

7. Portfolio Simulation and Pick of the Day

Overview

Two special functions are incorporated into the AIQ *Portfolio Manager* for users who base their trading selections on *Expert Design Studio (EDS)* analysis. These functions allow you to create and test strategies and perform EDS analysis within the *Portfolio Manager* application.

The first function, *Portfolio Simulation*, is used for creating and back testing mechanical strategies for entering and exiting stock and mutual fund positions. The second function, *Pick of the Day*, is used to generate stock and mutual fund selections on a daily basis.

In this section you will find instructions on how to set up and use the *Portfolio Simulation* and *Pick of the Day* functions. Overall, the procedure is as follows:

1. First, create a simulation strategy based on an EDS strategy file. (Several pre-built simulation strategies are delivered with TradingExpert.)
2. Use the *Portfolio Simulation* function to back test and refine the strategy.
3. Run *Pick of the Day* to screen for tickers meeting your strategy criteria.

Once you have completed the testing phase and developed confidence in a simulation strategy, the daily process of analyzing your data to find trading candidates requires very little effort. You simply open *Pick of the Day*, confirm that the simulation strategy and date of analysis are correct, enter available cash, and then click the *Run* command. A list of tickers meeting your strategy criteria, and any other constraints that you have specified, will quickly appear on your screen.

A word about simulation strategies

A **Portfolio Manager** simulation strategy is a group of procedures that is used to control a simulation back test or a *Pick of the Day* screening. These procedures perform several different functions. They define both how your data is screened for new positions and how position exit points are determined.

In addition, trading rules can be incorporated into your simulation strategy. You can specify how much of your capital can be invested in a single trade and the maximum number of trades that can be open. Procedures to compute entry and exit prices that include slippage can also be specified and you can limit the tickers that will be analyzed for positions to a particular source or security type.

Although simulation strategies include some elements that apply only to simulation back testing, these same strategies are used by the *Pick of the Day* function to choose real-time trading positions. Simulation strategies can be created or edited from either the *Portfolio Simulation* function or from the *Pick of the Day* function.

When you create a simulation strategy, you first designate an EDS (Expert Design Studio) strategy file. This file, which is then linked to the simulation strategy, contains your EDS entry rule and any other EDS procedures such as exit rules or UDF's (User Defined Functions) that you want to incorporate. The file can either be selected from the many EDS files furnished with AIQ TradingExpert or you can create your own file. However, EDS files, rules, and UDF's can only be created or modified within the **Expert Design Studio (EDS)** application and a good understanding of **EDS** is needed to create or modify an EDS file.

Note

New users who do not have a good understanding of **Expert Design Studio** may find the next section, *An example of creating a simulation strategy*, a helpful tutorial.

1. Creating a simulation strategy

To create a simulation strategy, the user starts by selecting an EDS (Expert Design Studio) strategy file. You can select any of the EDS strategy files that were included with the TradingExpert program or any strategy you have created within the *Expert Design Studio* application.

Once a simulation strategy has been created, that strategy is always available for use in either the *Portfolio Simulation* or *Pick of the Day* functions.

The procedure to create a simulation strategy takes you through a series of screens where you first enter a name and select an EDS file for the strategy. You then select the entry and exit rules that will be used, any capitalization rules you want to employ, and, if the analysis is not to be run on your entire data base, the list of tickers that the selection will be made from.

The following types of special procedures can be included in a simulation strategy:

- Procedures for exiting positions.
- Procedures for ranking positions when multiple positions pass a screen.
- Procedures for breaking ties when multiple positions receive the same ranking score.
- Procedures for computing entry or exit prices (e.g., next day's open plus 10% of difference between next day's closing and opening prices).

□ To create a simulation strategy, follow these steps:

1. From the toolbar, select the **New Simulation** button. The *Portfolio Simulation* dialog box will appear on your screen. If *Accounts View* is selected, the view will change to *Simulations*.

Portfolio Simulation

Simulation Account Information

Name:

Description:

Comments:

Broker:

Strategy:

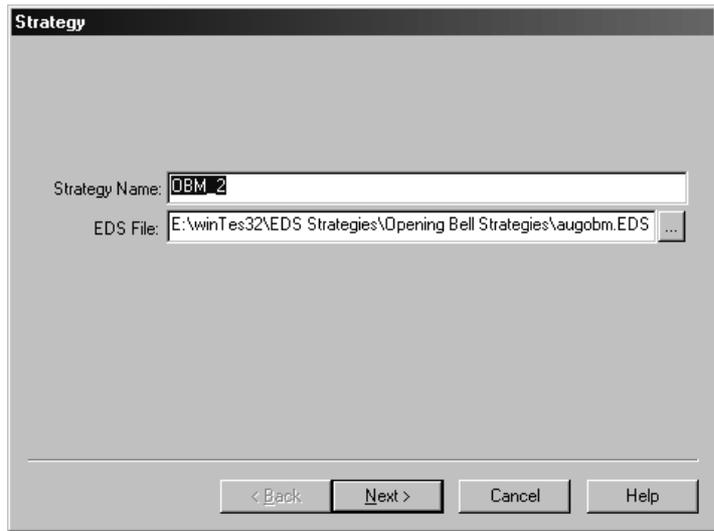
Available cash: Start Date:

