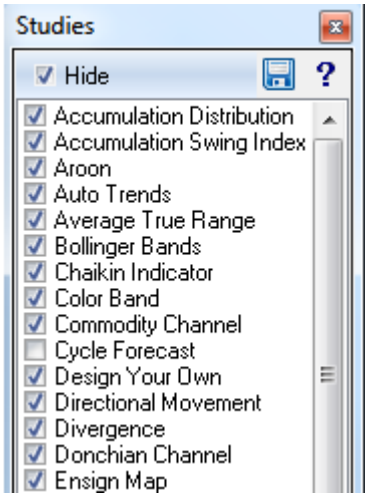
Next topic is about a few buttons on the charts toolbar.

Those who have been using the program for a couple days are getting comfortable with adding studies from the chart toolbar and not having to move the mouse back to a main menu.

When the studies button is clicked a form shows to the side similar to this.

Note there is a Hide check box and a Properties button on this form. And the discussion about the studies form applies to similar forms for Draw Tools and Color Bar studies.

The Hide check box controls whether the form remains open after making a selection. If you want to add several studies to dress the chart, uncheck Hide and click one study after another and they dress the chart. This is much faster than having to return to the Studies button to get the list of studies to show again.



Click the X button on the form to close it when you are finished.

When Hide is checked the form auto closes after a selection is made.

I use the form both ways, depending on what I am doing with the chart to put studies on.

Click the Properties button to show a check list for selecting which studies to show on your list.

Boxes that are checked will show on the list. In the example, Cycle Forecast is unchecked and does not show on my study list. Thus it is easy to configure your lists with what you want to see, and remove studies that you do not use so there is less clutter on your list of studies.

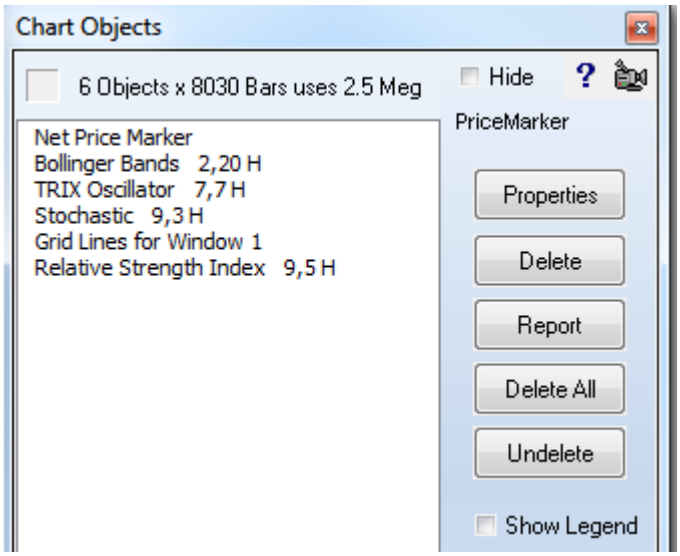
After checking or unchecking studies on the list you then click the SAVE button which replaced the Properties button on the study form. This will return the form to show the list of studies.

These design features are standardized across similar forms for Draw Tools and Color Bars studies. The selection lists attempt to open to the right side of the chart you are working with, so the distance of mouse travel is minimized. Now if the chart is hugging the right side of a monitor, the forms will overlap your chart, but you can still find their locations to be convenient.

Buffy3: If we do not check a study and change the property form with save how to go to list to check and add study?

Same way Buffy. Click the Properties button on the Study form again, recheck the box, and click the Save button. Now the study will show on the list again.

Chart Objects



Once a study or tool has been added to a chart, it shows on the Charts Objects list, which is displayed as the first button on the chart toolbar.

On the Chart Objects panel is a listing of the objects on the chart in the order they were placed on the chart.

Order can be important because later studies can reference studies ahead of themselves on the list as input.

In my example Stochastic is higher on the list than Relative Strength. The RSI could use Stochastic as an input on its property form.

But Stochastic could not reference RSI on its list of data points because RSI is lower on the list.

You can rearrange objects on the list by dragging them vertically on the list., but the need to do so should be rare.

You can double click an object to go to its property form for changing parameters and colors. That is all the same as EW, so will not go further on that. The rest of the form is quite similar to before. Click the Help button and watch the video for additional training on Chart Objects form.

JJ: Chart Objects -- what exactly is expected if you click the 'undelete' button?

Ensign will add back to the chart the object just deleted.

Output Window

The next topic is on the main ribbon on the right end is an Output Window.

Click that button to open a general purpose form with a memo box. We will use this form as a quick way to chat with you when doing remote support. Both the staff and the customer can type on the form. You could use it as a notepad for writing yourself notes.

At the top of the form is an edit box for entering keywords for cameras in the program that give us feedback when we have need for detail. One keyword you have used in EW on its debug form is the word REFRESH. If you enter that keyword and then refresh a chart the form will show the detail of the refresh records as they are received.

JJ: 'cameras in the program'?

Camera is my term for program code that will print to this output window when its keyword is showing on the form and the form is open. It helps me debug the program. And the Log check box will write the output to a text file.

JJ: Is keyword REFRESH case sensitive?

Keywords are not case sensitive. Now you can use the DYO study to write messages to this output window as well, which is inventing your own debug aide or camera. In the DYO Action section you will find selections for if ## then Output (message) that could be a trace statement to log results for program flow. And it could be your own messaging system, or even create a report.

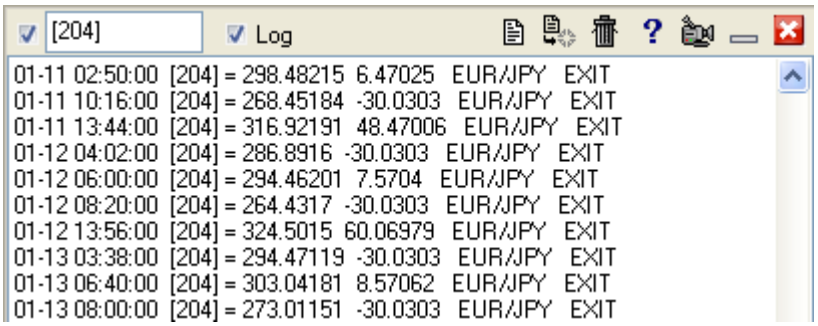
CIA: very cool!

This Output Window is also the output location for the ESPL statements. In the EW the ESPL editor had its own output form. In E10 we have combined the multiple needs for DYO, ESPL, debugging, and free form text entry into a single general purpose Output Window that is opened from the Main toolbar.

I see JohnA in the class. Can you give a comment about how you have used the Output Window for reporting, tracing, or debugging?

JohnA: I use the Output window continuously and leave my layouts running 24/7 - then look at the output window each morning. My DYO's put out a perfect trace of execution flow within the template.

Safe: JohnA, could you show us an example?



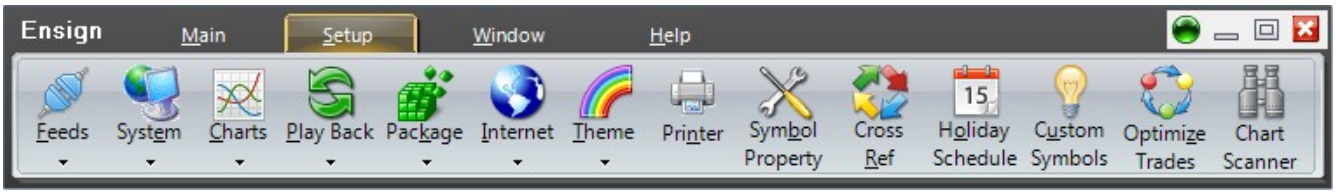
JohnA: Best tracing camera available. I have the Output Window loaded with a trace of variable [204]. This output is produced by DYO's that send results to the output window and here I am looking at the changes in variable [204] which is a key variable in my system. The trace shows date, time, variable value, the change in the variable value and the DYO that sent the results.

Thanks John for the reminder that a Variable can be a keyword for use in the Output Window logging. The variable index or name is the keyword, surrounded by square brackets.

Theme

The next topic is the Theme button on the Setup ribbon. The program supports several built in color themes, and the one the program installed with is the first one on the list called Luna. Click on the chevron on the bottom of the Theme button to show a drop list of other themes. This will recolor all forms to the selected theme.

A couple that are quite different are Olive and Obsidian. Go ahead and try the different themes and see if you like better one of the other themes. You do not have to use the Luna which is shades of sky blue.



Here is the Obsidian theme and its affect on the ribbon. Themes do not change the functionality of the program. They are in the category of eye candy.

taku: Guessing no way to delete unused icons?

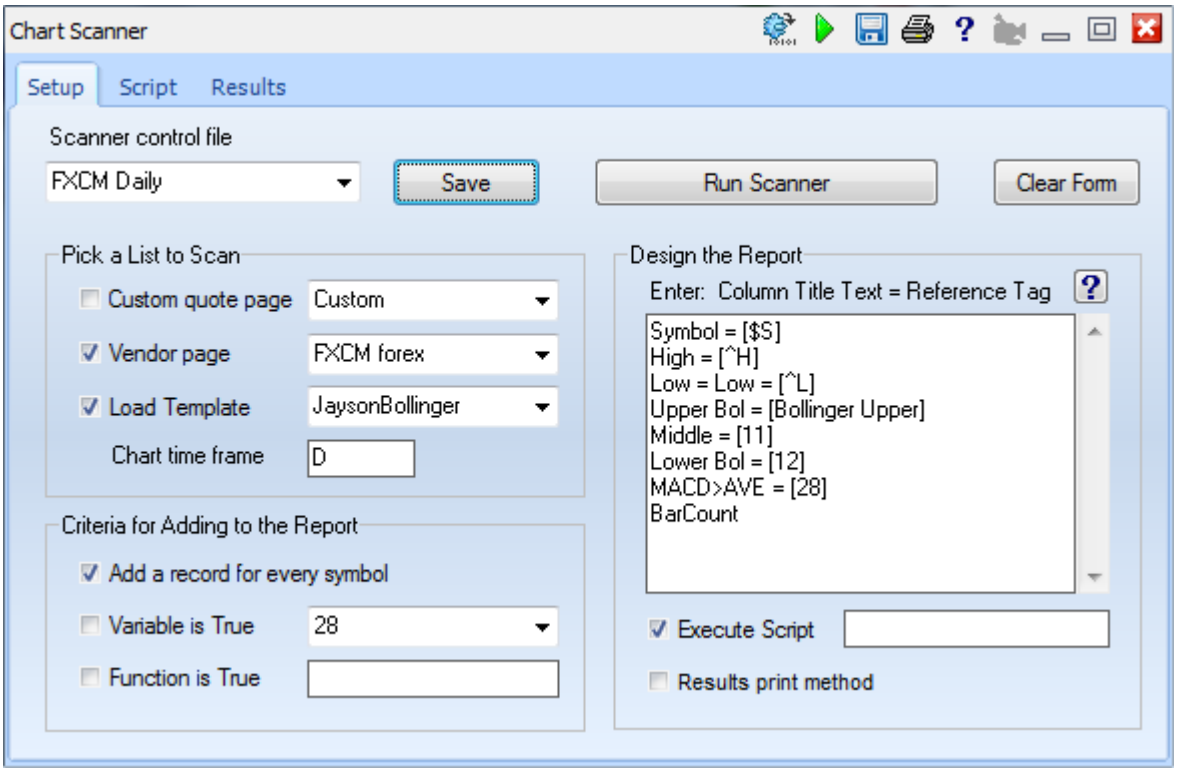
We decided not to offer the ability to hide ribbon buttons you might not use. Standardization makes it easier to support clients when staff and users have the same buttons. You can hide the buttons in this manner and have just the menu for the ribbons. Click on the word Ensign or a right mouse click on the ribbon shows a pop-up menu and there is a selection near the bottom for Resize Ribbon which will hide the buttons. Then as you click on the menu such as Main, the ribbon shows so you can select a button on the ribbon.

taku: Once my work day starts, rarely will look a the ribbon. I just resize to make as small as possible.

Though the feature for hiding the ribbon is present I have not found I use it in the mode. You cannot customize the ribbon to either rearrange the button order, the ribbons they are on, or to show/hide buttons.

Chart Scanner

The next topic is the Chart Scanner on the Setup form. This is one of the new advanced features and will be introduced today. This form is used for scanning through a list of charts and generating a report.



The first thing to do is to pick a list which can be a custom quote page or one of the vendor symbol lists. In the example the Vendor Page is checked and the vendor selected in the FXCM Forex vendor. My FXCM list has 7 charts on its list.

The Load Template box is checked and the named template will be put on each chart. The chart time frame to open is the Daily chart because of the D in the time frame box.

The next step is to identify the criteria for which charts are to be on the report. The example has the box checked to add a record for every symbol, ie take them all. Other choices are for when one of the Variables is True, or when and ESPL function returns True. So you could have a DYO, for example, that has a Boolean flag for a study result, such as Stochastic Rising or a bar relationship such as New High. Whatever logic you can resolve to a Boolean result, park that result in a Variable and select the variable on the drop down list for variables.

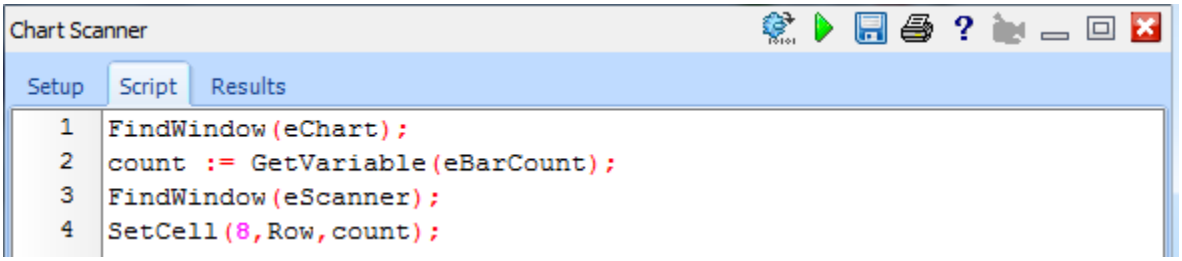
More complex things can be implemented in ESPL, and the procedure that returns the Boolean result is to be named in the box by the Function is True check box.

The 3rd step is to design the columns in the report. In the memo box, each row creates a column in the report. The title for the column is first, then an equal sign, then the reference tag or variable to post is value in the report.

The first row has Symbol = [$S] This will make a column with the title symbol and contents of the [$S] tag which fetches the symbol for the chart. The reference tags are the same ones used in DYOS. Click the small ? button by the Reference Tag label to jump to the documentation page in the manual for Reference Tags. This example is documented in greater detail in the manual.

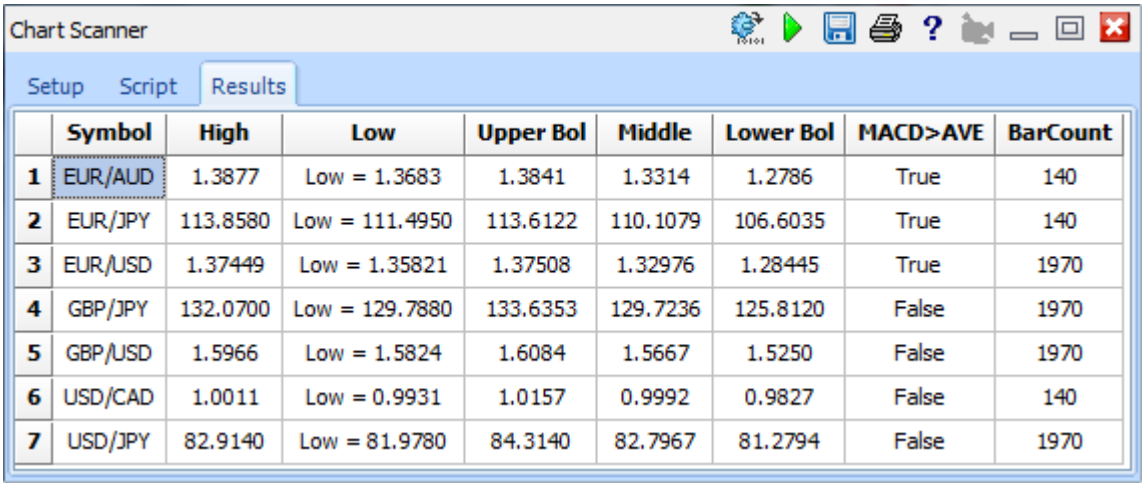
The last entry on the list has just the word BarCount without the = tag format. BarCount will make a column and then it will be blank. The content for the column happens to be done the an ESPL script which runs because

the Execute Script box is checked. And the ESPL script to run is entered on the Script tab of this form. An ESPL script provides more flexibility, but is entirely optional. I will show the small script that this example runs.



This example is typical of what you might use. Line 1 finds the chart being evaluated. 2nd Line gets some kind of data from the chart. 3rd line changes focus back to this scanner form. 4th line puts the data in a cell on the report, which is the 8th column and the Row the scanner is writing.

Now lets see the example report form our custom design. Click the Run Scanner button on the Setup form to start the scan. View the report on the Results tab of this form.



	Symbol	High	Low	Upper Bol	Middle	Lower Bol	MACD>AVE	BarCount
1	EUR/AUD	1.3877	Low = 1.3683	1.3841	1.3314	1.2786	True	140
2	EUR/JPY	113.8580	Low = 111.4950	113.6122	110.1079	106.6035	True	140
3	EUR/USD	1.37449	Low = 1.35821	1.37508	1.32976	1.28445	True	1970
4	GBP/JPY	132.0700	Low = 129.7880	133.6353	129.7236	125.8120	False	1970
5	GBP/USD	1.5966	Low = 1.5824	1.6084	1.5667	1.5250	False	1970
6	USD/CAD	1.0011	Low = 0.9931	1.0157	0.9992	0.9827	False	140
7	USD/JPY	82.9140	Low = 81.9780	84.3140	82.7967	81.2794	False	1970

This lists the 7 charts in my scan list, and shows the 8 columns designed in the report. Anything could be in your custom report. The example is not necessarily useful, but was chosen to illustrate you can populate the report with bar values, quote page values, study values, study flags, and chart variables. Both DYOs and ESPL could be used to provide content to the report.

