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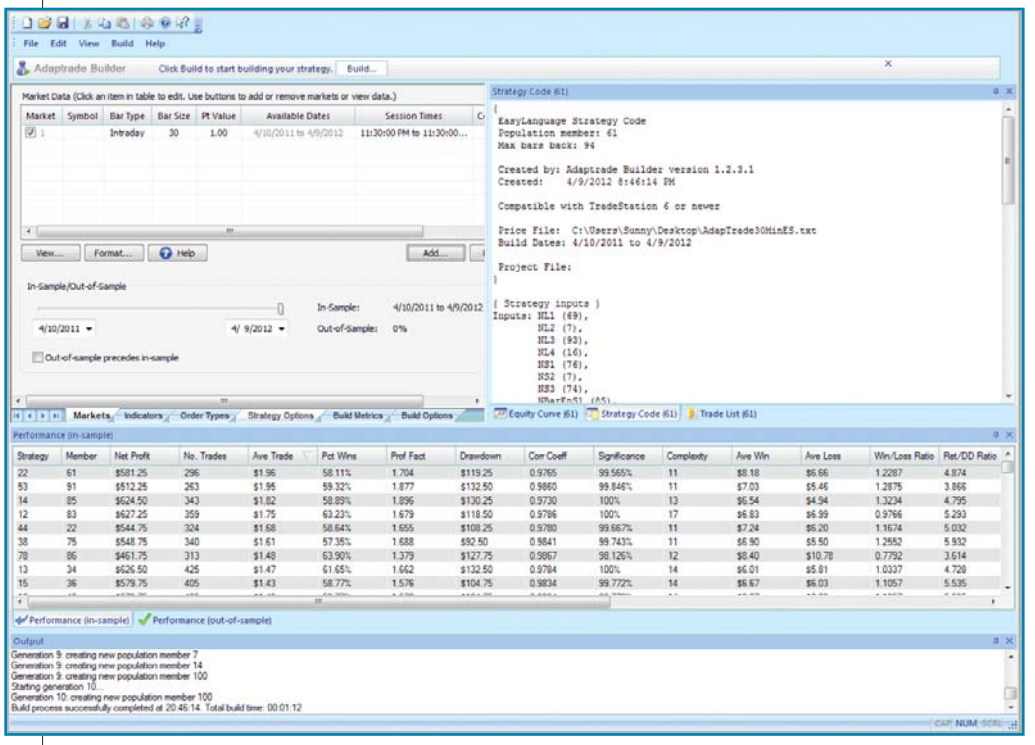
Basics Of Using Trading Software

System Design Software

Part 1



ADAPTRADE

FIGURE 1: ADAPTRADE WORKSPACE

by Sunny Harris

Back when I first began trading, only one piece of software addressed the trading community: it was called CompuTrac, the only available DOS program for a long time. It was wonderful by comparison to the alternative: pen and paper, or even primitive spreadsheets. CompuTrac (the company) put on annual seminars where they invited notable gurus to share their trading ideas. It was exciting to meet all these famous people face-to-face.

Somewhere along that time came an upstart young company called Omega Research. They introduced a DOS program called SystemWriter, later SystemWriter Plus. It answered

Adaptrade EasyLanguage Code

```
{
 EasyLanguage Strategy Code
 Population member: 61
 Max bars back: 94

 Created by: Adaptrade Builder version 1.2.3.1
 Created:    4/9/2012 8:46:14 PM

 Compatible with TradeStation 6 or newer

 Price File:  C:\Users\Sunny\Desktop\AdapTrade30MinES.
txt
 Build Dates: 4/10/2011 to 4/9/2012

 Project File:
}

{ Strategy inputs }
Inputs: NL1 (69),
        NL2 (7),
        NL3 (93),
        NL4 (16),
        NS1 (76),
        NS2 (7),
        NS3 (74),
        NBarEnS1 (85),
        EntFrS (3.9106),
        MMStopSzS (748.00),
        NBarExS (92);

{ Variables for entry and exit prices }
Var:   EntPrS   (0),
       SStop    (0);

{ Variables for entry and exit conditions }
Var:   EntCondL  (false),
       EntCondS  (false),
       ExCondL   (false);

{ Entry prices }
EntPrS = Highest(H, NBarEnS1) - EntFrS *
TrueRange;

{ Entry and exit conditions }
EntCondL = FastK(NL1) >= FastD(NL2);
EntCondS = StandardDev(C, NS1, 1) crosses above
Highest(Momentum(L, NS2), NS3);
ExCondL = FastK(NL3) crosses above FastK(NL4);

{ Entry orders }
If MarketPosition = 0 and EntCondL then begin
  Buy next bar at market;
end;

If MarketPosition = 0 and EntCondS then begin
  Sell short next bar at EntPrS stop;
end;

{ Exit orders, long trades }
If MarketPosition > 0 then begin

  If ExCondL then
    Sell next bar at market;
end;

{ Exit orders, short trades }
If MarketPosition < 0 then begin

  If BarsSinceEntry = 0 then begin
    SStop = EntryPrice + MMStopSzS/(BigPointValue
* CurrentShares);
  end;

  If BarsSinceEntry >= NBarExS then
    Buy to cover next bar at market;

  Buy to cover next bar at SStop stop;
end;
```