End Date:

Include open positions held at least days

Portfolio Simulation dialog box

2. Click the button labeled **New**. The first data entry screen that appears, entitled *Strategy*, is used to name the strategy you are creating and to select the EDS file that will be linked to this strategy.
3. To complete entries in this screen, proceed as follows:
 - In the text box labeled *Strategy Name*, type a name for the simulation strategy you are creating and click **Next**. The name that you enter here is the name that you will select to run a *Portfolio Simulation* and *Pick of the Day* analysis.



Strategy screen

Note

If the *EDS File* box does not contain a valid path and file name, you will not be able to create a simulation strategy. You can, however, create an exit strategy, which is a procedure for determining stops on positions held in your portfolio accounts. The distinction between the two types of strategies is that a simulation strategy requires linkage to an EDS file while an exit strategy does not. In fact, the only way to create an exit strategy is to intentionally leave the *EDS file* selection blank.

- To select the EDS file that contains the rules and UDF's (User Defined functions) that will be used in the strategy, do the following:
 - To find the EDS file you want to use, click the button with three dots (...) which is located at the right end of the *EDS File* text box. The *Open* dialog box will be displayed.
 - Use this dialog box to display the contents of the *winTes32\EDS Strategies* folder. TradingExpert stores the EDS strategies that were included with the program in this folder together with any strategies you have created within the **EDS** application.
 - Find the folder containing the strategy you want, double click to open, and then click to select the individual strategy file (.EDS file). Some categories are subdivided into sub-categories and placed into sub-folders, in which case you may need to look one level further down to find the individual strategy files.
 - With the EDS strategy file name displayed in the box labeled *File name*, click **Open** to return to the *Strategy* screen. The path to and name of the EDS file should now appear in the *EDS File* text box.
- When you have completed entries in the *Strategy* screen, click **Next**. Continue with step 3 (next page).

3. The *Exit* screen which now appears is used to specify the exit strategy for positions acquired through this simulation strategy. The screen provides six options for specifying stops:

- Trendline Stop
- Trailing Stop
- Protect Capital
- Protect Profit
- Holding Time (maximum number of periods)
- EDS Rule with time minimum

Exit

Trendline Stop

Trailing Stop 80

Protect 80 % of my Capital

Protect 80 % of my profit above 5

After 21 periods, exit

After 1 periods, exit on rule

< Back Next > Cancel Help

Exit screen

You can select any combination of stops from the options provided. Except for the first option (Trendline Stop), stops are dependent on the information that you provide in the adjacent boxes. The required information is self explanatory.

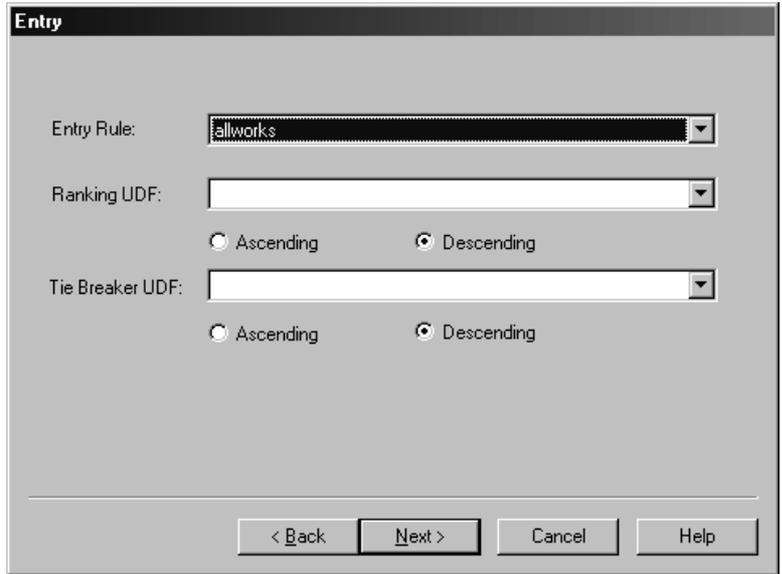
When you have finished specifying your exit strategy, click **Next**.

Note

For information on how to create a UDF (User Defined Function) and add it to an EDS strategy file, see Expert Design Studio, Part 2, Chapter IV of this manual.