Now I fully expect you to run with this new tool and design really useful content. Perhaps you have a report you run before the markets opens each day that scans for relationships of interest to you, and you can then focus on those charts because your custom design has identified them.

The Scanner is intended to be flexible and pretty easy to use by going through the steps of picking a list, a criteria and designing the report with as many or as few columns as wanted. The cells can be populated with text, or values, as shown in the example.

After you create a design, click the Save button to save the control file to the name entered in the combo box to the left of the Save button.

On the Setup tab is a Clear Form button. Clicking that blanks out the form as if you are starting to design a new report from scratch.

Harriet: This is what we used TC2010 for, so we do not need TC2010 anymore. :)

scooter2: Question, if you want to scan 3000 stocks ,do you need 3000 stocks in your chart list?

Yes you do scooter, Ensign cannot evaluate a chart data set it does not have.

scooter2: Would you consider having an Ensign server with all the stocks to access so we would not have to have that data on our computer?

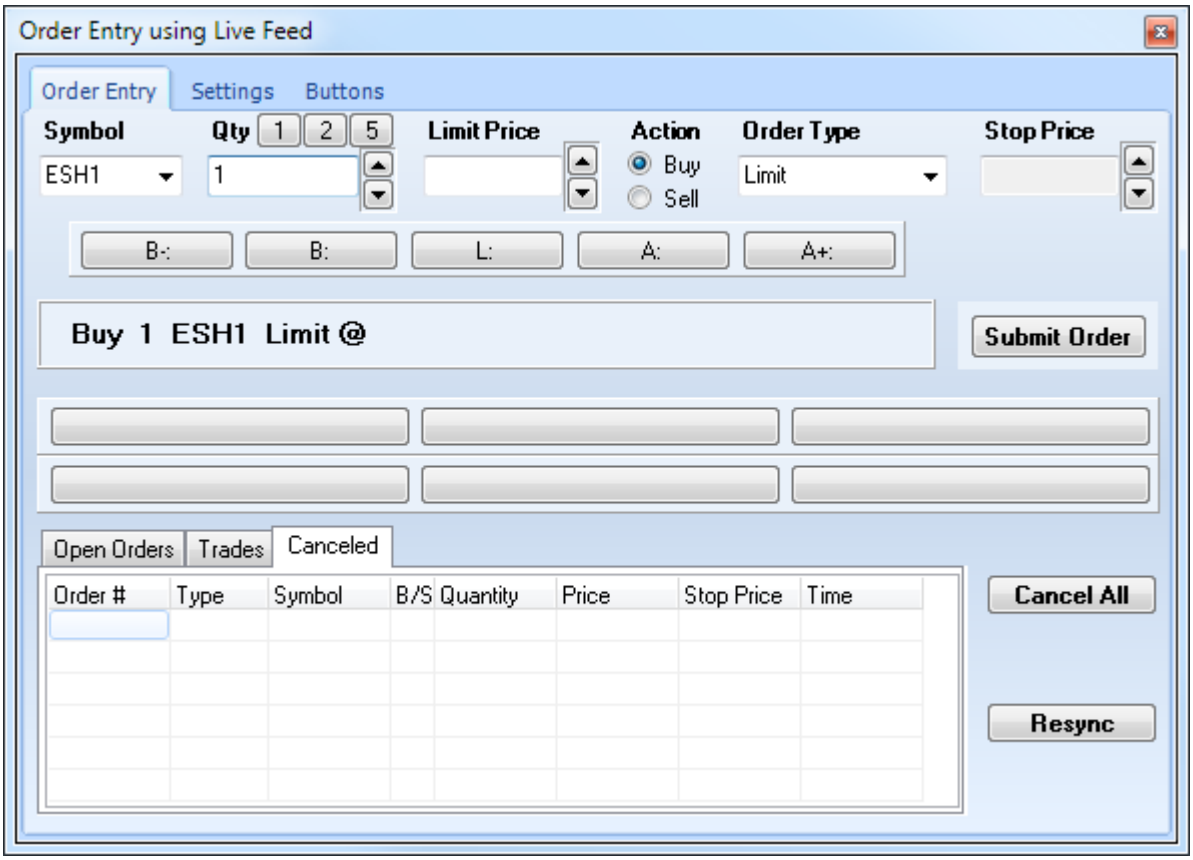
Scooter, even if we had a server with data, doubt we would have the time frames you seek or the scan logic that you can implement in your DYOs and ESPL.

Order Entry

Dblue: Do we still have sim-broker.... have not seen it if so.

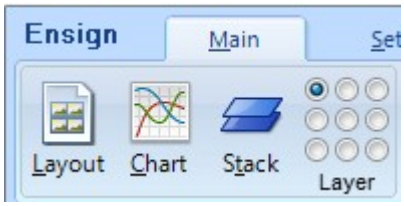
The Sim-Broker has been removed from E10, and there is something better coming in an Order Entry form that will interface with the TransAct Futures brokerage to begin with. And the Order Entry form will also be the replacement for Sim-Broker. So it can be used in simulation mode like Sim-Broker or in actual mode with your broker account. And another part of that Order Entry will be improved trading from the chart.

We are not ready to release what we have for the Order Entry, so in your beta versions access to the Order Entry is disabled. You see a space holder on the ribbons where the Order Entry button is located for the time being. When we are ready the button will show.



Layers

EW users could create an over sized desktop and use scroll bars to access areas not in the current view. In these areas additional charts could be placed so they would always be open and updating, and thus eliminate the time it would take to load and calculate studies.



E10 has a better implementation called Layers. On the main ribbon is the Layer button with 9 bullets. Click on a bullet to select that layer. Open charts, quote pages, and other forms on the layer. Click on a different layer bullet to change layers, and the forms on the previous layer will be hidden, though they remain open and updating.

Saving a Layout will save all forms on all layers, and restore them when the Layout is opened.

The keyboard keys of Ctrl-1 through Ctrl-9 will also change layers. The Chart 10-keypad can be configured to change layers by entering Layer# as the key text, where # is a digit 1 through 9. And, the mouse wheel can be configured to change layers on the Setup | Charts | Keyboard form.

The Close Layer sub-menu of the Close button on the Window ribbon can be used to close all windows on the current layer. The Close button on the Window ribbon closes all forms on all layers.

Be careful in your use of layers that you do not overwhelm the computer with the burden placed on it to update an excessive number of open charts and studies. I do worry that with the ease of using layers, and with multiple monitors, you will get carried away with loading up an excessive number of charts. A power user with 8 monitors might be excessive if each monitor has a few charts. Nine layers times 8 monitors is like having a screen space of 72 monitors.

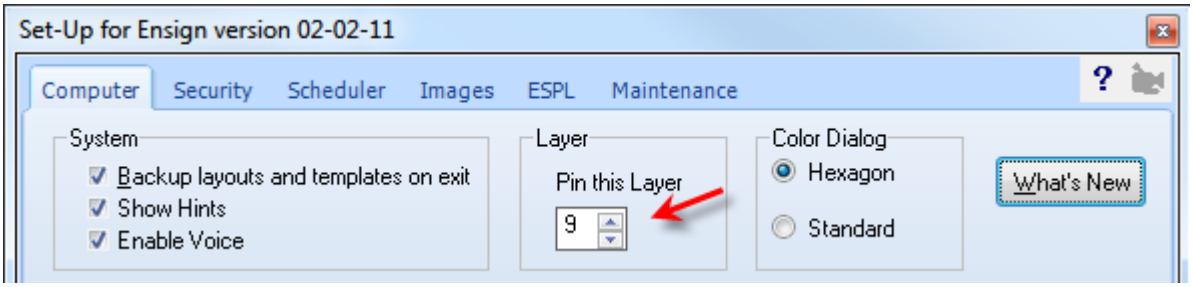
Not all forms are intended to be left open on any layer, such as a chart's property form. A property form is for immediate use and then closed, and is not a form that is saved in a layout either.

Scylnx: Cleaner than EW scrolling work spaces.

Yes. Layers are a great concept and much easier to use than scroll bars with an extended desktop space.

Pinned Forms

Click menu Setup | System to show the form where you can select a layer whose forms will be pinned to show on all layers. This example uses layer 9 to hold the pinned content. The 9th layer would be the layer bullet in the bottom right corner of the selection matrix.



Forms placed on the pinned layer will always show regardless of the layer selected. Enter a value of 0 to disable this feature.

Voice

EW uses the Clipboard to send text to Speakonia to read with a computer voice. E10 has eliminated any need for Speakonia by having its own voice using the Windows platform voices. There are DYO statements to SPEAK the message text, and the speaking voice is quite good.

The voice could be used for alert, or whatever, where the DYO statement is triggered by a Boolean True, and the DYO label or message text is then spoken, without utilizing the clipboard and Speakonia.

On the alert sections for line alerts, and study alerts, you can have the alert spoken with a voice, and it sounds great. You may have noticed the computer voice talking to you when you saved a Template or a Layout, or downloaded a package. E10 uses the voice as additional feedback that your action has been performed.

On the Setup | Computer form is a check box to Enable Voice. The box can be unchecked to turn off the system confirmation feedback, such as the 'Layout has been Saved'.

The voice is processed on an independent thread so that it does not cause the processing of the data feed to be paused while speaking. And the voice commands are queued. We have made many such improvements in E10, such as the voice, and more use of threads to give better performance and increased desirability.

On a chat form, right mouse click and select Voice Read on the pop-up menu to have chat text read.

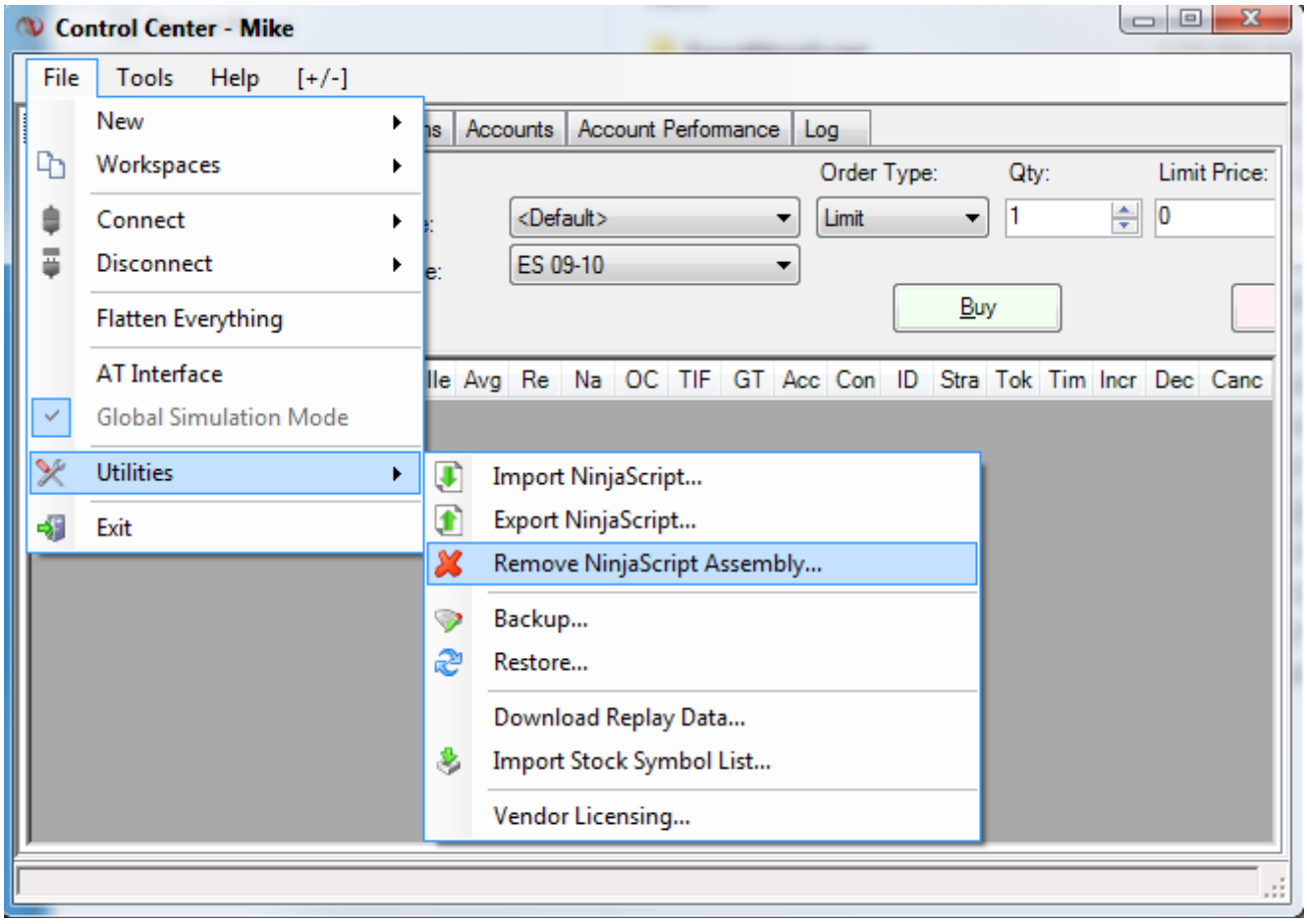
Data Feeds

Ninja Trader EDS

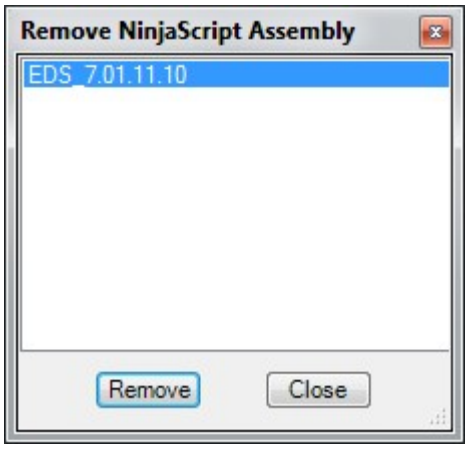
This document describes how to uninstall, download, install, load and run an Ensign EDS for NinjaTrader 7 for Ensign 10. There is a video on this material that can be downloaded using the Package feature. Look for it on the Package server for Ensign's Official Videos. The video package extracts to the C:\Ensign10\Video folder, which can be accessed by clicking the New User button on the Help ribbon. Then click the Show Local Video Library button on the New User form.

Remove Old EDS

If you have already installed an Ensign 10 EDS into NinjaTrader, it will be necessary to uninstall it before proceeding. To uninstall, in Ninja Trader 7.0, click on File | Utilities | Remove NinjaScript Assembly.

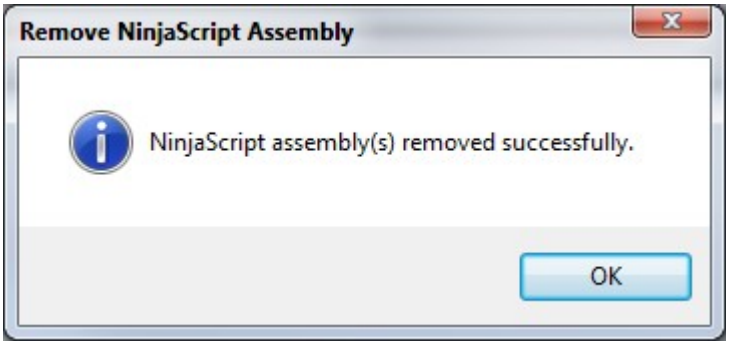


This will open the Remove NinjaScript Assembly window. You may have one or more Assemblies installed. The Assembly we want to remove is the EDS Assembly. It may have the Ensign or EDS name and a date. Select the Assembly you wish to remove and click the Remove button.



You will be prompted to confirm you wish to delete the assembly. Click the Yes button.

You should be informed that the assembly has been successfully uninstalled and will be removed from the list. Click OK to continue.



Click the Close button to exit out of the Remove NinjaScript Assembly.

