Section VII.

Using Expert Design Studio

In This Section

How to develop and test your own screening strategies with EDS

Note
TradingExpert Pro includes a comprehensive data base of ready made strategies. To access these strategies, select **Open** from the **File** menu and open the folder named **EDS Strategies**.

The most challenging aspect of EDS is defining your screening strategy in the form of rules. If you know how to create your own rules, the rest of the program becomes much easier. To make it easier to define strategies, EDS provides Pre-built Rules that cover most aspects of technical analysis. Users can create trading systems by simply pasting these Pre-built Rules into their EDS documents.

Before we cover how to create a trading system using the Pre-built Rules, let's first create a simple screening strategy by entering our rules directly into the Rule Library.

Creating a simple screening strategy

In our first example, we'll create a strategy that screens for:

- Stochastic buy signal (Stochastic rising from below 20 to above 20)
- Share price between $10 and $30

The EDS formula for this screening strategy is shown in **Figure 1**. The strategy consists of three statements, each defining a separate rule.

- The first rule, labeled **Rule1**, screens for stocks with a closing price that is greater than $10 but less than $30.
- The second rule, labeled **Rule2**, looks for stocks whose Stochastic indicator rose above 20. To accomplish this, it first looks for securities whose Stochastic value one day ago is less than 20 (left side of the equation) and then it looks for securities whose current day's Stochastic is above 20 (right side of the equation). Only those stocks for which the Stochastic indicator rose above 20 will pass **Rule2**.
- The final rule, which we called **Allworks**, will screen for the stocks that pass both **Rule1** and **Rule2**.

To create the rules in our screening strategy and save them in an EDS file, follow these steps:

1. Open ***EDS*** and select **New** from the *File* menu. A blank *Rule Library* Document will appear in the main EDS window.

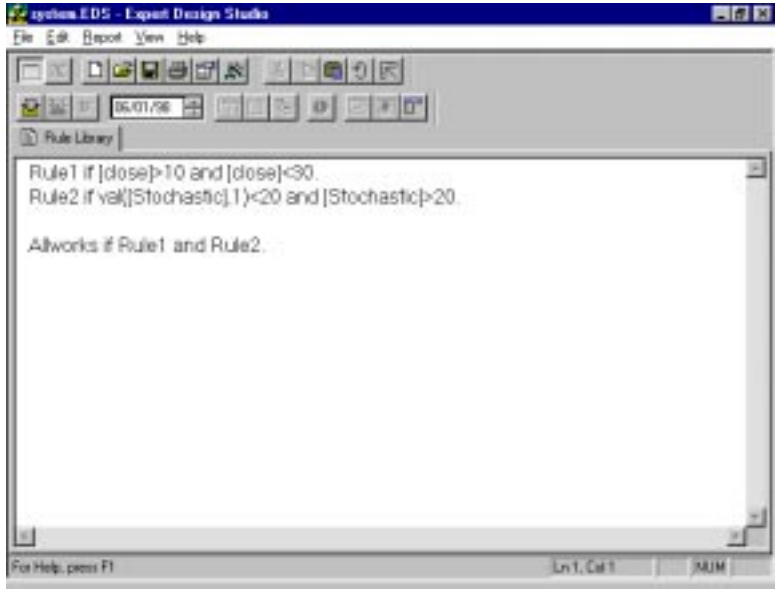

Figure 1

2. At the cursor, type the three rules exactly as they appear in Figure 1.
    - Each rule begins with the rule name (i.e., Rule1) and ends with a period.
    - The rule name is always followed by the word *if*.
    - The remaining characters (those characters after the word *if* and before the period) comprise an expression that can be evaluated with either a True or False result. (This expression is called the ***Rule Body***.)
    - Characters enclosed within the "[]" brackets typically refer to an indicator or a component of the stock price. (When a rule is evaluated for a specific stock and date, the value of the indicator or price component on that date is used to evaluate the rule.)
3. After entering your three rules, select **Save As** from the *File* menu. In the *Save As* dialog box, enter a name for the file and click **Save**. Before saving the file, the EDS Rule Compiler checks each statement for errors and displays messages describing any errors that may be present. If no errors are found, the rules are compiled and the file is saved.

Note:
To see a list of available indicator names, select **Edit** from the menu bar and then choose **Builder**. The *Rule Builder* dialog box will appear. In box #1, Select **Indicator Fields.** A complete listing of the different indicators will appear in box #2.

Creating a Report

Now that our screening strategy has been created, the next step is to set up a Report that will list those stocks that pass our screening criteria. A separate Report with its own report tab can be created for any rule in a trading system. Since we are most interested in the stocks that pass the Allworks rule, the only report tab we need to create is one for the Allworks rule.