4. The *Entry* screen now appears. You will use this screen to select the entry rule (from the rules listed in the EDS file linked in step 2.) that will screen your database of stocks for suitable trading candidates. You can also select UDF's (User Defined Functions) that will rank positions when multiple stocks pass your initial screening or when ties occur. Continue by following the instructions below:

- To find the rule you want to use, click the arrow on the *Entry*



The screenshot shows a dialog box titled "Entry". It contains three dropdown menus: "Entry Rule" (set to "allworks"), "Ranking UDF" (empty), and "Tie Breaker UDF" (empty). Below each dropdown are two radio buttons: "Ascending" and "Descending". For both "Ranking UDF" and "Tie Breaker UDF", the "Descending" radio button is selected. At the bottom of the dialog are four buttons: "< Back", "Next >", "Cancel", and "Help".

Entry screen

Rule list box. A list of the rules incorporated in the linked EDS file will be displayed. Select a rule from this list.

- Use the next list box, *Ranking UDF*, to specify a User Defined Function that will be used to rank stocks when multiple stocks pass your selected screening rule. To specify the order in which the results should be ranked, choose one of the two options listed, **Ascending** or **Descending**.
- Use the last list box, *Tie Breaker UDF*, to specify another User Defined Function that will be used to break ties when two or more stocks receive the same ranking from the previous UDF. To specify the order in which the results should be ranked, choose one of the two options listed, **Ascending** or **Descending**.
- When you have completed the items in the *Entry* screen, click **Next** and continue with step 5.

Note

If multiple tickers are found and a ranking or tie-breaking UDF is not specified, tickers will be listed in alphabetical order.

Note

New users who do not have a good understanding of *Expert Design Studio* may find the next section, *An example of creating a simulation strategy*, a helpful tutorial.

5. The *Capitalization Rules* screen appears next. Use this screen to impose trading rules for simulation studies and for determining the share amounts for *Pick of the Day* selections. By imposing capitalization rules, you can specify the number of shares that will be purchased or the portion of your capital that will be used for each trade. You can also limit the number of open positions and impose other constraints. In order for a position to be entered during a simulation run or selected by *Pick of the Day*, all conditions specified in the *Capitalization Rules* screen must be satisfied.

Capitalization

All selected conditions must be met to qualify a position for entry.

Do not use capitalization rules.

1 shares.

10.00 percent of portfolio value.

Compute every 20 days.

Compute when portfolio value changes by 10.00 percent.

Allow partial entry, but never less than 50 shares.

No more than 3 new trades per day.

No more than 10 open positions.

Maintain capital reserve of at least 400.00

Pyramid positions.

< Back Next > Cancel

Capitalization Rules screen

To complete this screen, continue as follows:

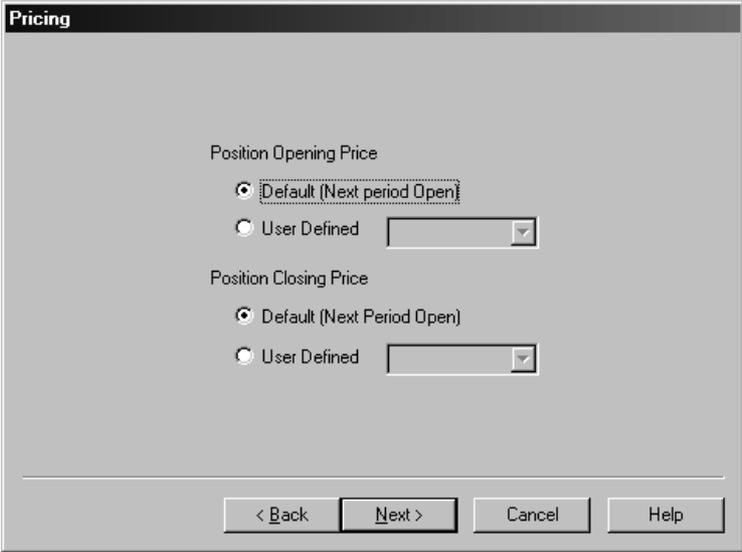
- If you do not want to impose capitalization rules, select the first option **Do not use Capitalization Rules**. Then click **Next** and continue with step 6.
- To specify the number of shares for a trade (subject to the *partial entry* option below) and impose other capitalization rules, select the **shares** option and then enter the number of shares in the adjacent box.
- To specify the percentage of the total portfolio value that will be used for each trade and impose other capitalization rules, select the **percent of portfolio value** option and then enter your percentage in the adjacent box. The same dollar amount (the amount computed from this percentage) will be used for all future trades unless at least one of the two options below is checked. Both options may be selected.