Download EDS NinjaScript

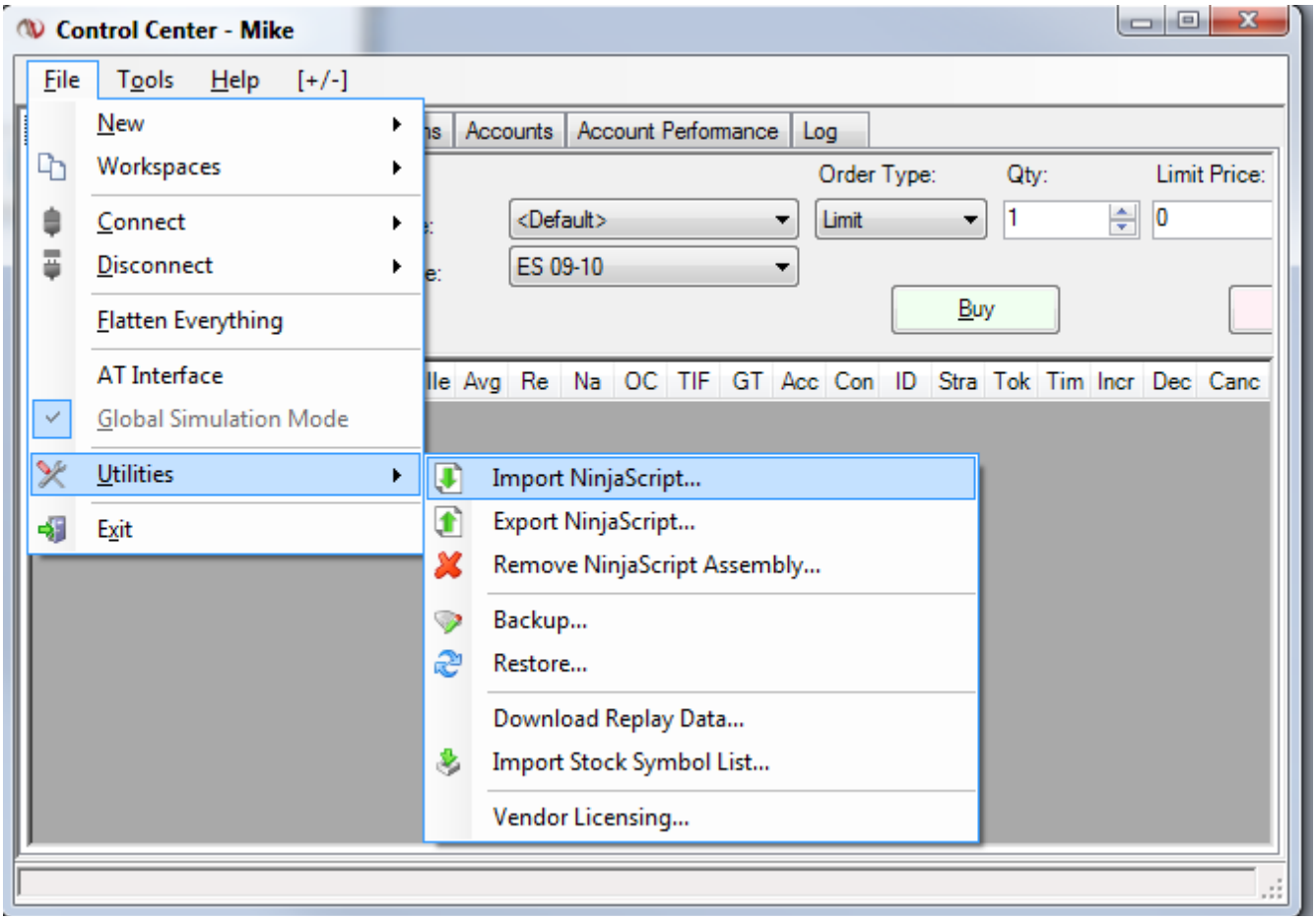
Obtain the NinjaTrader EDS by clicking on this link:

http://www.ensignsoftware.net/files/Ninja7.Ensign.zip

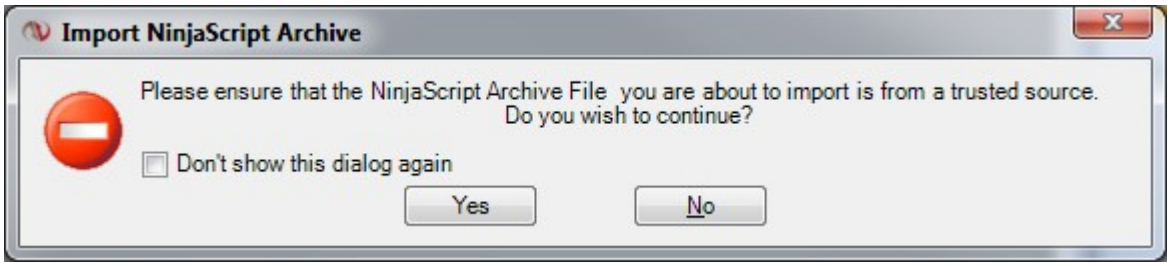
Save this to your Desktop or some other place that you will remember when you access it later. Once the file is downloaded and saved, close the web browser.

Install EDS in NinjaTrader

In NinjaTrader, click menu File | Utilities | Import NinjaScript.



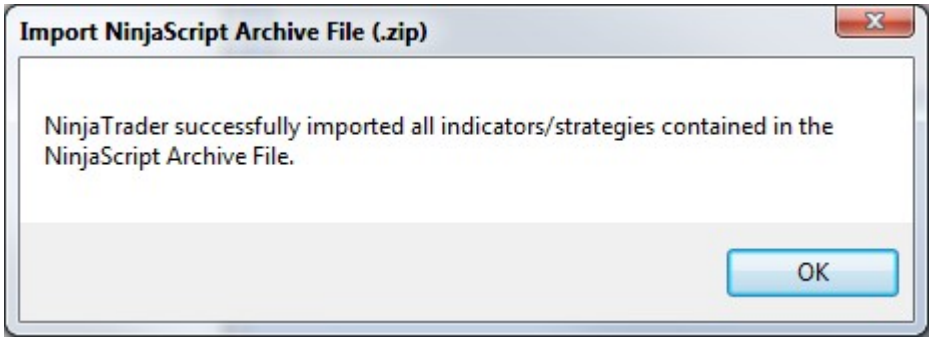
You may get a warning that informs you that the file should be from a trusted source.



Click Yes to continue.

Browse to the location you saved the Ninja7.Ensign.zip file. Click on the file and click Open.

It will take a few seconds for the script to import. Once it is done, you will get a message saying that the script has been imported successfully.



Click OK to continue.

Esignal

Interactive Brokers

Charts

Geometry of Charts

A chart is the primary tool used by technicians to analyze a security. A chart is a convenient graphical way to represent the time, price and volume properties of a trade event. This article will show the geometrical relationships for various chart types.

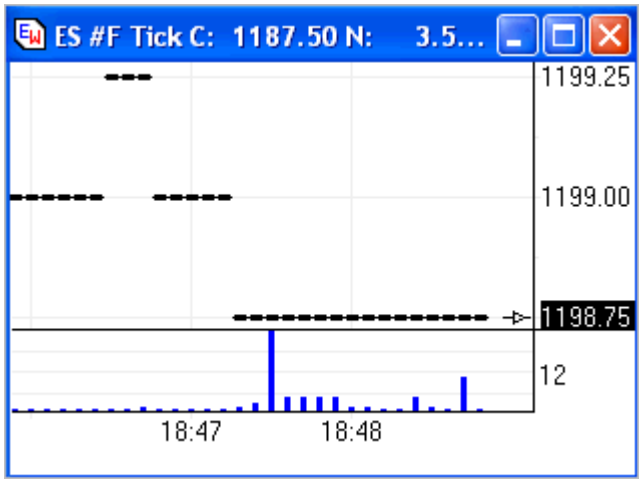
Four basic properties of a trade

1. The date and time when the trade occurred. This property is called the timestamp.
2. The price of the trade. This property is called the trade price.
3. The number of shares or contracts involved in the trade. This property is called trade volume.
4. The trade event itself. This property can be thought of as a tick.

The most common way to present the above information about a trade, is to plot trades on a graph where time is the horizontal axis, and price is the vertical axis.

Raw Tick Chart

A raw tick chart shows the individual trade events. The trade event is plotted as a dot on the price scale (vertical axis) at its timestamp (horizontal axis). The trade volume is shown below as a vertical blue histogram bar.

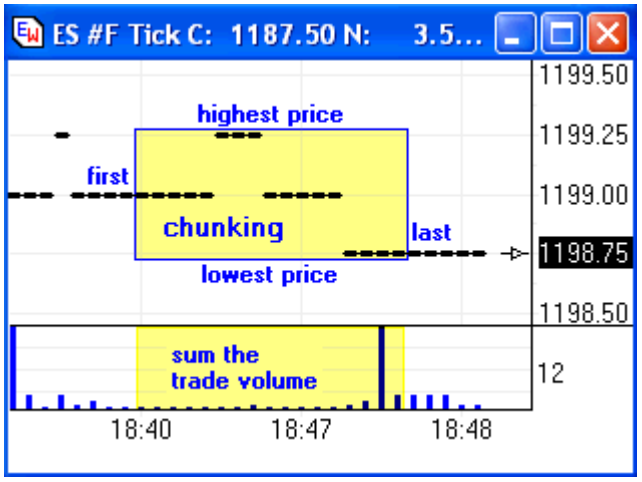


All subsequent chart types are just variations of this basic graphical presentation of the four trade properties. All variations involve chunking raw ticks together to form a collection. The collection is drawn as a bar, instead of as a dot.

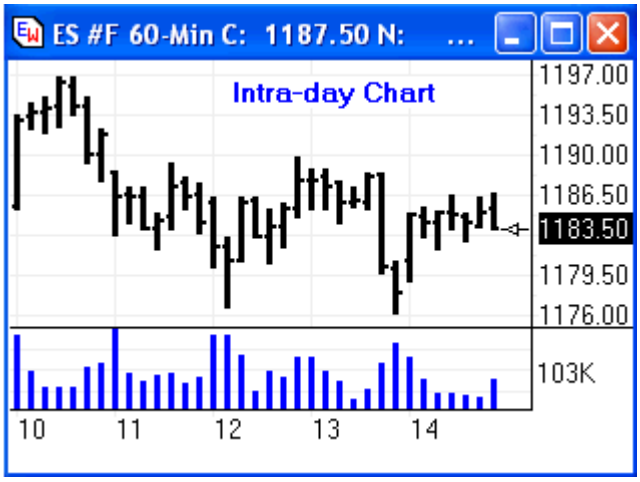
Chunking Properties

The tick chunking can be thought of as enclosing a group of ticks in a bounding rectangle. This rectangle introduces the following bar properties.

Open: The price of the first tick in the chunk.
Close: The price of the last tick in the chunk.
High: The price of the highest tick in the chunk.
Low: The price of the lowest tick in the chunk.
Volume: Sum the trade volumes in the chunk.
Timestamp: From either the first or the last tick in the chunk.



Fixed Time Period



The width of the chunking rectangle is based on a fixed period of time. The fixed time interval may be any of the following time periods.

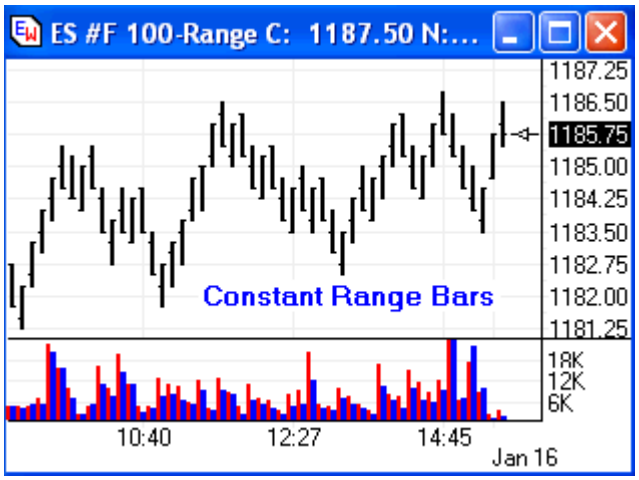
Intra-day: The time period is some multiple of 1 minute.

Day: The time period is 24 hours, measured from an exchange's afternoon close.

Week: The time period is a week.

Month: The time period is a calendar month.

Fixed Price Range



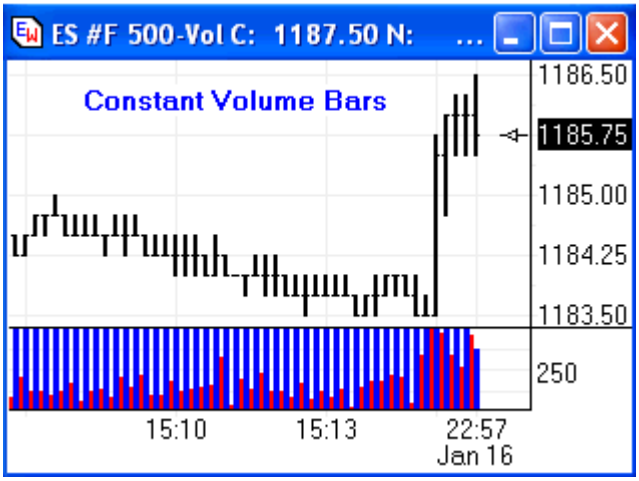
The height of the chunking rectangle is based on a fixed price range. When the price range is exceeded, a new bar is started.

The bar volume is shown in blue.

The bar tick count is shown in red.

An in depth discussion of this type of chart can be read in this article:
read more» Range Bars

Fixed Volume



The width of the chunking rectangle is based on the sum of the trade volumes. When the sum exceeds some fixed volume level, a new bar is started.

For example, if the fixed volume level is 500, each bar will build until its volume is 500. If the sum is currently at 496 and the next tick's trade volume is 10, a volume of 4 will finish off the current bar's volume. The new bar will start with the remainder 6 volume.

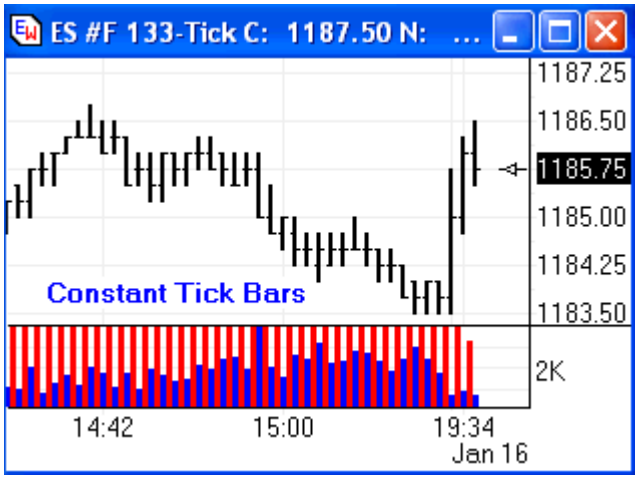
The bar tick count is shown in red.

Fixed Tick Count

The last variation adjusts the width of the chunking rectangle until it encloses the same number of trade events. This is called a constant tick chart.

The bar volume is shown in blue.

The bar tick count is shown in red.



The four chart types shown above share in common the four basic properties of a trade. Each chart type forces one of the basic properties to be a fixed unit for each bar in the chart. The three other basic properties will of necessity have a variable size. This table summarizes the chart types and the four basic properties of time, price, volume and trade event.

Chart Type	Time Period	Price Range	Volume	Tick Count
Intra-day, Day	Fixed	Variable	Variable	Variable
Constant Range	Variable	Fixed	Variable	Variable
Constant Volume	Variable	Variable	Fixed	Variable
Constant Tick	Variable	Variable	Variable	Fixed

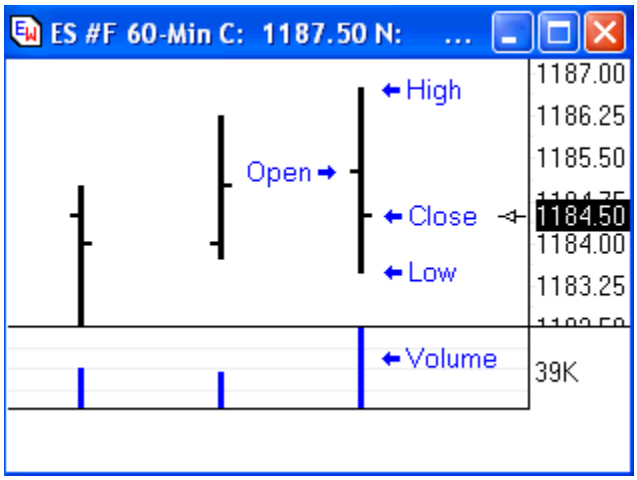
Display Formats

The chunked group of raw ticks form a bar, which can be displayed using the following variations. The display variations can be used with any of the chart types.

Standard Bar Chart

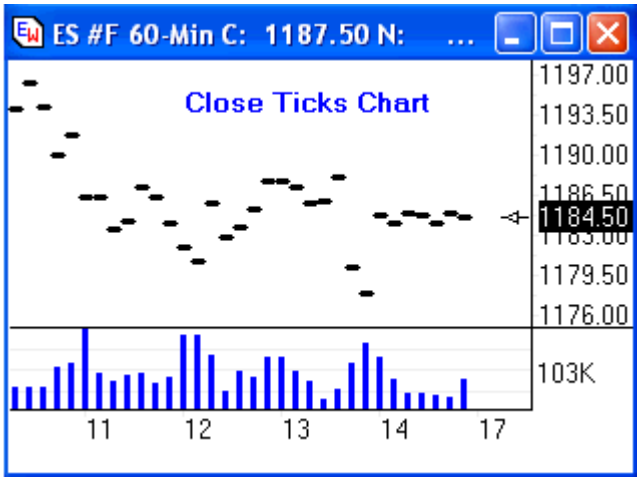
The price range is represented with a vertical line extending from the Low to the High. The Open (first tick) price is shown with a dash on the left side of the bar. The Close (last tick) price is shown with a dash on the right side of the bar.

read more» Bar Styles



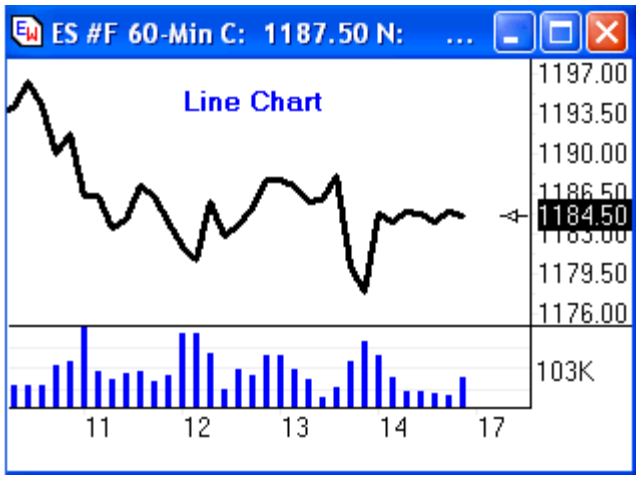
Close Ticks Chart

This display is created by showing only the close price for each bar. The Open, High, and Low prices for a bar are not shown.