FIGURE 2: ADAPTRADE EASYLANGUAGE CODE

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a fantasy: backtesting concepts and producing detailed reports of the outcomes. It only processed daily data, but I created 15-minute data (by hand) and fed it into SystemWriter Plus and then wrote in all the corresponding times on my charts. It was definitely primitive. But it was head and shoulders above anything else available.

When Windows came along, it didn't take long for it to catch on, along with the need for intraday data. And along came an upgrade to SystemWriter Plus, called TradeStation. After that, it all happened very fast, as computers became more sophisticated, operating systems blossomed, and datafeeds got faster.

I do not pretend to know all there is to know about available software. I'm dangerous: I know a little about a lot, but not a lot about much except TradeStation. In this series of reviews, I will show you available software products, but not a lot about them. This isn't meant to be in-depth reviews of each product, but a sweeping stroke over a lot of choices available to you as a trader.

I will present these products alphabetically, with no evaluation as to fitness for purpose. That is up to you. I have lots of software because I love software and buy everything I can afford. I'll show you what I currently have.

ADAPTRADE BUILDER

33175 Temecula Pkwy #A, 336
Temecula, CA 92592
Phone: 951 302-1624
Fax: 208 977-1111
Internet: http://www.adaptrade.com
Email: info@Adaptrade.com

AdapTrade software is a departure from the point & click variety and from the observe & program variety as well. This program does it all for you. All you have to do is supply the data. AdapTrade is easy to use, and I was up and running in about 10 minutes. All I had to do was export the data from another program into ASCII format and import it into AdapTrade. For this exercise, I exported one year of 30-minute data on the @ES. Once the data was in, I pushed the build button and the software began spinning and created some 100 strategies all on its own! The AdapTrade workspace looks similar to what you see in Figure 1.

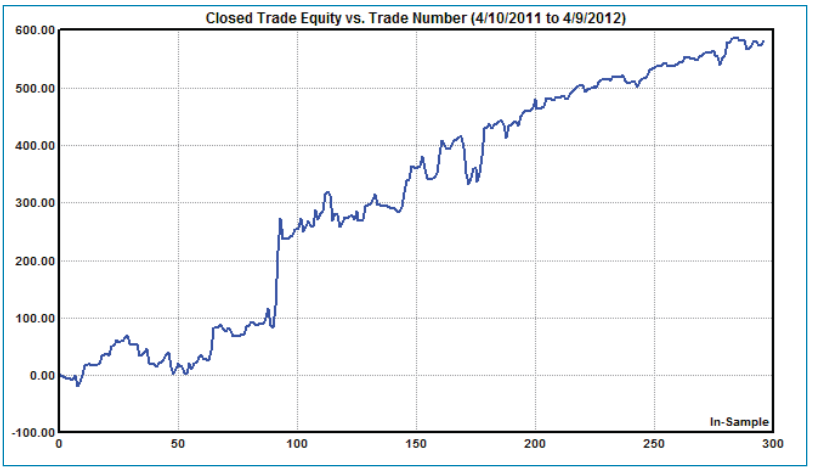

FIGURE 3: ADAPTRADE EQUITY CURVE

Marvel of marvels! After AdapTrade spins out its analyses and I have viewed many of the equity curves, I clicked on the strategy code tab associated with my pick, and lo and behold, the EasyLanguage code was right there in front of me! (See Figure 2.)

The equity curve for run 61, which had acceptable percent wins and average trade size, is in Figure 3. Next, I copied and pasted the code into TradeStation so I could crosscheck the results. I can't vouch for the efficacy of the code, other than to say that it compiles, runs, and shows a theoretical positive net profit. The problem I see at first glance is that the average trade is small in the AdapTrade window.

The output section of AdapTrade allows me to sort by any of several important columns: net profit, number of trades, average trade, percent wins, profit factor, drawdown, and more. I decided to sort by percent wins (see Figure 4).