To create an Allworks report tab, proceed as follows:

1. From the menu bar, choose **Report** and then **Insert**. A dialog box will appear which lists the rules that have been created.
2. Highlight **Allworks** and click **OK**. An Allworks report tab will appear next to the Rule Library tab.

Running a Report

Proceed as follows:

1. To run the Allworks Report, click on its tab.
2. Next, select **Report** from the menu bar and then choose **Run Single**.
3. A list of the ticker symbols that pass the Allworks rule for the date listed on the icon bar will begin to appear on the screen. To display a chart of any stock listed on the Allworks report, simply double click on its ticker symbol.

Enhancing the Report

The basic Report lists only the symbols of the tickers that pass the rule. EDS allows you to display additional information by adding columns to the report. For instance, we can list the Closing Price and Stochastic value next to the ticker symbols on the Allworks Report page.

To add columns to the report:

1. With the Allworks tab active, choose **Report** and then **New Column**. The *Fields* dialog box will appear.
2. From the *Category* box, select **Indicator Fields**. The *Items* box will now display an alphabetical list of all indicators.
3. From this list, select **Close** and **Stochastic** and click **OK**. The final report appears in **Figure 2**.

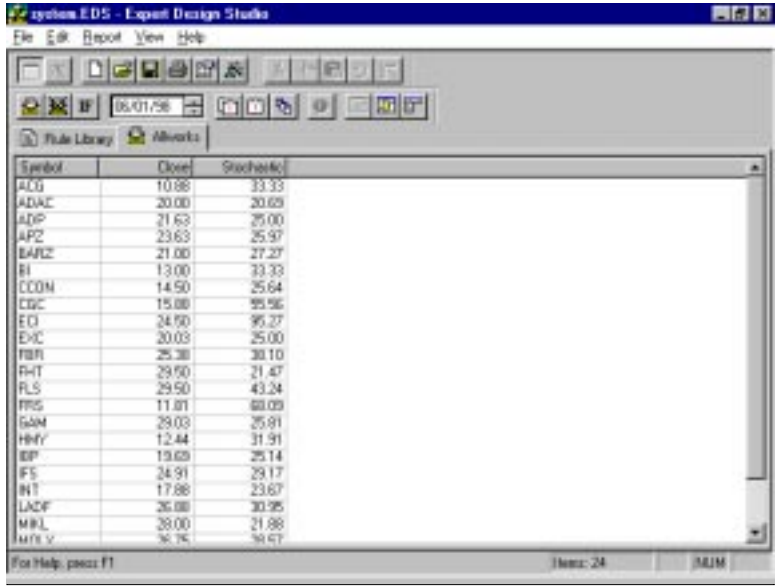

Figure 2

Using Pre-built Rules

The Expert Design Studio comes with a vast array of Pre-built Rules and strategies. These pre-built routines will cover most every user's needs. These routines, which are accessed through the EDS *Builder* function (*Edit* submenu), allow you to create trading systems by simply cutting and pasting the Pre-built Rules.

Pre-built Strategies can be located by clicking **Open** on the **File** submenu and opening the folder named **EDS Strategies**.

As an example, let's say we want to build a system that screens for stocks that just crossed above the 28-day Moving Average at the same time that the Velocity indicator is above zero and increasing.

To create a trading system using Pre-built Rules:

1. Our first step is to tell EDS we want to open a new file. To open a new file, select **File** from the menu bar and choose **New**.
2. Next we want to use the Builder function to select the appropriate Pre-Built Rules. From the menu bar, choose **Edit** and then **Builder**.
3. The *Rule Builder* dialog box that appears contains several boxes. From *box #1,Select Category,* choose **Prebuilt Routines**. (Prebuilt Routines are EDS rules that have been constructed for different technical indicators.)

4. The Items available for selection are listed in *box #2*. When an Item is selected, a description of that item appears in the text box immediately below *boxes #1* and *#2*.
5. In order to build a rule for the 28-day Moving Average Crossover, click on the **ST MA price cross up** rule.
6. Next, click on **Paste Selected Item Below**. The rule will now appear in *box #4*.
7. Click **OK** to paste the rule to your Rule Library document. Make sure the ST MA in your ***Charts*** application is set to 28 days.
8. To return to the Pre-Built Rules, select **Edit** from the menu bar, choose **Builder**, and once again, select **Prebuilt Routines**.
9. In order to build a rule for Velocity above zero and increasing, choose the **Velocity Above Zero Slope Up** rule.
10. Click **Paste Selected Item Below** and then click **OK**. Both rules should now appear in the Rule Library.
11. With these rules created, we can now type in the final rule which will be called Allworks. This rule simply states that the two previous rules are true. Our newly created trading system appears in **Figure 3**.