Line Chart

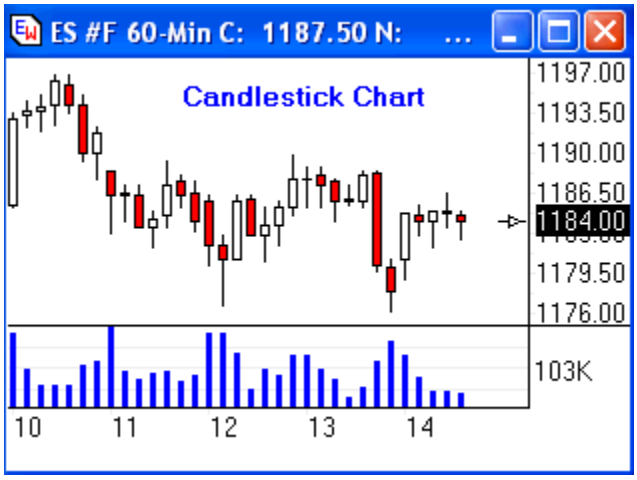
A line chart connects the close prices from the bars. The Open, High, and Low prices for a bar are not shown.



Candlestick Chart

A candlestick is a bar with a rectangle drawn between the Open and the Close prices. The left and right side characteristics are lost which were used to indicate the Open and the Close. Therefore, a solid rectangle is used to indicate the Open is at the top of the rectangle and the Close is at the bottom. A hollow rectangle indicates the Close is at the top and the Open is at the bottom of the rectangle..

A variation for the hollow rectangle is to use a solid rectangle of a different color, such as green.



read more» Candlestick

There are other variations in the presentation of the trade information. Each variation emphases some particular property or characteristic of the underlying data, often at the expense of ignoring or hiding other characteristics. So this article is by no means complete and exhaustive. Some variations that

were not covered include: Renko Charts, Swing Charts, Heikin-Ashi Charts, Average Candle Charts, Point and Figure Charts, Three Line Break Charts, Price Histogram Charts, and Market Profile Charts.

Beginning traders may wonder whether one chart type or display variation is superior to another. The answer is basically 'No'. All chart types have their roots in the same trade information. Every variation will have traders who use that variation successfully and exclusively. Having said that does not mean that there isn't a popularity bias. Here is my opinion about the popularity of the different chart types and display variations.

Popularity	Chart Type	Display Format
High	Constant Tick	Candlesticks
	Intra-day, Daily	Standard Bars
	Constant Range	Line Chart
	Constant Volume	Close Ticks, not used
	Price Histogram	
Low	all others	

Studies

Ensign Map

Can the markets be predicted? That is a century old question. The 1900 Ph.D. thesis dissertation of Louis Bachelier, in Paris, argued the apparent erratic motion of stock market prices is identical to random walks. The 1965 work of Nobel prize winner Paul Samuelson proved that prices fluctuate randomly. While the bias of academia is towards markets being efficient, completely random and unpredictable, it appears that most traders believe otherwise. Traders see market behavior and price patterns that are repeatable, which therefore offer an element of being predictable.

Larry Pesavento, a well know trader and author, has been a long time proponent that market behavior can be predicted. The titles of some of his books are: 'Astro-Cycles: The Trader's Viewpoint', 'Fibonacci Ratios with Pattern Recognition', and 'Profitable Patterns for Stock Trading'. The last mentioned book has a chapter titled 'The Non Random Nature of Chaos Theory' which discusses his involvement in an area of research using Neural Networks to forecast the next day's price action. Read more » Neural Nets. Read more » Larry Pesavento's trading style.

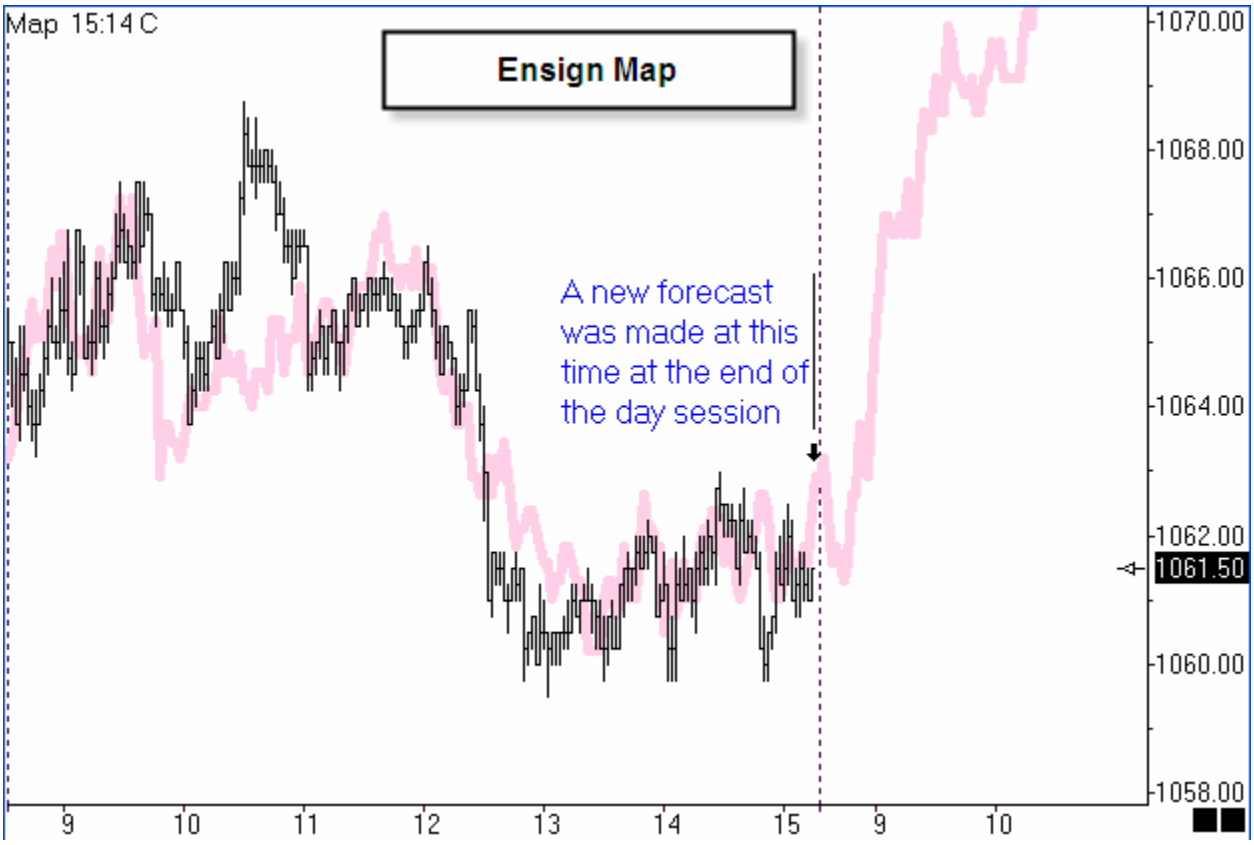
I believe the markets can be predicted. Market behavior has often been compared to waves because of the inherent characteristics of amplitude and periodicity. Market technicians have used Fibonacci retracement and extension tools to measure and predict amplitude fluctuations. The Pesavento Patterns tool was developed for Larry Pesavento to quickly find the swings in the price action and label the amplitude ratio relationships. Cycle tools have been used to measure and predict periodicity. A powerful tool that is predictive of both price and time is the Pyrapoint tool.

Possibly the most original predictive tool in recent years to be made commercially available is the Ensign Map tool found only in the Ensign charting software. The Ensign Map tool analyzes enormous amounts of market data to make a probable forecast of future market behavior. The tool incorporates the characteristics of both amplitude and periodicity to forecast future price action. That is a monumental objective, and the Map tool does an exceptional job.

The Ensign Map needs lots of back data in order to make a useful prediction. The tool is designed to recognize patterns and learn market characteristics for both vertical price fluctuations and the timing of swing turning points. Time of day is an important consideration since behavior at market open is used to predict opening behavior. Mid-day behavior is used to make a mid-day forecast. Behavior at market close is used to predict market closing patterns. In order to see sufficient pattern detail, it is recommended that the tool be applied to 2-minute bars up to 5-minute bars. A large time frame bar like 60-minutes is inappropriate because there is hardly any pattern in just 6 hourly bars per day. Some users have applied the Map tool to constant tick bar charts with success, but the variable nature of the time period covered by constant tick bars diminishes the precision of the Time characteristic that the tool is analyzing.

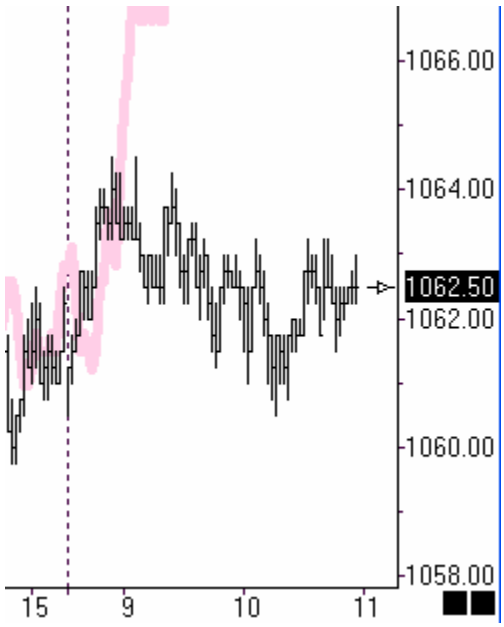
Market Open Forecast

Recalculate the Map at the end of the day session. The Map that shows on the chart will have very high correlation to the chart because it has the benefit of hindsight. The data showing on the chart and all prior days off the left side of the chart is known information, and is used to make the forecast for tomorrow's opening behavior.



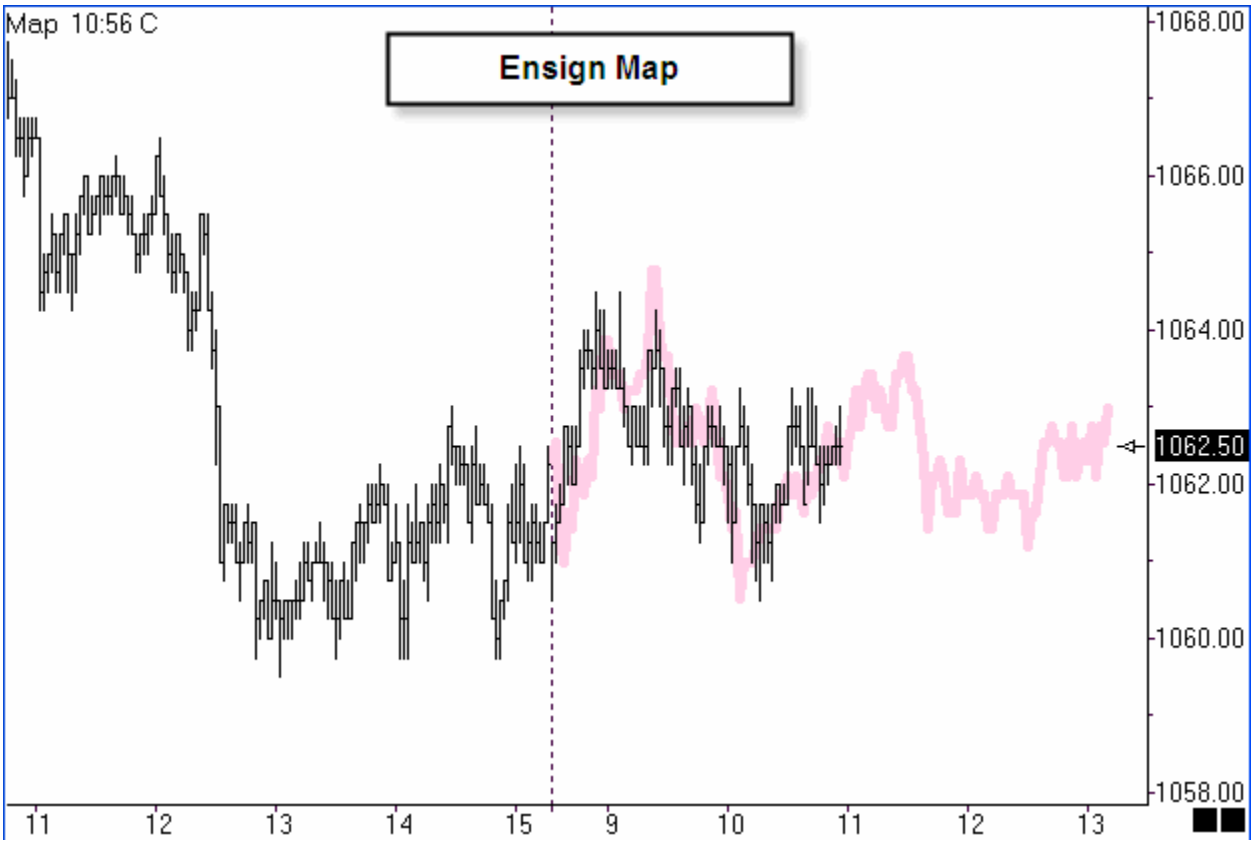
The forecast is for the market to move higher in the first couple hours of the trading session. Here is what actually happened.

The market started higher, but then sputtered sideways in a 3 point trading range. This is hardly fulfilling the previous day's forecast for the market to move upward to the 1069 price area.

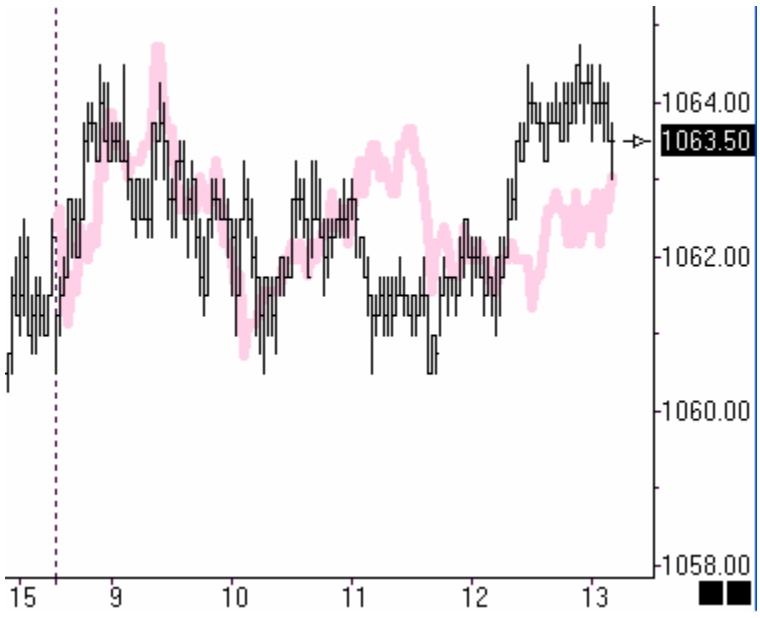


Mid-day Forecast

Now that new information about the actual open is known, it is time to make a new forecast for the mid-day. The Map is recalculated manually by pressing the equal sign key.

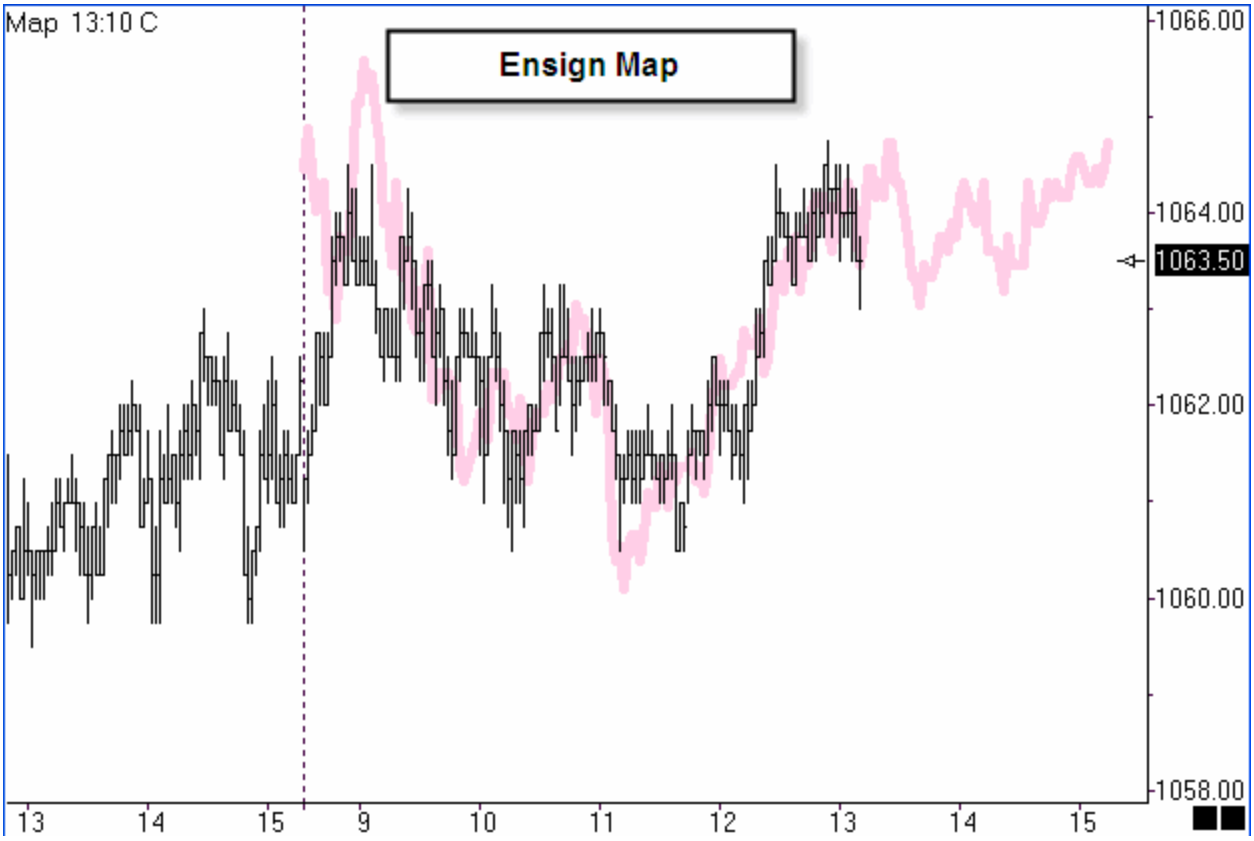


The Map has been resized in its amplitude by pressing the Shift Left Arrow or Shift Right Arrow keys. Then it was repositioned vertically so it nicely overlays the chart's bar pattern as shown. The Map is positioned vertically by using the Shift Up Arrow or Shift Down Arrow keys. The forecast is for another couple hours of sideways choppy action. This is what developed through the mid-day.