After this sort, I am able to evaluate the system by average trade size to see that the 100% winning system only has four trades and the average trade is only $10.25. Not really exciting, is it? But the trades in the 50–70% range hold some promise because there are more trades. With more trades I can put on size, and I can use compounding. Strangely, when I tested this code in TradeStation (whence I exported the original data) and looked at their strategy performance report, I found a great report! In the crosscheck, the average trade is $41.11 while it showed $1.96 in the AdapTrade report. There are more trades in TradeStation,

Performance (in-sample)

Strategy	Member	Net Profit	No. Trades	Ave Trade	Pct Wins	Prof Fact	Drawdown	Corr Coeff	Significance	Complexity	Ave Win	Ave Loss	Win/Loss Ratio
91	43	$348.25	142	$2.45	53.52%	1.640	$80.50	0.9614	98.000%	16	$11.74	$8.24	1.4244
93	2	$251.75	82	$3.07	62.20%	2.092	$80.50	0.9698	98.586%	17	$9.46	$7.44	1.2717
85	52	$458.75	19	$24.14	63.16%	8.311	$151.50	0.9586	90.585%	18	$43.46	$8.96	4.8479
92	29	$276.50	77	$3.59	63.64%	2.381	$80.50	0.9659	99.308%	21	$9.73	$7.15	1.3604
100	24	$163.75	11	$14.89	63.64%	1.723	$204.25	0.4201	50.000%	18	$55.75	$56.63	0.9845
94	49	$193.75	69	$2.81	63.77%	1.989	$68.00	0.9797	97.814%	20	$8.86	$7.84	1.1298
97	10	$279.50	3	$93.17	66.67%	100.000	$133.00	0.9321	50.000%	14	$139.75	$0.00	0.0000
96	40	$287.25	9	$31.92	88.89%	100.000	$200.00	0.9849	50.000%	11	$35.91	$0.00	0.0000
99	51	$41.00	4	$10.25	100.00%	100.000	$104.25	0.9946	50.000%	18	$10.25	$0.00	0.0000

FIGURE 4: ADAPTRADE OUTPUT WINDOW

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and the percentage wins is slightly lower. So there are discrepancies.

I haven't had the time fully explore this product yet, but the concept is exciting. And if nothing else, it gives you ideas of how a system should be coded. You might want to experiment with the code from Figure 2.

AMIBROKER

Internet: http://www.amibroker.com
Email: support@amibroker.com

Powerful charting and analysis for only $199, this product boasts a litany of sophisticated analysis tools. Even the more powerful and costly products don't all offer such things as Gann squares and triangles, available in **AmiBroker** (AB). In poking around through the menu items in AmiBroker, I found an exciting feature called the risk/yield map. I'll tell you about it in a bit.

For now, however, take a look at the AB workspace shown in Figure 5. Along with the standard chart and indicators available with most software, this product highlights the indicators' values on the scale axis; it also gives an interpretation (lower left) of the indicator.

The AmiBroker coding language is titled the "formula editor." AB also provides an editor helper that allows you to code by point & click. It is called the "AFL code wizard" (for AmiBroker formula language, I presume). In Figure 6, I have provided an example of their formula language code. To me it looks like the code used by MetaStock. This particular formula is for the momentum indicator.

I find AmiBroker intuitive to use and easy to learn. They even have a point & click method for trading right from a chart, from your choice of brokers, just like the big guys. I did have a hitch trying to delete an indicator from my chart. My first attempt was to delete the indicator by clicking on it and pressing the delete key. That didn't work. Next, I tried clicking on the indicator on the left-menu panel and pressing the delete key. It deleted the indicator all right, but not from the chart. It deleted it right from the indicator library. Whoops! No more Bollinger Bands. My last attempt worked — I right-clicked on the chart and was able to delete the indicator from the chart successfully.

Having deleted my indicator from the library, I decided to search the web for AmiBroker indicators so I could restore Bollinger Bands.

I was gratified to find a variety of indicators and systems contributed by users and programmers worldwide. The indicators I found appear in text format, not some .eld or .pla file. Not knowing what to do with the text, I copied it with CTRL+C and went back over to AB. There I found a button labeled "formula editor," right where you would expect it: under the analysis menu. I figured this would be a good start. All I did was press CTRL+V to put the code into the formula editor. Knowing that Compile usually follows that step, I searched the menu and found an icon displaying the letters "AFL" and a checkmark. Clicking the icon did the obvious: it compiled the code with no errors.

Beyond formula editor, AB has a point & click, formula code wizard. Within this feature is an adaptable set of tools for drag editing anything you wish. The inclusion of this tool makes AB as powerful as TradeStation and as intuitive as Genesis Navigator. This product could answer everyone's needs.

So this one looks like a winner. Not only is it intuitive, doing everything it should and everything we would expect, it has the added advantage of answering

FIGURE 5: AMIBROKER WORKSPACE

```
function Momentum( array, period )
{
  return array - Ref( array, -period );
}

Plot( Momentum( ParamField( "Field" ), Param("Period", 10, 1, 100 ) ),
                        _DEFAULT_NAME(), ParamColor("Color", ColorCycle ) );
```

FIGURE 6: AMIBROKER FORMULA LANGUAGE EXAMPLE

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some needs you didn't even know you had. This brings me full circle, back to the risk/yield map.