- **Compute every __ days:** With this option, portfolio value will be recomputed periodically based on the number of days entered in the box.
- **Compute when portfolio value changes by __ percent:** With this option, portfolio value will be recomputed any time that portfolio value changes by at least the percentage amount entered in the box.
- If you have selected either of the two capitalization rules at the top, you can enter additional conditions by selecting any of the five options listed in the lower section of the screen.
 - **Allow partial entry, but never less than __ shares:** This option allows positions to be entered in an amount (share or capital) less than the figure specified in the capitalization rule that is selected above.
 - **No more than __ new trades per day:** Enter your limit for the number of new trades in any one day.
 - **No more than __ open positions:** Enter a limit for the number of open positions for this account. No trades will be made if this number of positions is currently open.
 - **Maintain capital reserve of at least __:** Enter minimum capital balance that you wish to maintain for this account. No trades will be made if available capital is less than this amount.
 - **Pyramid positions:** Allows the purchase of additional shares in a position that is currently open in the account.
- When you have completed the entries in the *Capitalization Rules* screen, click **Next** and continue with step 6.

Note

For information on how to create a UDF (User Defined Function) and add it to an EDS strategy file, see Expert Design Studio, Part 2, Chapter IV of this manual.

6. The *Pricing* screen which appears determines how positions are priced at entry and exit. If you elect to accept the defaults, next period open prices will be used. Alternatively, you can specify a calculation procedure which allows for slippage. You start by creating a UDF (User Defined Function) for this purpose in the **EDS** application, which you then incorporate into the EDS strategy file. The UDF can then be selected from the *Pricing* screen. Continue as follows:

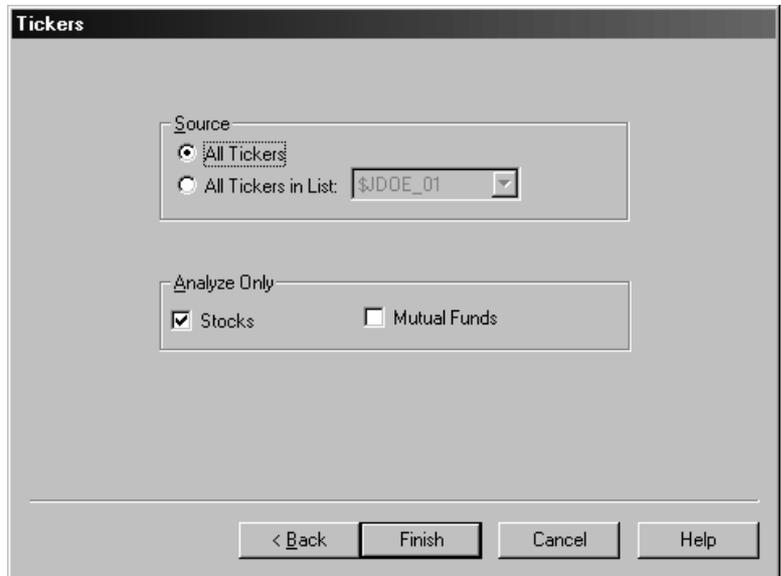


The screenshot shows a dialog box titled "Pricing". It contains two sections: "Position Opening Price" and "Position Closing Price". Each section has two radio button options: "Default (Next period Open)" and "User Defined". The "User Defined" option is accompanied by a dropdown menu. At the bottom of the dialog, there are four buttons: "< Back", "Next >", "Cancel", and "Help".

Pricing screen

- Select from these options in the *Pricing* screen:
 - For *Position Opening Price*, select one of the two options:
 - **Default (Next period Open)** - The opening price for all positions will be the next day's open price.
 - **User Defined** - The opening price for all positions will be computed using the UDF selected in the adjacent text box.
 - For *Position Closing Price*, select one of the two options:
 - **Default (Next period Open)** - The closing price for all positions will be the next day's open price.
 - **User Defined** - The closing price for all positions will be computed using the UDF selected in the adjacent text box.
- When you have completed your entries in the *Pricing* screen, click **Next** and continue with step 7.

7. The *Tickers* screen which now appears is the final step in the procedure to create a simulation strategy. Make your selections in the two sections as follows:



Tickers screen

- *Source* - This section identifies the tickers that will be screened for positions using this simulation strategy. Two choices are provided:
 - **All Tickers** - All tickers (except the type excluded below in *Analyze Only*) will be screened.
 - **All Tickers in List** - Screening will be limited to the list named in the adjacent list box. Display available lists by clicking the arrow, then select the list you want to use for screening.
- *Analyze Only* - Use this section to limit the screening to stocks or mutual funds only. Select **Stocks**, **Mutual Funds**, or both, depending upon the type of tickers you are screening for.

When you have completed your selections in the *Tickers* screen, click **Finish**.

8. The *Portfolio Simulation* dialog box will be redisplayed with the name of the newly created simulation strategy appearing in the *Strategy* list box. To back test and refine the new simulation strategy, go to Section 3 of this chapter, *Back testing a simulation strategy*.

An example of creating a simulation strategy

This tutorial on how to create a simulation strategy takes you through a number of steps, beginning with choosing an entry strategy in the *Expert Design Studio (EDS)* application. After selecting the EDS strategy that you will use as the foundation for your simulation strategy, you then go to the *Portfolio Manager* application where the procedure takes you through a series of screens beginning with the *Portfolio Simulation* dialog box.