Late Afternoon and Closing Forecast

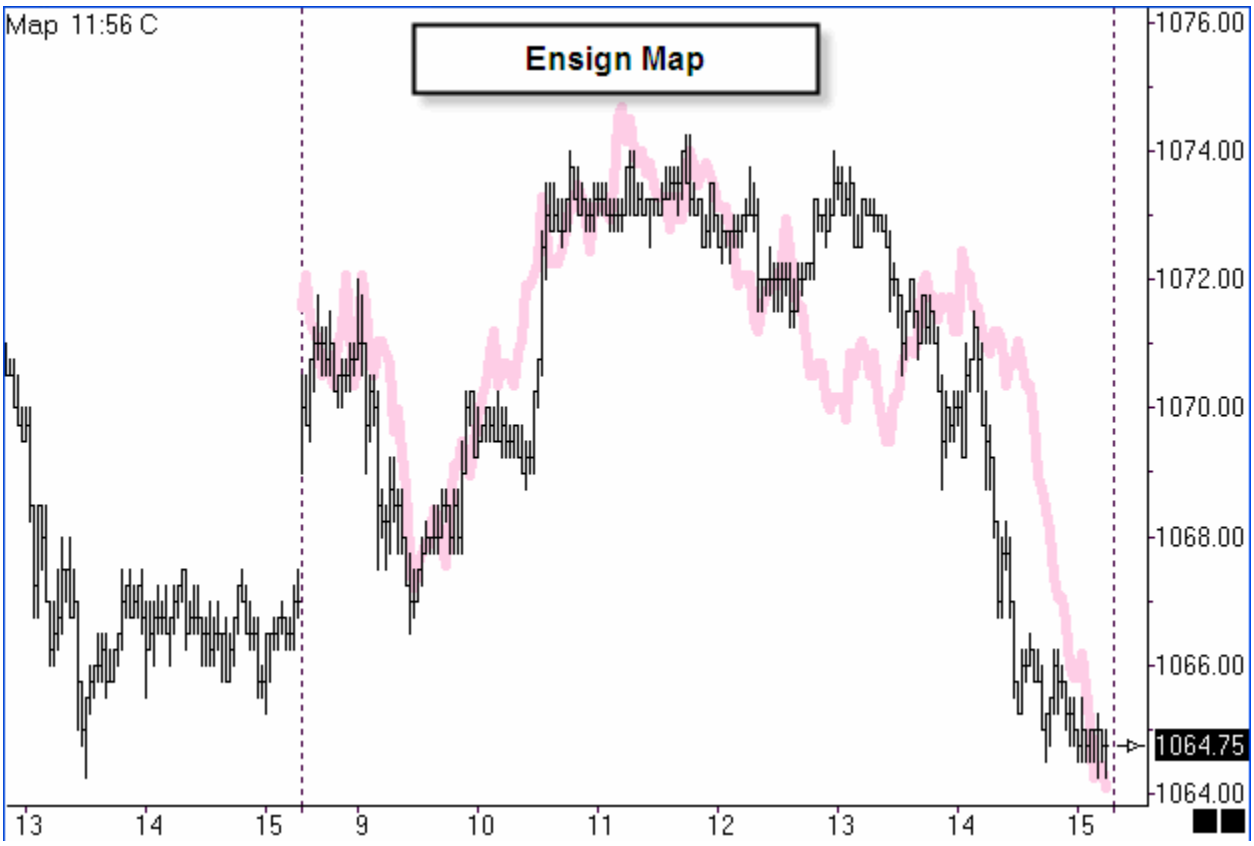
A couple more hours of price action describing today is known. It is time to make an update of the forecast to predict how the market will behave for the balance of the afternoon and into the close. The equal sign key is pressed to recalculate the Map. The new Map is resized and repositioned to overlay the chart bars nicely. The forecast for the balance of the day is for more sideways action near the high of the day.



Summary

The Ensign Map is a forecast based on probability, not certainty. The examples illustrate how the Map is used. Note that the time of the forecast is shown on the chart in the top left corner. The time stamps tells when the Map calculation was made. Data ahead of this time stamp is known information. Bars shown on the chart after the time stamp show how the market developed in comparison to the forecast.

The examples shown in this article not particularly impressive. Perhaps it is better that way lest hand picked stellar examples give a false expectation about what the Map can do. Some forecasts are truly phenomenal, however, such as the following forecast made at 11:56 for the market to sell off in the afternoon and close on the low of the day. This Map when sized to fit the bars ahead of 11:56 made an exceptional forecast of the market's closing price.



The Ensign Map is good for all symbols and all charts. And surprisingly, it is amazingly good on constant tick, constant range, and constant volume charts where the bars have a variable time period. These charts still have patterns and rhythms, and the principles still work. The idea is to have enough bars per day to have detail in the patterns. On a fixed time bar, a 2-min time period is recommended.

Additional Reading

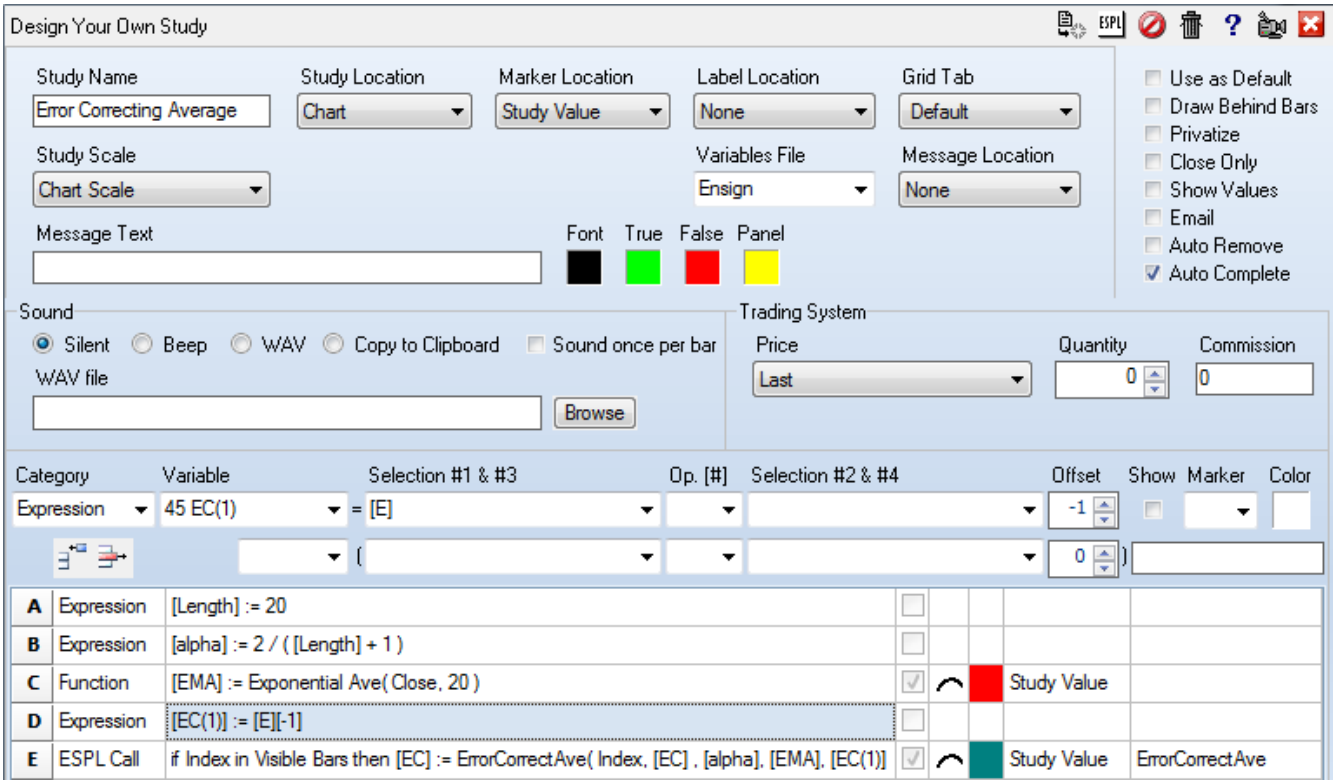
1) www.dacharts.org/archives/Ensign_Wed_class_transcripts/FXCM_data_rating_Pesavento_map.htm
2) Larry Pesavento
3) Price and Time

DYO: Design Your Own

Error Correcting Average

This example implements an error correcting average using a combination of a DYO and ESPL.

This is the DYO portion.



A – The length of the period for the moving average.

B – Calculate the alpha factor from the length.

C – Calculate an Exponential Moving Average. The period is the same as the Length.

D – One of the parameters needed for the ESPL Call is the prior value returned by the ESPL call, ie. the value calculated for the prior bar. Row D references Row E with an Offset of -1 to return the prior value.

E – Make an ESPL Call to a function named ErrorCorrectAve. The value returned is plotted using a teal color. The function call passes the 5 parameters as shown.

The core of the implementation is shown in the ESPL editor by clicking the ESPL button on the DYO property form.

ESPL Editor

```
32  function ErrorCorrectAve(idx,v,alpha,ema,ec1);
33  begin
34    LeastError := 1000000;
35    if ec1=0 then ec1 := Last(idx);
36    for value1 := -25 to 25 do begin
37      Gain := value1 / 10;
38      ec := alpha*(ema + Gain*(Last(idx)-ec1)) + (1-alpha)*ec1;
39      error := Last(idx) - ec;
40      if abs(error) < LeastError then begin
41        LeastError := abs(error);
42        BestGain := Gain;
43      end;
44    end;
45    Result := alpha*(ema + BestGain*(Last(idx)-ec1)) + (1-alpha)*ec1;
46  end;
```

32 – The function name is the same as used by the DYO calling statement. 5 parameters are being passed and assigned to local variables. Idx is the bar index being evaluated.

34 – Initialize a variable named LeastError to a high value.

35 – Test for the initialization state where the prior EC value has not been calculated yet. Make a default assignment for the average to begin with a bar's Last value.

36 – Loop through 50 iterations of the code through line 44.

37 – Gain is one tenth of the iteration value, ie -2.5 through 2.5.

38 – Make an exponential average calculation using the various Gains.

39 – Calculate the spread between the average and the bar's Last value.

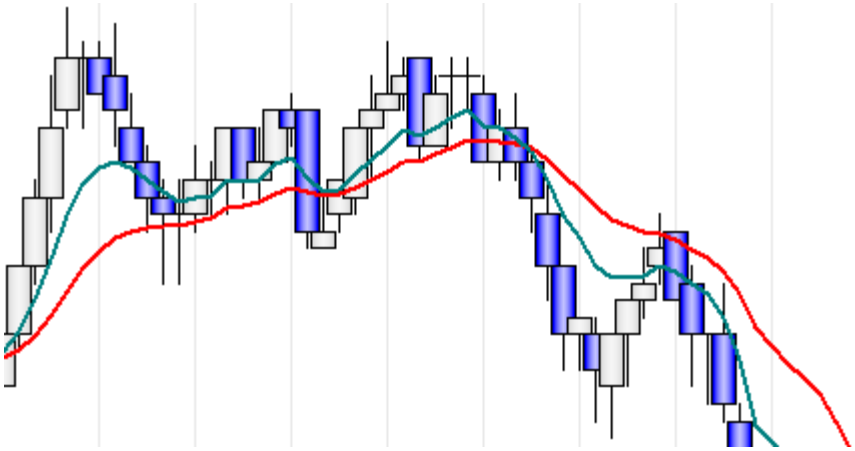
40 – Test the absolute value of the error, and conditionally

41 – Remember the LeastError.

42 – Remember the current gain as the BestGain.

45 – Return the Exponential Average calculated using the BestGain error correction.

The chart example compares a regular Exponental Average plotted in red with the Error Correcting Average plotted in teal.



Draw Tools

Alan Square

Alan Kelland's Box Trading Method
A draw tool growing in popularity is the Alan Square, named after its inventor Alan Kelland. Alan's method is first and foremost price action. The square serves as a structure to create

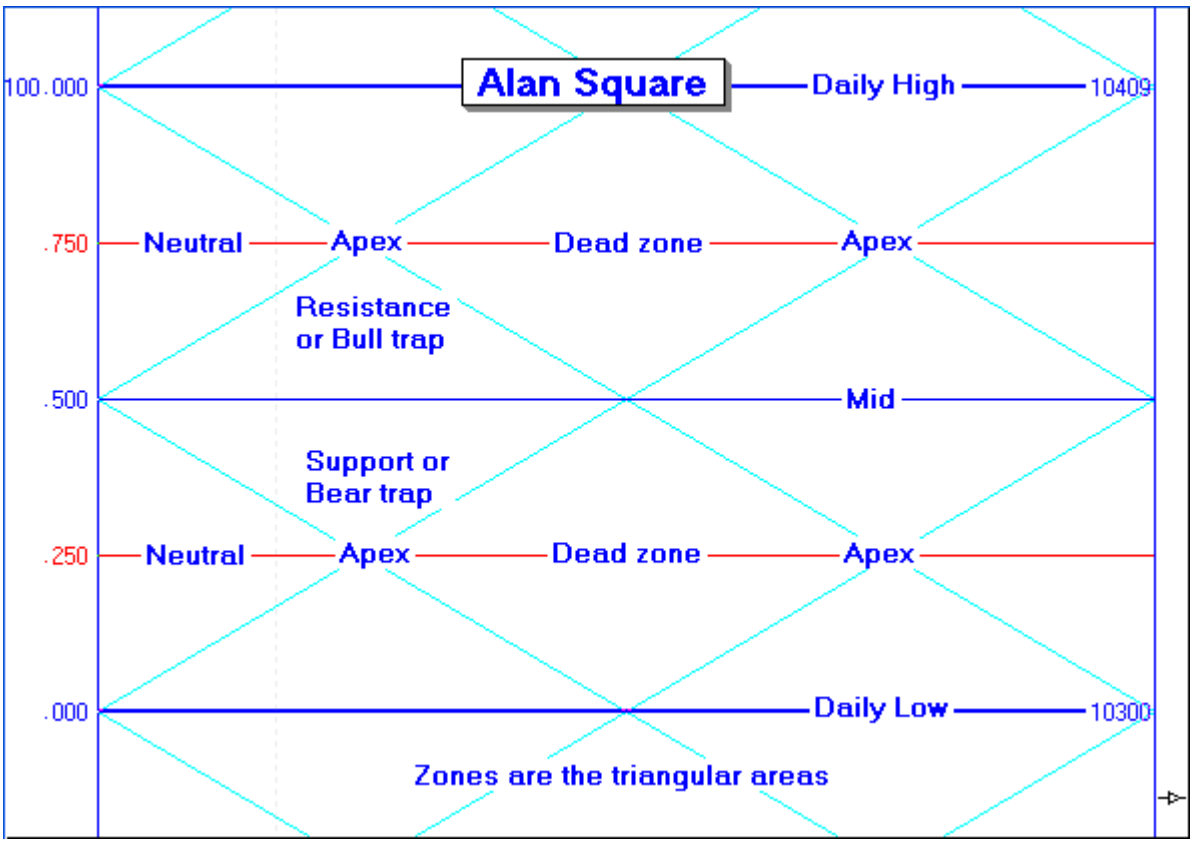
- Opportunities
- Targets and
- Protection

The most important aspects are to look for only the best quality setups, focus on identifying follow through bars, and never fade a zone (i.e., never sell a support zone, never buy a resistance zone).

Background
Alan developed his methods trading the ten-minute all-sessions Dow Jones Index futures (YM contract). This article and the trading strategies described reflects his work using that instrument. They are suggested uses only and as such are not a complete compilation of all his methods. However, traders have successfully applied the square to the S&P futures, DAX, Crude Oil, Euro, Bund, Bond, Russell and even stocks. Similarly, while the method is geared towards 10-minute bars, Alan has also used the square on various intra-day time frames and Daily charts. You are encouraged to experiment and find what works for you.

Though Alan does not use indicators (e.g., MACD, Stochastic, etc), many traders do and have added them to their charts. Price action strategies that Alan has shared to take advantage of these opportunities, protections, and targets are summarized in this article.

Components
The major components of the Alan Square are:



1) **Angulars**

- a) Major - Up and Down angulars from the High, Low, and square Midpoint.
- b) Minor - Up and Down angulars parallel to the Major, but from the 25% and 75% quartiles.

  Note: Only Major angulars create opportunities. Minor angulars are primarily used for protection.

2) **Quartiles**

- Yesterdays Low - 0% level (See below for how to determine Daily High and Daily Low)
- Yesterday's High - 100% level
- Midpoint - 50% of yesterday's Daily High and Daily Low
- Quartiles 25% and 75% of yesterday's High-Low range
- Extensions (125% to 200% or more of High-Low range)

3) **Apexes**

- First apex at 10:20 Eastern time zone (ET)
- Second apex at 14.10 Eastern time zone

  Note: Angulars do cross at 12:20 ET, but as it is the center of the Dead Zone, these apexes are second in importance for their timing value.