Take a look at Figure 7. What would you do with this chart? The risk/yield map is a display of average weekly percentage return on the y-axis, while the x-axis (risk) is a standard deviation of percentage weekly returns. Symbols of stocks appear in the inner portion of the map. Symbols in the upper part of the map give the best yield with risk increasing from left to right. This exciting tool lacks only one thing: I want to click on a symbol within the body and have the symbol automatically charted.

In the next article in this series, I will look at eSignal and Genesis Navigator. Stay tuned!

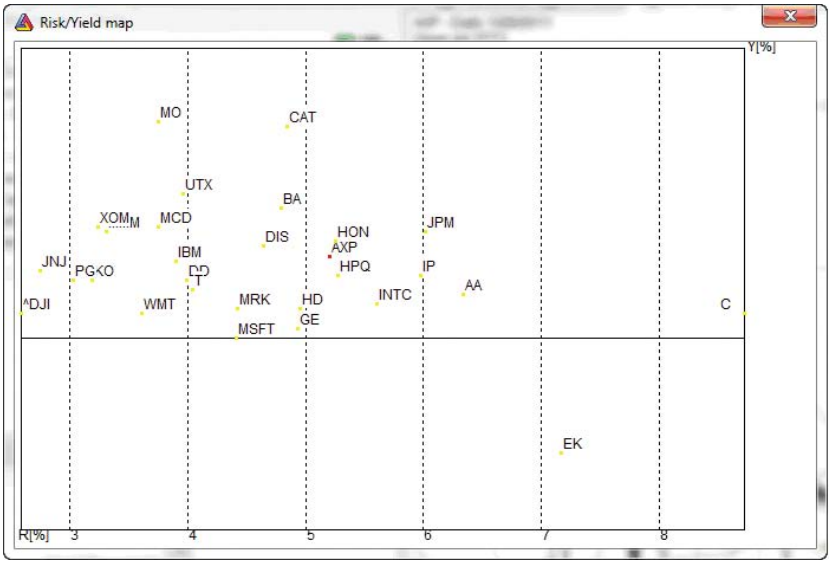

FIGURE 7: AMIBROKER RISK/YIELD MAP

Sunny Harris is an author, trader, computer programmer, and mathematician, who has been trading since 1981. The first printing of her book, Trading 101, *sold out in two weeks and continues to be a financial bestseller; her second book,* Trading 102, *also achieved record sales. In early 2000, Harris released* Electronic Day Trading 101, *followed by* Getting Started In Trading *in 2001. Her latest book is* TradeStation Made Easy. *She may be contacted at MoneyMentor.com.*

SUGGESTED READING

Harris, Sunny [2012]. "Now, Set Up The Process," *Technical Analysis of* STOCKS & COMMODITIES, Volume 30: July.

_____ [2012]. "First, You Design The System," *Technical Analysis of* STOCKS & COMMODITIES, Volume 30: June.

‡AdapTrade ‡AmiBroker

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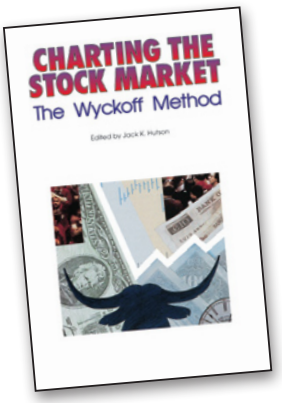
I'm dangerous: I know a little about a lot, but not a lot about much.



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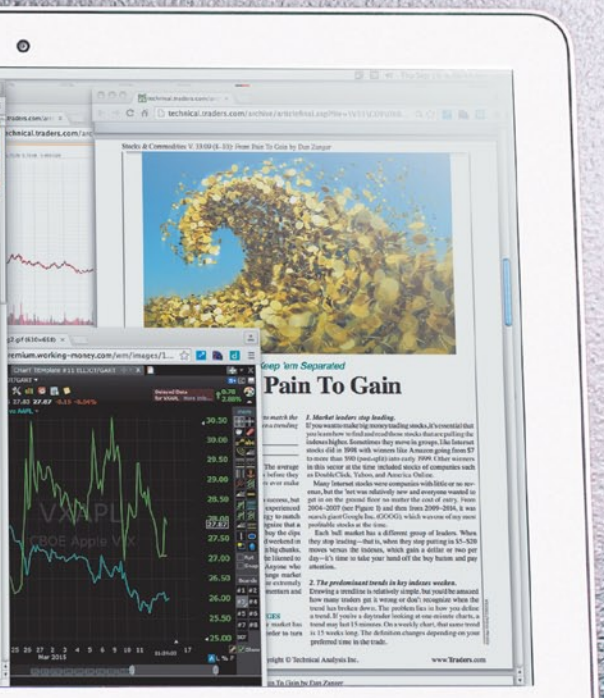

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