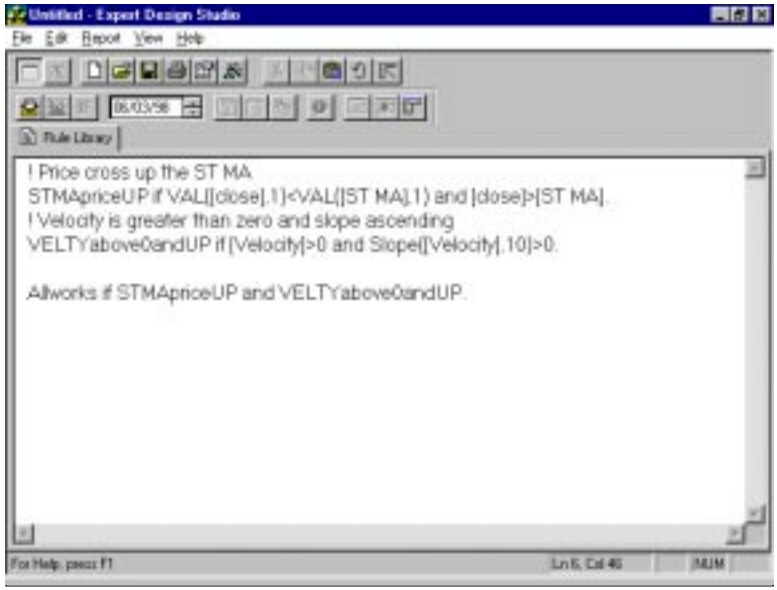

Figure 3

12. To complete our system, we will create a Report for the Allworks rule. Select **Report** from the menu bar and choose **Insert**. From the dialog box that appears, select **Allworks** and click **OK**. To run this report, click on the Allworks tab, set the date shown in the tool bar to the proper day, and from the *Reports* menu choose **Run Single**.

Running a backtest

The Expert Design Studio not only allows you to create your own trading systems but it also provides a complete and thorough backtester. This backtester will quickly scan the securities in your database and report the average return per trade using the strategy along with the average holding period. Many other statistics are reported including a listing of how returns compare to equivalent trades in the S&P 500 index.

To demonstrate the backtester, we'll run an historical test on the trading system that was just created. This system screened for stocks that just crossed above the 28-day Moving Average at the same time that the Velocity indicator was above zero and increasing.

 To run a backtest, proceed as follows:

1. Click on the Allworks report tab that was created in Step 12 above.
2. Select **Report** from the menu bar and choose **New Backtest**. The first in a series of dialog boxes appears. These boxes are used to set up a backtest for the selected rule.
3. The first box titled *Test Name* shows the default name assigned to the test. Click **Next** to move to the next dialog box.
4. From the next box, titled *Entry*, select **Buy long** and enter **SPX** for the index we want to compare our results to. Click **Next**.
5. In the next box titled *Range*, enter the date range that will be used for the backtest (6/13/96 through 6/12/98). Click **Next**.
6. The last box, *Exit*, is used to set the sell strategy for the test.
    - Select the first choice only if you want to hold all positions for the same fixed time period. The default holding period is 21 days.
    - The second choice, *Trade It*, can be used to employ more active sell strategies. These include a simple trailing stop or stops that allow for entering different percentages for capital protection and profit protection. You can also elect to exit on a sell rule that you create in the Rule Library.

- For our backtest we will use a fixed stop strategy with a simple 21-day holding period.

7. After completing all entries, click **Finish**. The screen is automatically switched to Test View where tests are run and test reports are viewed.
8. By default, the backtest we have set up will screen all the stocks in our database. You can also run the test on a list, an industry group, or only the mutual funds in your database. To change the default from your entire database, do as follows:
   - From the *File* menu, choose **Properties**.
   - In our test, we'll run the strategy only on stocks that are in the S&P 500. From the *Tickers in List* list box, choose **SP500**.
   - Click **OK**.
9. To run the backtest, select **Test** from the menu bar and choose **Run**. When the test is completed the Summary test report will appear in the main window (see **Figure 4).**

Figure 4

From the results of the backtest, we see that 1814 trades took place over the two year time period with an average gain of 1.97% for the fixed 21 day holding period. That's a 23.6% average annual rate of return. If you bought the S&P 500 instead of the stocks, the average

gain per trade was 2.23%. The annualized buy and hold return was 31.15%

To see a listing of the individual trades, click on the *Positions* tab.

To run a new backtest, move to Test View and select **Test** from the menu bar and then choose **Run**. A dialog box is displayed which allow you to make changes to the testing parameters. Make any changes and click **OK**. When the test is completed, results from the modified backtest will appear.

Note:
When you are in Test View, you can return to the report/ rule screen by selecting **View** from the menu bar and choosing **Report View**. To return to the test screen, select **View** from the menu bar and choose **Test View**. Before moving to the test screen, a report tab must be active. You can not move to the Test View when the Rule Library is the active tab.