4) **Zones**

- Support Zone (SZ)
- Resistance Zone (RZ)

- Neutral Zone
- Dead Zone (DZ)

Of all the components, the angulars are the most important. Horizontals serve mainly to create zones and targets. The zones arise from the intersection of the angulars and horizontals and are used to create opportunities through the support and resistance nature of the angulars. The apexes on either side of the DZ, at 10:20 ET and 14:10 ET create price-time opportunities.

Price as it moves through the square offers trading opportunities primarily through use of the angulars and zones, and at times the quartiles, as described later in the strategies section. Examples are follow-through (FT) bars, violations and obligations, 2Z, VBT, and apex splitters.

One important aspect of the Alan Square is that it tells the trader where price did not, and cannot, go.

Start and End Times of the Alan Square
The standard square "Chart1" spans the pre-open through regular trading hours (RTH) session. It starts at 08:20 Eastern Time (ET), ie, NYC time, and ends at 16:20 ET. It takes the highest High and lowest Low from 08:00 ET of the prior day to 08:00 ET of the present day.

There is also a "Chart2" square that spans the entire Globex and RTH sessions. This will be referred to in this document as the alternate square. For the YM, this starts at 20:10 ET and ends at 17:.00 ET.

Alan uses a four-day rotation method that he calls PVAC, an acronym generally standing for the nature of the price action likely to be encountered on those days. PVAC is described in more detail in the PVAC section.

Construction Methods
There are various ways to draw the Alan Square. The implementation of the Alan Square in Ensign Windows is just one more of many reasons to switch to Ensign. Those who do not use Ensign can still draw the square 'the old fashioned way', how Alan drew his square for ten years prior to his getting Ensign Windows. The last two methods can be adapted by non-Ensign users to manually draw an Alan Square. Click on one of these excellent links for instructions.

- Ensign Alan Square Draw Tool
- Manually - Lines and Square (link to dacharts)
- Manually - Box and Parallels (discovery method, link to dacharts)

Helpful Studies, DYOS, & Templates
Traders have come up with a number of handy DYOS (Design Your Own Study, unique to Ensign) that help them. These DYOS are provided as templates. Traders should be knowledgeable about how to download and apply them and are referred to the Ensign Help pages for further reading.

The following templates are current as of 27 Jun 2005. Right Click and Save to an Ensign Templates folder.

- PVAC Ribbon (by Quartz)
- Highlight Bar1, Bar8, and Bar 11 (by dblue)
- Count HH, LL and Mark on chart (by Quartz)
  Alan Bar Count Method only
  Swing Count Method only
  Both, without highlight of 4th HH or LL
  Both with Highlights of 4th HH or LL
- Time Ribbon (by sputnik)

Also see dacharts.com templates page. Here is a list of trading hours for various markets (thanks sputnik, current as of June 2005)

Price Action Strategies
Price action is viewed by Alan in many ways, but to keep it simple, there are two areas of focus: bar relationships to nearby bars and larger pattern completions (targets).

As price moves across the square's zones and angulars, the push-pull and emotional extremes can be exploited by the trader when viewed as territory gained or lost, proximity areas of protection or open areas of exposure, and pattern completion targets.

The Angulars, Bars, and Zone ideas will be presented first. However, of all the strategies, learning to identify quality follow-through (**FT**) bars is the most important, followed by Violations.

FTs and Violations will over-ride, or at worst 'shade' the broadly general 'reads' of angulars, bars, and zones. If you plan to use this method, your time would be well spent studying the FT bar concept.

1) Early Read of Chart
The alternate Alan Square that spans the Globex session can be used as an early read for the standard Alan Square.

Once the standard square is in place (after 8.20, quickly assess Bar1, and then, Bar2 characteristics using these guidelines:

- Proximity of Bar1 to nearby angulars and horizontals
- The placement Bar2
    - Above, below, or through the H, L, or Mid
    - If through the High, Low, or Mid, this creates a 2Z possibility for Bar2
    - Above, below, or through a quartile

2) Angulars

- The square exists only to draw angulars (meaning, angulars are the most important part of the square)
- Trade short under Down Angulars, especially above the 75% quartile
- Trade long above Up Angulars, especially below the 25% quartile
- Price proximity of an angular when in a trade provides a price level for protection
- The further from the angulars price goes, the more your trade is exposed and lacking protection.
- Price riding the top of a down angular will be agonizingly slow.
- Price surfing an up angular targets the end of the line plus one quartile
- Price crossing the angular targets the exact end of the line
- Price surfing under an angular, trade at the kisses.

3) Zones

To recap, there are four zones and two Apexes

- Support (SZ)
- Resistance (RZ)
- Neutral (NZ)
- Dead Zone (DZ)
- Apexes (not technically zones, but the meeting point of various zones)

Within the zones there are close in areas where the square's structure diminishes the potential for rewarding a position taken nearby, i.e., left and right of an apex).

There are also areas of proximity protection, e.g., a price line where a trader can put his stop and protect his position, such as a major angular.

The guidelines below are general. Bear in mind the previous caution that FTs in particular and many times Violations will take precedence. Incorporate your study of FTs and Violations when using the Zone guidelines.

Support Zone (SZ)

- Long as low down in the SZ as price action allows
- Longs on the right side of a SZ can use the up angular as protection.
- Generally, do not initiate a short position in a SZ.
- Bars that break a SZ to the right of an apex creates a VBT (Vacuum Back Targets), discussed below.
- Bars that break a SZ on the left of an apex fall into an RZ and create a potential to short

Resistance Zone (RZ)

- Short as high up in the RZ as price action allows
- Shorts on the right side of a RZ can use the up angular as protection.
- Generally, do not initiate a long position in a RZ.
- Bars that break a RZ the right of an apex create a VBTs (Vacuum Back Targets), discussed below.
- Bars that break a RZ on the left of an apex rise into a SZ and create a potential to long

Dead Zone (DZ)

- As price goes into the Dead Zone, so it will go out of the DZ, i.e.,
    - If it goes into the DZ with a down bias, it will eventually exit with a down bias, or
    - If it goes into the DZ with a up bias, it will eventually exit with a up bias
- Scalp trades countertrend to the entry into the DZ, i.e.,
    - Scalp shorts high up in the RZ of the DZ, or
    - Scalp longs low down in the SZ of the DZ
- The maximum number of bars in a DZ is 23
- Only the primary square (the square created by yesterdays H and L) has a Dead Zone. The zones in the extension squares are generally treated as typical Support or Resistance.
- Only the standard square has a DZ, i.e., the alternate square does not have a DZ

Neutral Zone (NZ)

- Refrain from initiating a trade in the NZ until
  - Long when price is low in the SZ of the NZ
  - Short when price is high in the RZ of the NZ

Apex

- The two major Apexes are the outside boundaries of the DZ
- Apexes, being the meeting point of six zones, provide protection left and right. This is what Alan calls a give-them-no-oxygen area.

4) Bar 1, Bar 2, Bar 8, and Bar 11

On the standard square, number the bars starting with Bar 1 at 8:20-8:20 ET, Bar 2 follows, and so forth. There are a total of 47 bars in the day, 23 of which have the potential of being in the DZ, and one of which (Bar 1) is never traded. Only Bar 1, Bar 2, Bar 8, and Bar 11 carry pattern significance in Alan's method.

'Fleece bars' are long bars which lure overly-emotional traders in, but quickly reverse to 'fleece' traders of their money. Bar 8, which is the opening 10 minute bar for the RTH session, and Bar 11, which is the end of the first 30 minute opening range, provide such opportunities which Alan Square traders can use.

Alan will initiate a trade only after the close of the 10 minute bar. The only exceptions are Bar 2, Bar 8, and Bar 11, which he will trade within its open and close.

Bar 1 - the 8:20 ET bar Example of Bar1

- Never trade Bar 1
- Bias the close of the day on Bar 1
- Trade Bar 1 bias after lunch hour

Bar 2 - the 8:30-8:40 ET bar Bar1-Bar2 Example

Only Bar 2 can “uncheck” Bar 1 (i.e., only Bar 2 can over-ride a read from Bar 1)

Only Bar 2 Open as it relates to Bar 1 Close is used:

- Bar 2 Opens above Bar 1 Close, no significance
- Bar 2 Opens equals Bar 1 Close
    - A initial head fake is likely, so fading the move is a potential
    - May signify that the market will close unchanged from Bar 8 Open
- Bar 2 Opens below Bar 1 Close,
    - Alan doesn’t wait for the bar to close to initiate a short
    - With one exception, if bar 2 is outside to bar 1, it is generally bullish, whether up or down, so do not short in the first hour.
- When Bar 2 is a 2Z, price will often return to that price before 14:00 ET

Bar 8 - the Open Bar, 9:30-9:40 ET

- Bar 8 has only one rule: If Bar 8 is at or near the LOD (low of day), Do not short
- A Bar 8 long is a quick, TMAR trade (Take the Money and Run)

Bar 11 - The end of the 30m Opening Range, 10:00-10.10 ET Bar11 HOD Example

- Alan will not buy a Bar 11 High of Day (HOD)
- Treat as a high probability fleece bar at or near HOD (high of day) for a TMAR short
- Use on V and A days

5) Territory: Win it, Prove it (FT), Lose it (Violations)

Winning Territory
The Alan Square creates many opportunities for price to “win territory” with penetrations, “prove itself” with FT bars, and "give it up" or lose it through violations.

Territory is won when a bar penetrates an up angular and closes above it in the case of a move up, or when it pierces a down angular and closes below it in the case of a move down. Territory may also be won in a similar fashion with respect to horizontals.

Having won the territory, price must then “prove itself”. It does so by immediately printing a follow-through (FT) bar and by maintaining proximity to the angular, or by not violating (giving up) the nearby angular or horizontal. Territory that is not won will not be defended.

Follow-Through (FT) Bar Alan's examples of FT bars
Traders can study the chart showing the various types of follow through bars and then review prior days charts both statically and in playback to better understand this very important concept.

In its simplest form, an FT bar is a Higher High (HH) and a Higher Low (HL) (or a Lower High (LH) and Lower Low (LL)) in the direction of a trend. However, when a bar creates a HH and a HL, but the HL violates its adjacent angular or horizontal, that is not a FT bar (a non FT bar) as that violation gave up previously won territory.

Proximity
Proximity to an angular is quite strict. Price must stay close to the angular, but must not penetrate it. When price is still correctly trending relative to the nearby angular, but the slope of the trend is creating distance from it, minor angulars may be placed to protect the trend. However, the minor angulars do not in themselves create opportunities, they serve only to protect.

Ranking FT Bars

An FT bar takes precedence over other obligations such as the 2Z, Apex Splitter, or VBTs.

Territory won and confirmed by an FT bar can be ranked in importance as follows:

- Won at an Angular
- Won at yesterday's High or Low
- Won at the Mid
- Won at the Quartiles

If nothing has been won, there is nothing to protect.

Quality of FT Bar
A quality follow through bar going up will have a HH and a HL and will close in the higher part of its bar. Likewise a quality FT bar going down will have a LH and a LL and will close in the lower part of its bar.

A quality FT through a quartile is stating that the next quartile in the direction of the trend (i.e., next down quartile or next up quartile) can be expected as a target.

An FT bar is checked when the move continues in the direction of the trend without violation of the FT bar. It becomes unchecked when the low of the up FT bar is taken (or the high of a down FT bar is taken), i.e., the FT bar is no longer predictive.

Where people get trapped is they see a lousy (poor quality) FT bar and immediately enter. The market has spoken, but has not activated them. It is saying to expect lousy follow through.

A pattern completion target can be set by following the angular that was won to its endpoint on the square.

Alan's examples of hypothetical FT bars
Examples of FT
Example of FT with Target

Violations
After having won territory, should a bar then pierce the angular or horizontal just won, a violation is created and price "gives up" the territory.

In the case of an angular, the use of that angular to provide protection is not to be trusted. In the case of a horizontal, it is saying that price does not want to go into that territory, or that if it does, it will not defend it.

Additionally, if that violation was also a VBT (see VBT section), this should be noted on the chart as while the move may continue, odds of it failing (intra-day) are established by that VBT.

6) Band Targets Example of Bands
Price will often use the space between like angulars as a channel, stepping down or up the channel successively through the quartiles. Alan calls these bands.

When a channel gets violated, the pattern completion is the exact end of the violated line. When a channel has not been violated, the pattern target completion is a quartile extension of that line, extended each time another band is won.

7) Vacuum Back Targets (VBTs) Example of VBTs
If an up bar breaks up through a down angular or if a down bar breaks down through an up angular, the price where the bar cut through the angular creates a VBT. When this happens, a short horizontal line is placed at that price point, which is now a return target for price.

VBTs exist to provide price targets. They are not themselves entries. When the VBT is created higher up in a resistance zone, or lower down in a support zone, the greater the potential for a high quality return target. The lower the quality of a subsequent entry, the more at risk is meeting the VBT target. Keep in mind the idea of proximity providing protection and "open space" providing exposure.

The VBT remains in effect until a subsequent price bar prints the VBT price, at which point the VBT is considered "checked", i.e. closed, and no longer in play. The very next bar **cannot** uncheck a VBT.

8) 1-2-3 and 4th, a.k.a, "Fade the Fourth Whatever" Example of 1234 counts
The 123 pattern is a typical technical analysis pattern. The principle is simple: having conditioned traders to anticipate a successful test of a prior extreme three times, the forth attempt will be taken by the inexperienced traders and faded by those who are aware of the pattern.

Alan does not count HH or LL swing-to-swing, but rather bar-to-bar. Fading a fourth HH would thus be the fourth higher high of a bar sequence. However, the fourth HH of a swing sequence is also faded. Similarly, on trending days, fade the fourth band move.

9) 2-Zedder (2Z) Example of 2Z and targets
A 2Z is a bar that opens in one zone, travels through another, and closes in a third zone. The 2Z bar creates an obligation, i.e., price will return to test the open.

10) Apex Splitter Example of Apex Splitter
An Apex Splitter is a bar that traverses one of the two major Apexes. Expect a reversal within 30m (3 bars).

Miscellaneous:

- Once-Twice-Thrice
- Look for quality FT bars and trade only the best setups
- Unchecking a bar is not a signal, it is a warning
- If a line is violated twice, odds are it will be violated again.
- After a significant reaction to news, fade the move after 39 minutes of the reaction to the news and anticipate a pullback to 50% of the move
- The alternate Alan Square is useful on Mondays and Fridays.
- 80% of Friday's will hit the midpoint (Example)
- Up days typically make move before noon, down days after 14.30ET
- For the U (September contract) only
  - -- fade an upside move of 60-minutes or ~75 points
  - -- fade a sixth HH and ~75 points
- Use a major (or minor) angular to manage your trades. When a line or zone is won, trail the stop, surrender nothing
- ZB (US Bond) likes zones, times, and quartiles
- Euro is all about symmetry. Likes 20 minutes after news, but best are angulars right of whole session chart, above or below High or Low
- The Market's duty is to inform with price action.
- No FT, no VBTs, no obligations, no mbh
- If a chart begins eroding profit, exit.
- As a trader, look for market distress and identify quality exhaustion points
- We owe it to ourselves to follow the money. Trade the trending markets.

PVAC Days and Alan's Method
PVAC is the acronym Alan uses for a four-day rotation cycle. The cycle itself is circularly continuous

every days of the week, forever, including every holiday.

Thus if, for instance, Monday was a P, Tuesday is V, Wednesday is A, Thursday is C. At this point the cycle repeats, with Friday being P, Saturday being V, Sunday being A, and the following Monday being C.

One must first determine a valid and confirmed “PVAC” day to start their cycle properly. The easiest way to do that is to apply the PVAC template, which is coded to do the repeat cycle using the Ensign internal calendar. One could also make a small calendar and color each day after a known PVAC day is determined.

Having started, the cycle never changes. While each day tends to have the characteristics shown below, like all cycle tools, there are inversions, which will last a cycle or at times even more, and have reasonable odds of inverting regularly.

A trader who wants to incorporate a four-day rotation cycle into their work is encouraged to study for themselves whether this adds value.

Bonnie Hill's Cycles pages may be of use to those who want to learn more about rotation cycles.

The Alan's Lessons page at dacharts.com has various annotated examples of price action during specific PVAC days. The links below are to dacharts pages of PVAC day examples.

Day	Color	Characteristics
C-Day	Yellow	• Consolidation day, aka 'consoly' day. It may not chop, but it may have an accumulation or distribution quality to the action • Trade often and trade fast • Pattern traders fade 4HHs and 4LLs with backfill/pullbacks 3 bars later • Apexes and angulars tend to have less importance • Numerical traders trade after Bar8 open and use support one horizontal below, resistance one horizontal above • C day opens often at the 25% • The afternoon action tends to be opposite to the morning action
P-day	Green	• Often a trend day. Find the trend and enter it. • Often opens at the 75% • Trade P-days against a quartile • Watch for price to be above/below the first apex: buy above or sell below • Do not fade dead zone, minimal trading
V-Day	Red	• Closes well for bulls • Use your fleece bars Bar8 and Bar11 • Bar8 open often a V-day return target • 'V' return comes early in day in bear moves, late in day in bullish moves
A-day	Blue	• Closes poorly for bulls • Use your fleece bars 8 and 11 • Generally 'A' shaped, but may have a kick-leg after 3pm

Other Uses of the Alan Square
Alan uses the square various ways on the Daily chart as well as with other time frames. Here are some examples.