Step 1. Use Expert Design Studio (EDS) to select an entry strategy

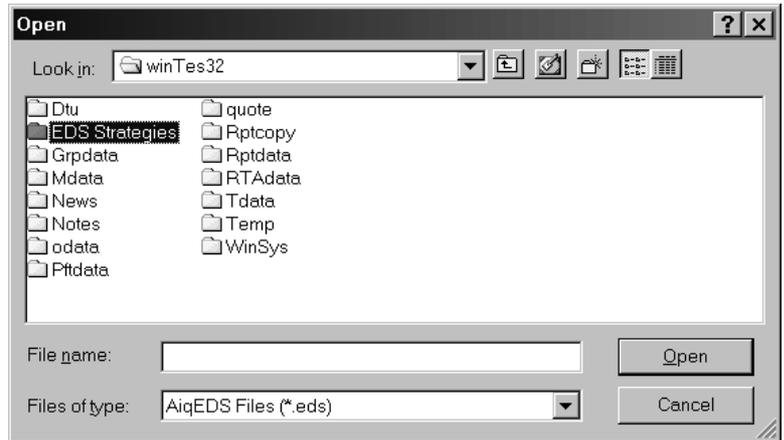
Before you start to create a simulation strategy in the *Portfolio Manager*, you must first decide on the entry strategy that you want to use as the foundation for your simulation strategy. You will, of course, thoroughly test and fine tune the strategy before you put any of your capital at risk. For your entry strategy, you can select any of the pre-defined EDS strategies that are included with the TradingExpert program. If you are an experienced user and have worked with EDS, you might instead select a strategy that you have created within the *EDS* application.

For this example, we will use one of the pre-defined strategies. You first need to open the *EDS* application, where you can review all of the strategies that are included with the program and examine the EDS code for those strategies that interest you. The code lists the rules that make up a strategy and tells you what conditions (technical or other) will trigger an entry point. In most cases, the code will also include explanatory comments that can be very helpful in understanding how a strategy is designed to generate entry points.

□ *To select an entry strategy, proceed as follows:*

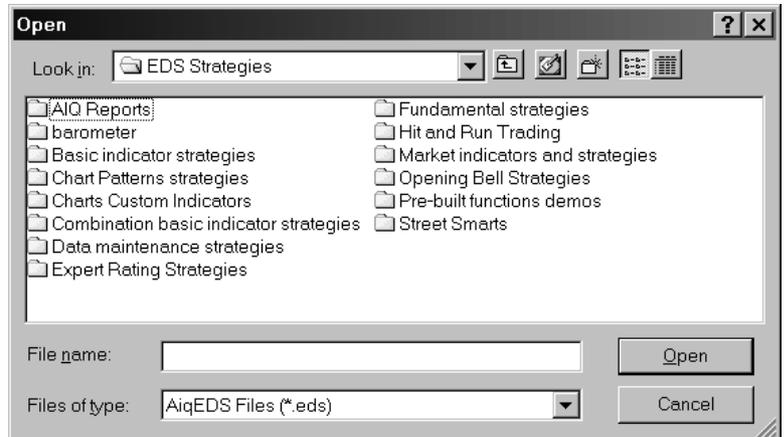
1. Open the *EDS* application by choosing the EDS button on the TradingExpert Pro Menu.
2. Click the **File** command on the menu bar and choose **Open** from the drop-down menu. The typical Windows style *Open* dialog box will be displayed. Notice that the *Open* dialog box is already set up for files of the EDS file type (*.eds files) and the winTes32 folder is already selected. TradingExpert stores the EDS strategies that were included with the program in this folder. Any strategies you create within the *EDS* application should also be stored in this folder.

3. Double click on the **EDS Strategies** folder to display a list of folders that each contain a number of EDS strategy files. Strategies based on the same indicator are grouped into the same folder and all folders are named in accord with the strategy or indicator type contained within.



Open dialog box

4. For this example, double click on the **Expert Rating Strategies** folder where you will find eleven EDS files. At this point, the only information you have about these strategies is their EDS file names. To learn more about a file, first open the file and then click the **Rule Library** tab to view the details of the strategy including the rules, User Defined Functions (UDF's), and any explanatory comments that have been added.