- Daily with an annual square.
- Daily with a contract start-close square
- 90-minute chart (Alan)

Traders have used the Alan Square in many ways. Here is a sampling of their ideas:

- Euro (mbh)
- GB 10m (sputnik)
- QM 5m (sum_1) :: QM Daily (sum_1)
- ZB 10m (quartz)
- YM, with DYOS, well commented (kodi)
- with Pyra Overlay (Buffy)
- $SPX 30m with one-month square (saxby)
- Google 10m RTH square (amg)
- Moon Quarters (Frito)
- Solstice time (phi)
- ES with 50% Angulars (Discovery)

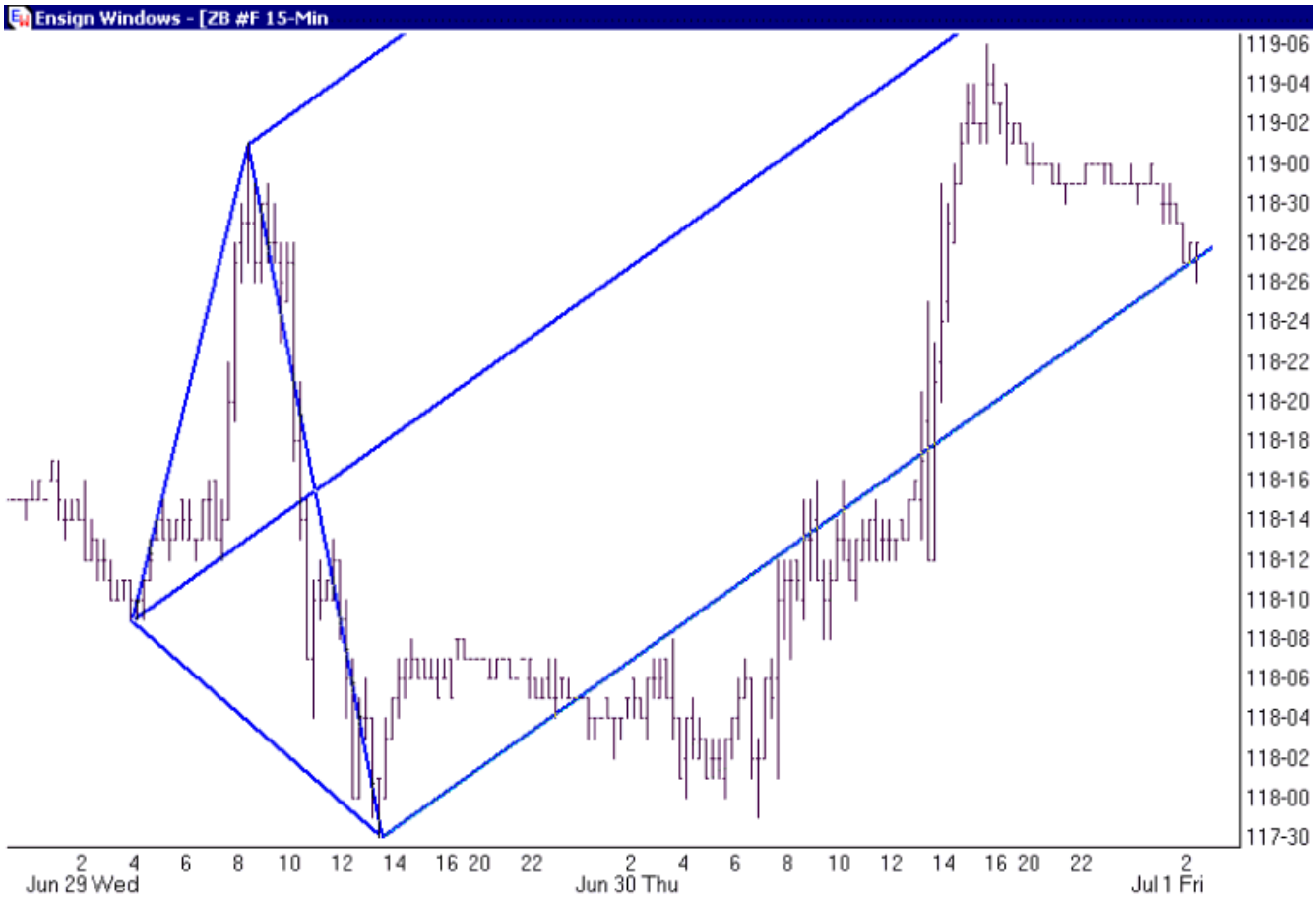
Appreciation is extended to Alan Kelland, Ana Maria Gallo, Judy MacKeigan, and other Alan Square traders for use of the materials in this manual. For more information about Alan's methods and using the Alan Square, please join the Coffee House chat room in the Ensign chat rooms and the Coffee House Ventri1o voice room. Many excellent traders patronize these rooms (and the B-Line chat rooms) who use the Alan Square everyday. Excellent chart examples are posted each day to the http://www.dacharts.com/ web site.

Andrews Pitchfork

Let's look at an actual trade in the 30-Year U.S. Bond futures. This is my favorite interest rate future to trade, because you get the most "bang for the buck" and if you are a bit crafty, there's still plenty of movement to day-trade them, off-floor, if that's your trading style.

One of the problems off-floor traders find with all of the interest rate products is that they have several sharp moves. But between those sharp moves, there are long periods of inactivity—some traders call this "flat lining". This "flat lining" tends to deform or diminish the effectiveness of trading methods, because time continues to pass while the contract stops moving. When using Median Lines, I say that price "drifted out" out the Median Lines because time has moved to the right [or marched on] while price has stayed still. Is there a way to address this drifting and thus make these contracts more tradeable?

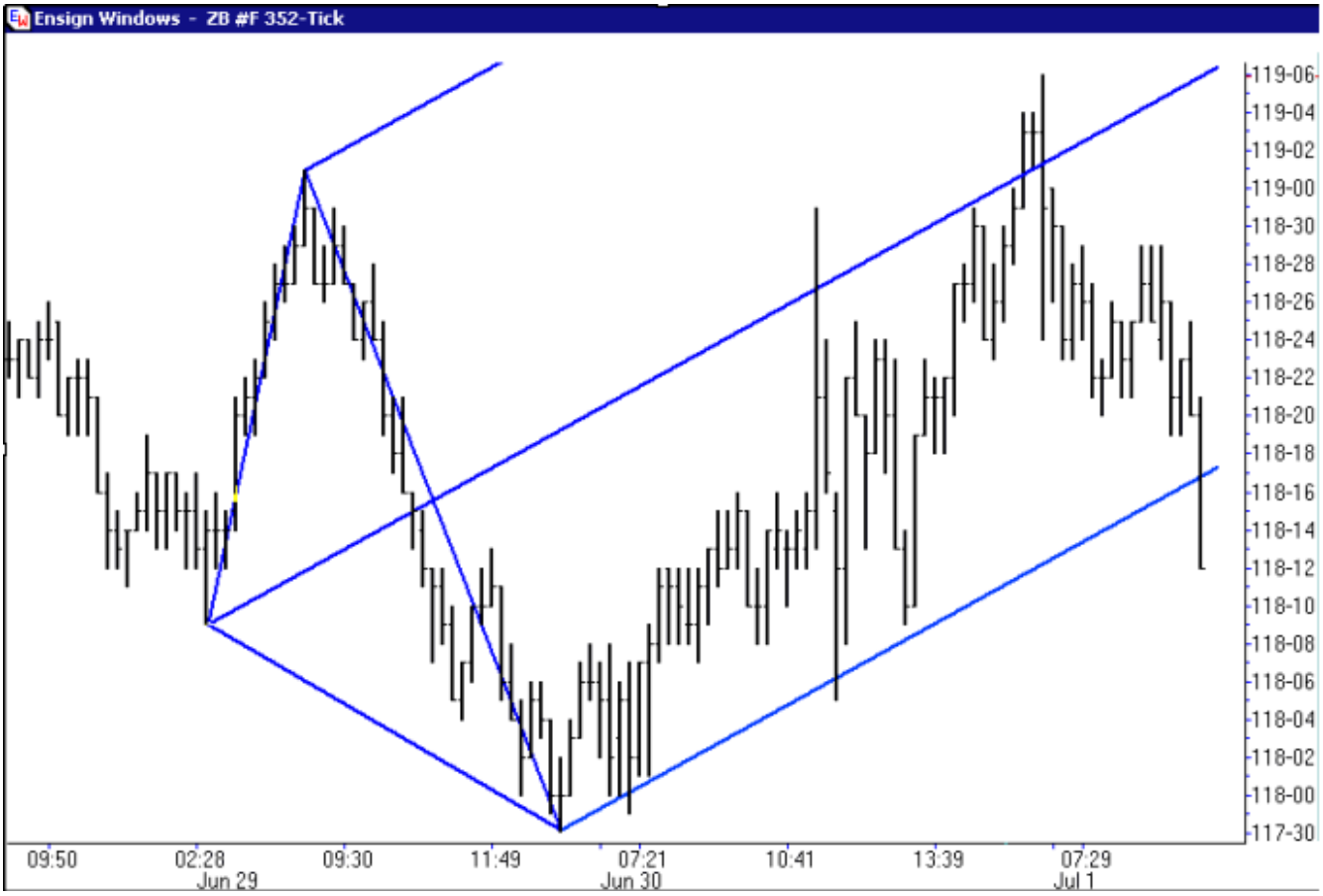
Actually, there are several ways to address the "drifting effect" and I'll show you today one of these ways, in detail, and how to combine it with Median Lines to trade these markets effectively. The oldest and most well known method is point and figure charting, and you could use this method, along with



Median Lines, to trade these contracts. But I don't find the combination of Point and Figure Charts and Median Lines to be a good combination. Instead, I like to use "tick based" bar charts, where each bar on the chart shows X amount of ticks of trading activity. So if I choose to look at 300 tick bars, each bar on the chart will show 300 ticks of activity and the range, open, high, low and close that happened while those 300 ticks unfolded. Once 300 ticks have been reached, a new bar is started. By choosing to look at tick based bars, I have taken time out of the equation, which "can" be a good thing. In this case, it is a positive, because it generally eliminates the drifting effect I just mentioned, and that makes the

Median Lines much more effective in showing me where price is liable to run out of energy, and where price is likely to find support and resistance. Let's compare a time based bar chart and a tick based bar chart.

The 1st chart is a 15 minute time based bar chart. Note how price tends to stall, dead in the water, at times. This causes price to "drift" through the right" of any Median Line you draw, reducing their effectiveness. Now lets compare this time based chart with a tick based chart, of the same time period.



Note here how the "dead periods" have literally disappeared from the chart, although it is a chart of the same "time frame." Because the bars are based on numbers of ticks, these dead periods are hidden within the tick bars. Now let's look at a few actual trades, in a step by step manner, and see how to trade using tick bars and Median Lines:

Example 1: Price has made a nice run up but it has now re-tested its highs once and when it failed to make a new high, it traded a bit lower and then left triple tops in place at 119-10, below the swing highs of the move. You can see that I added a red down sloping Median Line set, drawn from the prior three alternating pivots.

Now note that the last bar on this chart, the last of the three triple tops, "zooms" or runs back lower through the Upper Median Line Parallel after trying to get and hold above it. And note that price closes in the lower third of this "zoom" bar. We say this bar closed with "good separation," which is an indication of the selling pressure or momentum it had to the down side, once it failed to hold above the Upper Median Line Parallel. The quality of the separation found in a zoom bar gives us clues to its likely reliability. That means that if a bar zooms through a Median Line or one of its parallels but closes near or on the line it just zoomed, it had poor separation and is a poor example of a zoom bar, and thus, less likely to be reliable in a trade set up.

Zoom bars can be used for high probability trade set ups, and that's what we'll try to do in this first trade example. Let's see what I can diagram as a potential trade that makes sense and has a good risk reward ratio.

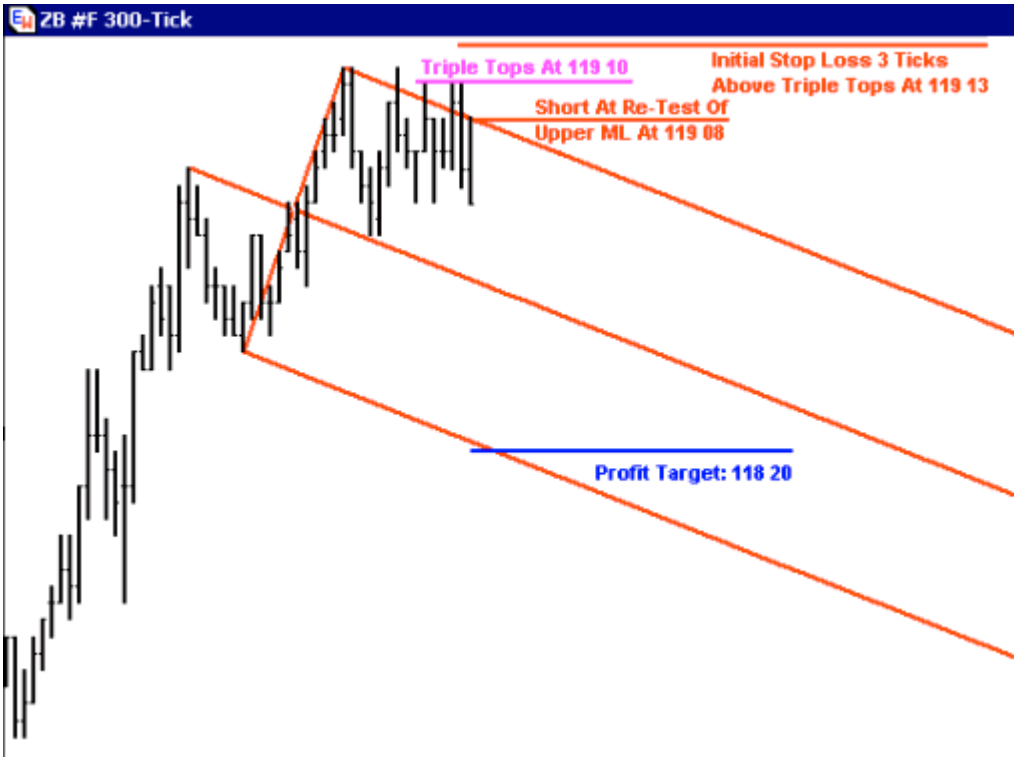
Because price closed with good separation and also left triple tops above the down sloping Upper Median Line Parallel, I want to be a seller of this market IF price gives me a high probability trade entry with a solid risk reward ratio. Let's look at all of these things, one by one:

By a high probability trade entry, I mean by looking at tens of thousands of actual trades I have made over the thirty plus years I have been trading, I am able to categorize each trade taken in the past according to the trade entry method associated with each trade and then do in-depth statistical analysis, telling me the probabilities of success of each of the trade entry set ups I use when trading. In this particular trade, I am looking to sell after a "zoom and re-test," which is a trade set up that I used thousands of times, so I know after a great deal of actual trades the probability of success of this trade is better than 70 percent.

As I mentioned earlier, the quality of the separation in this zoom bar gives it a higher likelihood of success. Again, separation visually tells us about the quality of the selling or buying pressures associated with the bar. Better separation in the same direction as the contemplated entry shows a strong correlation with the probable success of the trade.

Now the trade plan: I want to sell a re-test of the just-zoomed Upper Median Line Parallel at 119-08. My initial stop loss order will be at three ticks above the 119-10 triple tops, at 119-13. That means I am risking 5 ticks per contract, which is $31.25 per tick times 5, or $156.25.

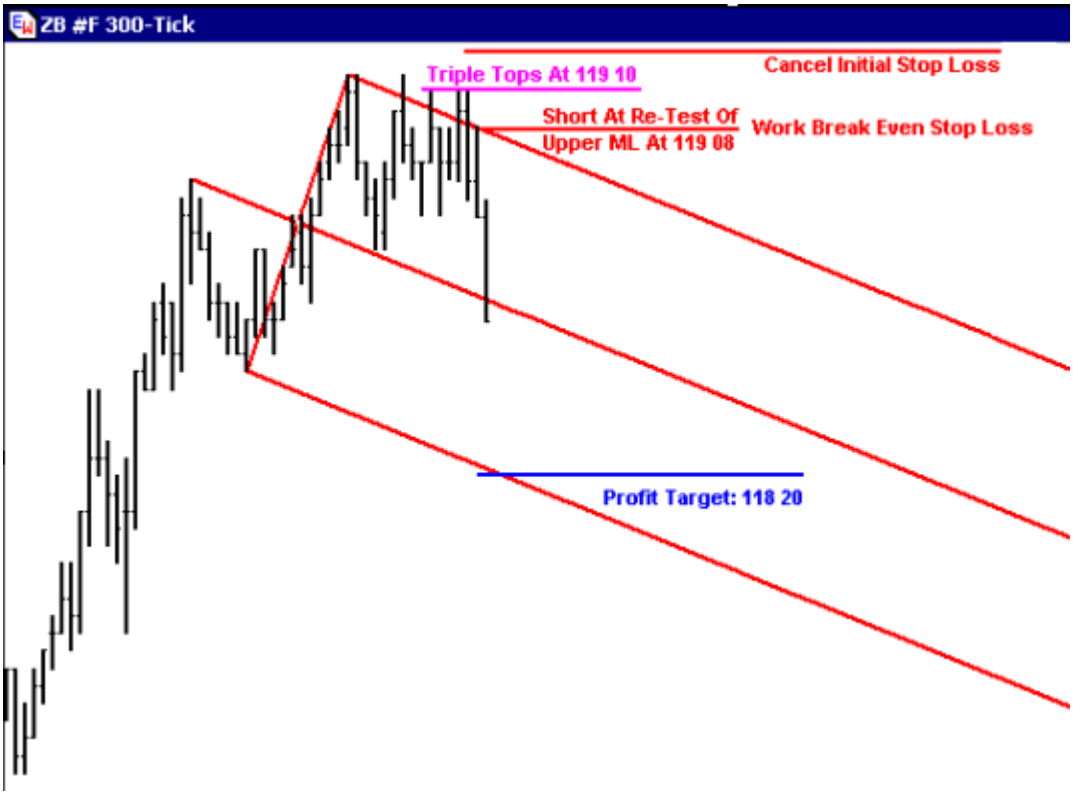
My profit target is a test of the Lower Median Line Parallel, which initially comes in at 118-20. That means that if I am correct, I expect to make 20 ticks, which is $625 per contract. This gives me a risk reward ratio of 20/5, which equals 4. I don't take trades that have a risk reward ratio of less than 2, so this trade set up is more than acceptable. And I'm certainly willing to risk $156,25 per contract on the initial stop loss. I like the look of this trade set up, as well as the probabilities associated with it. I enter a limit order to sell 30 year bond futures at 119 08/32, and I also enter a stop loss buy order at 119-13, so that I have limited my loss right from the beginning. Let's see if the market let's us get filled:



Price comes back up and re-tests the down sloping Upper Median Line, getting me short bond futures at 119-08 in the process. Remember from the Median Line theory that we expect price to run out of energy at or near the Median Line or its parallels, so it shouldn't be a surprise that price stopped going higher after testing the Upper Median Line Parallel—In fact, that's exactly what I was expecting and why my order was to get short at the re-test of the Upper Median Line Parallel.

Once I get confirmation from the exchange that I am indeed short, I enter my profit target: I enter a limit order to buy bond futures at 118-20, and I make it "OCO" with my initial stop loss order at 119-13 ("OCO" means that once one of these two orders is filled, the remaining order is immediately canceled).

Note that price closed on its lows, something I like to see when short. This indicates that price likely still carries additional downside directional energy. Now that I am short, I'll have to watch as price unfolds:



Price continues to sprint lower, again making a wide range lower bar that closes on its lows. And when price penetrates and closes below the down sloping Median Line, it's a sign that I should be evaluating my outstanding risk and if possible, reduce it by trying to move my stop loss closer to the current price action. But I'll have to be careful! I want to move my stop closer if possible, but I need to stay far enough away that I don't find myself in the "noise" of this market and get stopped out right before the market resumes its downward move.

Looking at the price action that's unfolded since I've put the position on, I'm in a quandary: There have been only two price bars, both of them wide range bars with price closing near or on its lows. Because price has come straight down, there is no price context for me to use to hide my stops behind. What do I mean by that? I can use market formations like double tops or bottoms, trading ranges, swing highs or lows to hide behind when bringing my stops closer to the action, if they are available. As you can see in this example, there are no market formations [no context] to hide behind. The best I can do as this bar closes is cancel my initial stop loss order and put in a break even stop order at 119-08, meaning I am now risking nothing but brokerage on this trade.

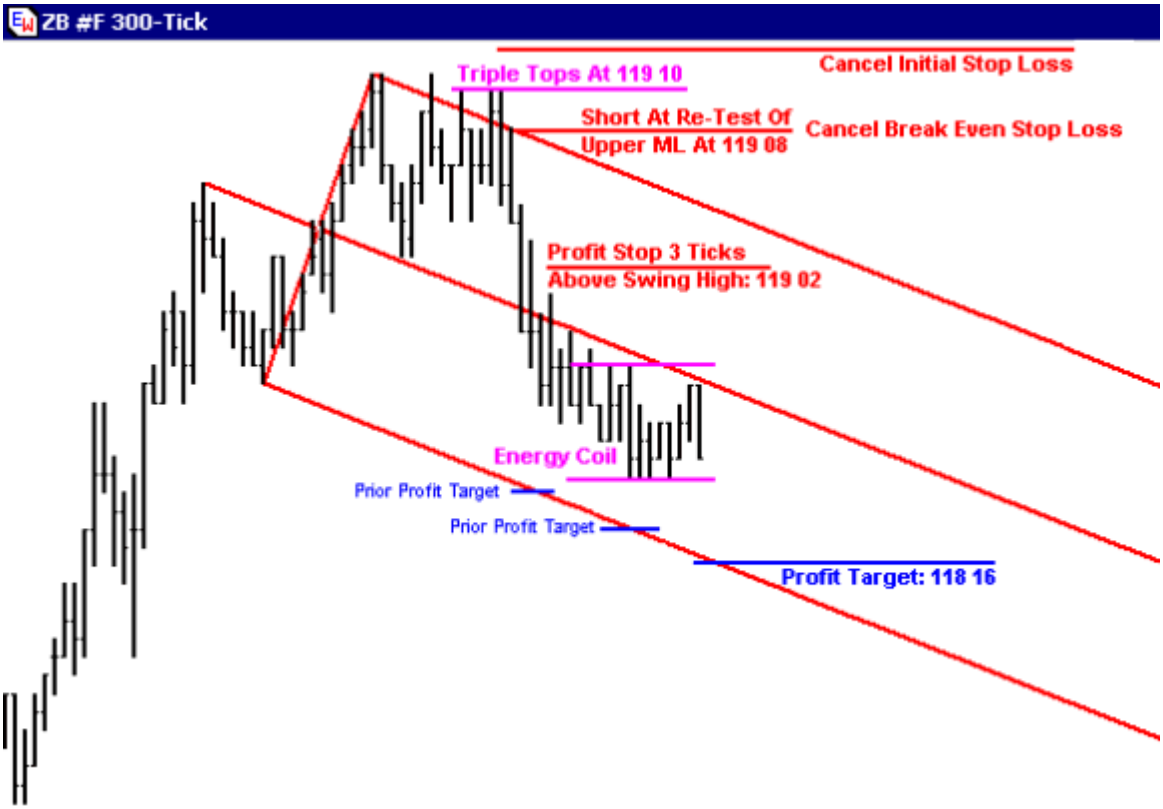
Price makes another new low but then rebounds, climbing well back above the down sloping Median Line before falling all the way back down to close unchanged, below the Median Line. The next bar tests the Median Line again but then heads lower, making another new low and closing near its lows. The next bar opens unchanged, then leaves a double bottom before climbing up above the Median Line briefly, although it manages to close back below the Median Line. Note that we have now had four bars close below the Median Line.

The next bar opens unchanged, below the Median Line, and makes a new low for the move, breaking through the double bottoms but climbing back up to close unchanged. I note with interest that the range of this bar is narrower than the bars I have been seeing. In general, as the ranges of the bars narrow, it is a sign that price may be running out of directional energy. It isn't a bad thing, but instead, it is a red light, telling me to be on the look out for further information—and to be trying to reduce my risk when possible. I am tempted to move my stops closer, but I want to give price a bar or two more.

The next bar opens unchanged again, then climbs back to test the Median Line, where it runs out of energy. And this bar closes on its lows. Finally, the last bar opens unchanged, trades lower, leaving a double bottom, but closes on its highs. And it is also the narrowest bar in this series of bars that form a range or "Energy Coil," which is an area where price is re-storing its expended directional energy.

Two things prompt me to move my stop order closer: The narrowing ranges of the bars and the alternating closes at the extremes of the bars within the range. Both of these things reiterate to me that price is re-storing energy and that it is important that I have my stop orders as close to the action as possible without being within the "noise" of the market. I look at the chart and note the mini swing high price made when it briefly came back above the Median Line at 118-31. I then move my break even stop at 119-08 down to 119-02, three ticks above the mini swing high, making it a profit stop now. In essence, we are playing with the market's money. I call this "boxing in profits" and our goal is to get to the point where we are playing with the market's money as soon as possible, as long as we stay out of the "noise" of the market.

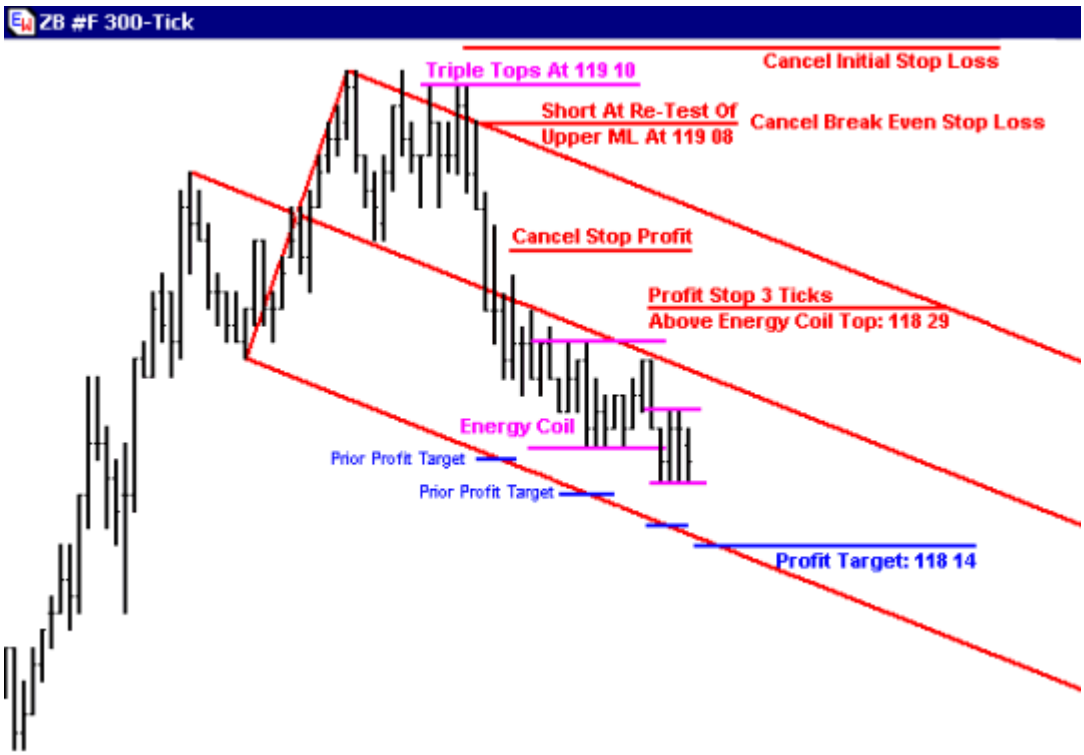
I also re-calculated my profit target, by simply determining where price would intersect with the down sloping Lower Median Line Parallel. Because I am short against a down sloping line, as time goes by, my profit target moves lower, meaning I get paid more IF I am smart enough to keep adjusting my profit target. My new profit target is now at 118-18.



Now price forms a true energy coil, which runs for about sixteen bars. Even though price action has slowed down directionally, note that unlike traditional time-based bars, tick bars are still showing us price formations.

While we are in this agonizing energy coil, I'd love to move my stop profit order closer to the action, but I don't see any market formation or context YET that will allow me to do so without being too close to the noise of the market. I'll just have to be patient until the market gives me more to work with.

I AM able to move my profit target lower, however. I check where price will intersect with the Lower Median Line Parallel and then move it down to 118-16. Once again, I get paid for being short against a down sloping line as time goes on.



Price finally breaks below the current energy coil. Once the first bar closes below the energy coil, I move my stop profit order from 119-02 down to three ticks above the 118-26 top of the energy coil that price just broke out of, giving me a new stop profit order of 118-29. Again, I just keep boxing in profits as price approaches my profit target.

As several more bars form, note that they are again narrow range bars. I've just moved my stop profit order as close as possible, so there's nothing to be done there. But I measure where price will intersect with the Lower Median Line Parallel and note that its time again to move my profit order lower, because I am short against a down sloping line. I move my profit order down to 118-14.

Price breaks out of the narrow range [or the second energy coil] and closes on its lows. As I said earlier, bars of consequence that close on or near their extremes give an indication that price has further directional energy to spend in the same direction, and after spending that much time in energy coils re-storing energy, you'd expect that price had enough directional energy to quickly make it to my profit target. And indeed, it does during the next bar, punching through the Lower Median Line Parallel and filling my 118-14 profit order in the process.

Once I get confirmation from the exchange that my profit order was filled, I make certain my stop profit order at 118-29 is canceled and that I am working no further orders.

This was a nice clean bond trade, netting me 26 ticks in the bond futures, which is $812.50 per contract. The important keys to this trade were 1) Picking a high probability trade set up that had a solid risk reward ratio associated with it; 2) Hiding stops behind market formations; 3) Boxing in profits while staying far enough away from the "noise" of the market; and 4) Remembering to monitor the profit target and move it accordingly as the bars unfold. Because I was short against a down sloping line, I got paid an extra 6 ticks to be short as time passed, because of the slope of the line.

Article by Timothy Morge

Timothy Morge is one of the most respected names in the futures industry today. Throughout his remarkable 30 year career Mr. Morge has been a floor trader on the CME, an institutional trader managing cash forex positions in excess of $2 Billion U.S. Dollars, the author of the highly acclaimed book "Trading With Median Lines," the owner of AutoForks software, a mentor and teacher to hundreds of professional traders, as well as the Managing Director of Spike Trading's Proprietary Trading Group in Chicago.

Mr. Morge regularly teaches "Market Maps" seminars to professional traders at the CBOT and the CME. These half day seminars focus on teaching the trading tools Morge uses in his own trading, as well as the money management and risk reward tools he has developed over his thirty year trading career. In February, Mr. Morge and Spike Trading will begin

allowing non-professionals to take the Market Maps seminars in person or via the internet.

For further information on Market Map Seminars, go to: http://www.marketmaps.org

AutoForks Software, which runs on Ensign, is at: http://www.marketgeometrics.com

"Trading With Median Lines," written by Tim Morge, can be ordered at: http://www.medianlines.com/bookorder.html

ESPL Programming Language

Frequently Asked Questions

When will the new Ensign be released?

Ensign Software has done a major redesign of their charting software and released this new product as Ensign 10 (E10) for beta testing on January 25th, 2011. Ensign 10 may be in beta testing for up to 6 months (probably less). The previous (current) Ensign product is called Ensign Windows (EW).

Where can I learn more about the new Ensign 10?

Ensign will hold a daily training class in the Ensign chat room #1, with class starting at 4:30 pm Eastern time. Please join us for training, to get your questions answered, and for help in using the program. Download and install the program and click the Help | Docs button to read the Users Guide for Ensign 10. Several of the forms have a Video button which will open a viewer and play a training video. Forms also have Help buttons for quick access to the documentation.

Will Ensign 10 be able to use my current workspaces and templates?

Unfortunately the answer is No. Ensign 10 is a major redesign, particularly in the redesign of the Design Your Own study which is often present in workspaces and templates. Backward compatibility could not be preserved. Templates and workspaces will have to be recreated and saved in Ensign 10. Although you are disappointed in the lack of backward compatibility, the increased flexibility in Ensign 10 and its many new features should create compensating excitement.

Will I be forced to upgrade?

No. You can continue to use Ensign Windows. However, please become informed about Ensign 10 before making a commitment either way. You can run both programs side by side on the same computer. Continue to use Ensign Windows until you are comfortable with Ensign 10 and have duplicated your system in Ensign 10.

Will Ensign Windows be maintained?

Ensign Windows will be maintained for all of 2011. We will evaluate how many customers still use Ensign Windows at the end of 2011 before deciding what to do in 2012. When we are finished with the beta testing, Ensign 10 will become the product for all new clients. Between natural attrition and the continual migration of existing customers from Ensign Windows to Ensign 10, the size of the client base using Ensign Windows will shrink and eventually have a natural death of obsolescence. We do not want our customer base to migrate to Ensign 10 all at once. We would like the migration to happen gradually throughout 2011.

Will there be a price increase?

No. Ensign 10 will continue the same pricing as Ensign Windows, which is $49.95 per month. Ensign 10 will be the superior product from Ensign Software and be a greater value that merits your continued subscription.

Will Ensign 10 be able to read my database and chart files?

Yes, the tick and intra-day database files, and the chart files are unchanged in their content. However, the path to the folders has changed. Files can be copied from Ensign Windows to Ensign 10 if you are observant to copy the files into the correct folders. Database and chart files in Ensign 10 have two additional directory levels of \Feeds and a vendor folder. Example:

Ensign Windows: C:\Ensign\Ticks\ES #F is the path to the tick database files for the ES #F symbol.
Ensign 10: C:\Ensign10\Feeds\dSig\Ticks\ES #F is the path to the tick database files for the ES #F symbol for the eSignal vendor feed.

In Ensign Windows some symbols have a prefix character to make the symbol unique, such as =6EH1. In Ensign 10 the uniqueness is handled by the vendor folder so symbols are no longer modified to have a prefix character. 6EH1 will be the Ensign 10 symbol instead of =6EH1.

Why fix something that isn't broke?

We appreciate your loyalty to a great product, Ensign Windows. You do not have to make any change now. However, there are many exciting and new features that are part of Ensign 10, and will be attractive to you for consideration as a replacement or upgrade of your Ensign Windows. The following is a short list of some of these features. As these features start to be utilized by friends and mentors, you too will want to use Ensign 10 so you do not feel left behind or that you are missing out. Ensign 10 templates and layouts will not be backward compatible for use by Ensign Windows users.

Significant New Features:

- All supported **vendor feeds** can be received simultaneously.
- The charts and forms are **free floating** for location on any monitor without a desktop MDI design.
- Multiple charts and forms can be placed in a **Stack** container.
- The **DYO** study has been redesigned to be more powerful, and easier to understand and read.
- Global **Variables** can be named and referenced by name instead of just by their index number.
- An Excel style **Spreadsheet** is now part of the program and an excellent tool for creating a scoreboard.
- **Quote** pages and Time & Sales have been redesigned to be more colorful and attractive.
- The documentation is in **PDF** files instead of multiple web pages. A PDF document makes it easy to print a manual.
- Sharing templates and layouts is accomplished through a new **Package** feature and distribution through Ensign's servers.
- New **Trade Optimizer** for advanced users to optimize their trading systems.
- New **Chart Scanner** for advanced users to generate reports of charts that match a search criteria.
- Ensign 10's **Ribbon** replaces the menus and toolbars.
- The Ensign Software Programming Language (ESPL) has been redesigned with an **IDE**, debugging tools, forms and components.

Features in the works but not released yet:

- **Order Entry** form with automation for making trades with the TransAct Futures brokerage.
- **Trading from the chart** with the TransAct Futures brokerage.
- **Playback** of multiple symbols simultaneously.
- **Options** model.