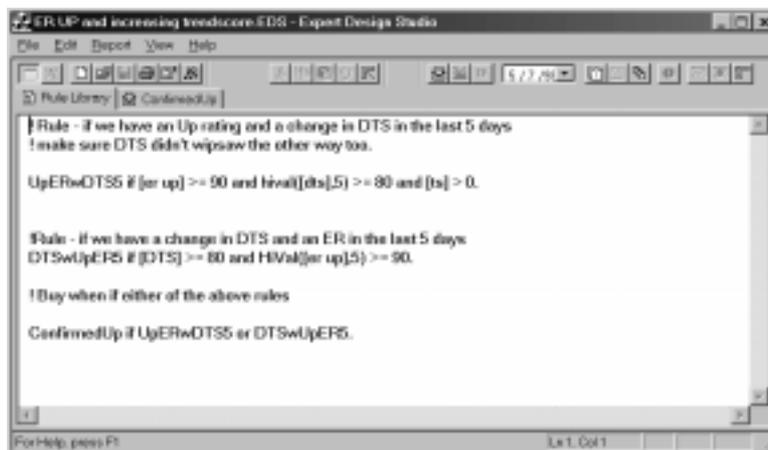


List of EDS strategies

Note

User Defined functions (UDF's) include the *is* identifier. Instructions on how to create UDF's can be found in the *Expert Design Studio* documentation, Part 2 in this manual.

- From the files in the *Expert Rating Strategies* folder, you are now going to select an EDS file to open and view. Double click on the strategy file name **ER UP and increasing trendscore.eds** to open the file and then click on the **Rule Library** tab and you will see that this file contains three separate rules, *UpERwDTS5*, *DTSwUpER5*, and *ConfirmedUp*. The first word of a rule (the rule name) is always followed by the word *if* and the balance of the statement defines the rule condition. This file also contains a number of comments (a comment is preceded by an exclamation point).
- For reference, print a copy of the Rule Library for this file.



Rule Library for ER UP and increasing trendscore.eds

- At this point, you could modify the strategy using the tools provided in *EDS*. Again, this is not for everyone since it requires experience working with *EDS*. You could also add other rules and UDF's to the file. In this way, you could create a special exit strategy or a ranking procedure for days when multiple positions are selected. Other procedures that might be added to the file are UDF's to compute entry and exit prices which allow for slippage or which prevent excessive losses on big down days. Later, when building your simulation strategy you can retrieve any rule or UDF contained in the EDS file.
- Since, for this example, you are not going to change the file, close *EDS* and move to the *Portfolio Manager* application. Continue with Step 2.

Step 2. Display the Portfolio Simulation dialog box

□ *Proceed as follows:*

1. Open **Portfolio Manager** and click the **New Simulation** toolbar button. The *Portfolio Simulation* dialog box will appear and, if you are in *Accounts View*, the view automatically changes to *Simulations*.

Portfolio Simulation

Simulation Account Information

Name: SIM_02

Description: ER Up plus TS

Comments:

Broker: Quick-Reilly

Strategy: test

New Edit Delete

Available Cash: 0.00

Start Date: MM/DD/YY

End Date: MM/DD/YY

RS Ticker:

Include open positions held at least 5 days

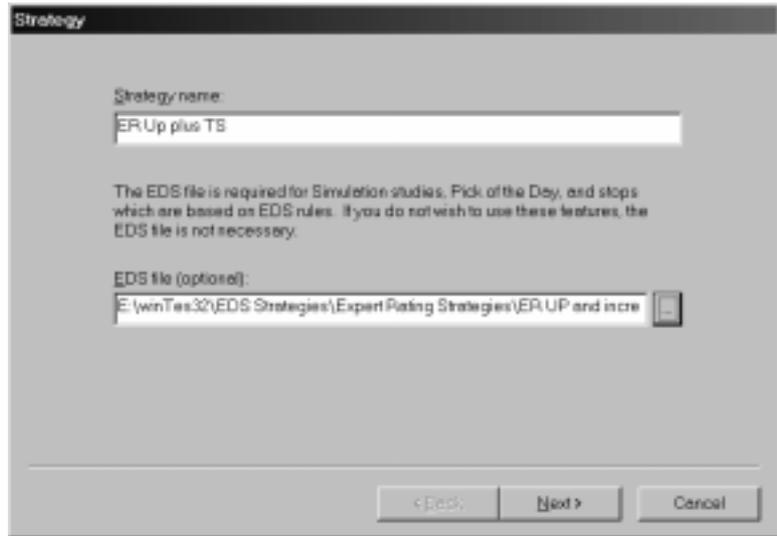
Run Cancel

Portfolio Simulation dialog box

2. You are now ready to create your strategy. The procedure will take you through a series of screens where you first enter a name and select your EDS file for the strategy. You will then select the entry and exit rules that will be used, any capitalization rules you want to employ, and the list of tickers that trades will be selected from.
3. Click the button labeled **New** and continue with Step 3.

Step 3. Complete Strategy screen

The first data entry screen that appears, entitled *Strategy*, is used to assign a name to the strategy and to select the EDS file that will be linked to this strategy.



Strategy screen

□ *Complete the entries in the Strategy screen follows:*

1. In the text box labeled *Strategy Name*, type **ER UP plus TS**.
2. To find the file that was selected for this example, click the button with three dots (...) at the right end of the *EDS File* text box. The *Open* dialog box that appears is exactly the same as the *EDS Open* box discussed in Step 1 above. This dialog box displays the contents of the *winTes32* folder.
3. To find the folder containing the strategy you want to use, double click on the **EDS Strategies** folder to display all strategy folders. Then double click on the **Expert Rating Strategies** folder to display the individual EDS files.
4. Finally, select the file **ER Up and increasing trendscore.EDS**, and click **Open**.
5. When the *Strategy* screen reappears, the *EDS File* text box will display *winTes32\EDS Strategies\Expert Rating Strategies\ER Up and increasing trendscore.EDS*, the path to and name of the EDS file.
6. Click **Next** to move to the next screen.

Step 4. Complete Exit screen

The next screen, *Exit*, is used to specify the exit strategy for positions acquired through this simulation strategy. The screen provides six options for specifying stops. For this example, a simple trailing stop will be used.

Exit

Trendline Stop

Trailing Stop

Protect % of my Capital

Protect % of my profit above

After periods, exit

After periods, exit on sale

< Back Next > Cancel

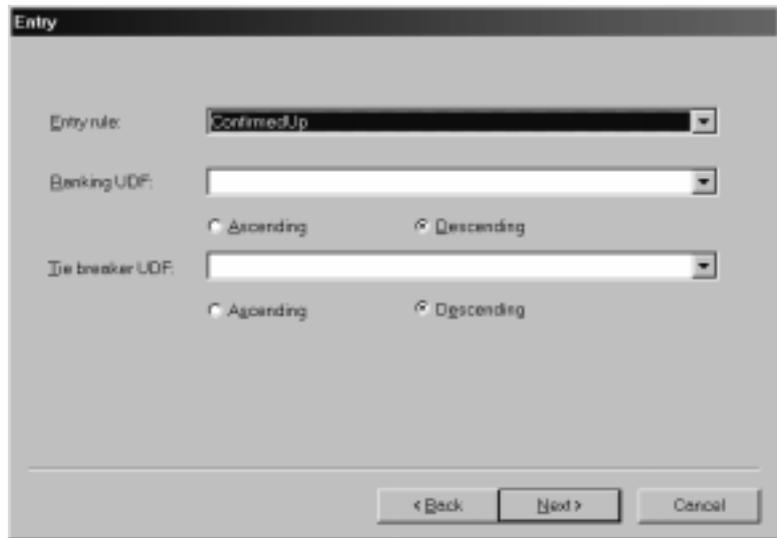
Exit screen

□ To specify the exit strategy:

1. Click the option box for **Trailing Stop**. In the adjacent text box use the arrows to choose **85%**.
2. Click **Next** to move to the next screen.

Step 5. Complete Entry screen

The *Entry* screen is used to select the entry rule, the EDS rule that will be used to screen your data for qualifying positions.



Entry screen

□ To select an entry rule:

1. Click the arrow on the *Entry Rule* list box. The drop-down list displays the three rules that are incorporated in the linked EDS file, *ER Up and increasing trendscore.EDS*. Looking at the printout of the Rule Library page for this file, you will see that rule statements are identified by their first words.
2. By examining the Rule Library page, you will see that the last rule, *ConfirmedUp*, is the one that represents the complete strategy because this rule is only satisfied if the other two rules are satisfied. Therefore, select the rule **ConfirmedUp** from the drop-down list.
3. For this example, leave the remaining two boxes on this screen blank. These boxes, *Ranking UDF* and *Tie Breaker UDF* are used to specify User Defined Functions for ranking stocks when multiple stocks pass the screening rule and to specify the order in which the results should be ranked when ties occur. If you felt that you needed procedures for this purpose, you would first have to create them as UDF's in the *EDS* application and add them to the strategy file.
4. When you have finished specifying your entry rule, click **Next** to move to the next screen.

Step 6. Complete Capitalization Rules screen

The *Capitalization Rules* screen that appears next is used for imposing trading rules for your simulation studies. You can specify the number of shares that will be purchased or the portion of your capital that will be used for each trade. You could also limit the number of open positions and impose other constraints. In order for a position to be entered during a simulation run, all conditions specified in the *Capitalization Rules* screen must be satisfied.

Capitalization

All selected conditions must be met to qualify a position for entry.

Do not use capitalization rules.

___ shares.

10.00 percent of portfolio value.

Compute every ___ days.

Compute when portfolio value changes by 10.00 percent.

Allow partial entry, but never less than 50 shares.

No more than 3 new trades per day.

No more than 10 open positions.

Maintain capital reserve of at least 400.00

Pyramid positions.

< Back Next > Cancel

Capitalization Rules screen

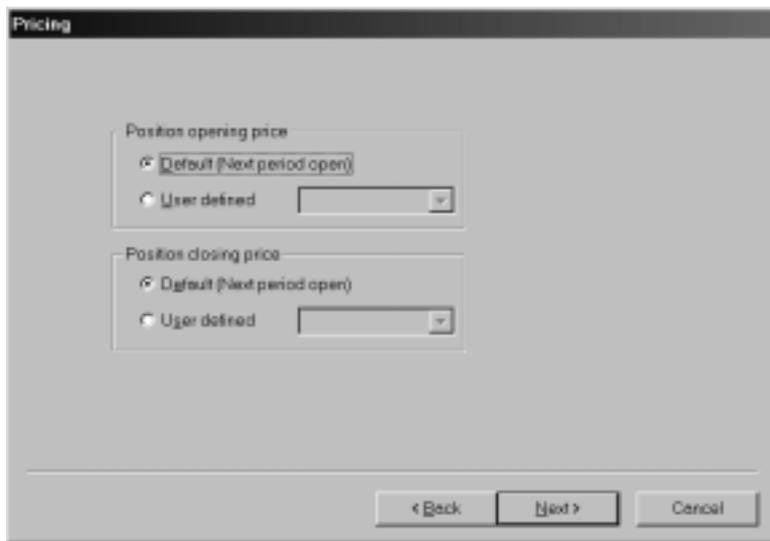
□ *Complete this screen as follows:*

1. Choose the third option, **percent of portfolio value**, which will specify the portion (%) of your capital that will be used for each trade. To use a figure of 10% for this option, enter this amount in the box. The dollar amount (the amount computed from this percentage) will remain constant throughout a simulation unless one of the two options below is checked.
2. Select the second option, **Compute when portfolio value changes by __ percent** and enter a value of 10%. With this option, portfolio value will be recomputed any time that portfolio value changes by at least 10%, which will in turn change the dollar amount of all future trades.

3. Since you have selected one of the two capitalization rules at the top, you can now enter additional conditions by selecting any of the five options listed in the lower section of the screen. For this example, use all five of the options as follows:
 - **Allow partial entry, but never less than __ shares:** Enter **50** shares. This allows positions to be entered at amounts less than the 10% of portfolio value specified above, but no position smaller than 50 shares is allowed.
 - **No more than __ new trades per day:** Impose a limit of **3** trades per day.
 - **No more than __ open positions:** Enter **10** for the maximum number of open positions. No additional trades will be placed if 10 positions are currently open.
 - **Maintain capital reserve of at least __:** Enter **400** for the minimum capital balance that you want to maintain for this account. Therefore, no trades will be made if available capital is less than 400.
 - **Pyramid positions:** By selecting this option, you are going to allow the purchase of additional shares in a position that is currently open in the account.
4. When you have finished specifying your Capitalization Rules, click **Next** to move to the next screen and continue with Step 7.

Step 7. Complete Pricing screen

The *Pricing* screen which appears determines how positions are priced at entry and exit.



The screenshot shows a window titled "Pricing". It contains two sections: "Position opening price" and "Position closing price". Each section has two radio buttons: "Default (Next period open)" and "User defined". The "Default (Next period open)" option is selected in both sections. The "User defined" option is accompanied by a text input field and a dropdown arrow. At the bottom of the window, there are three buttons: "< Back", "Next >", and "Cancel".

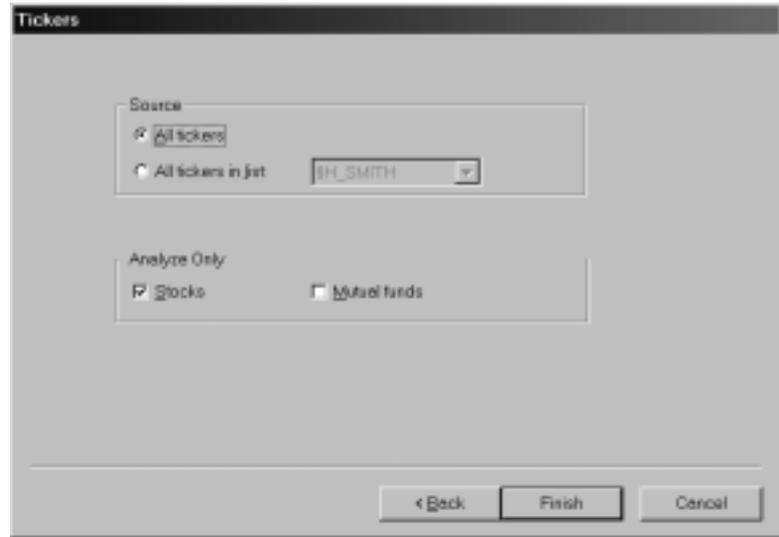
Pricing screen

□ *Proceed as follows:*

1. Accept the defaults for both the *Position Opening Price* and the *Position Closing Price*. This means that next period open prices will be used for both entry and exit trades. Alternatively, you could have specified calculation procedures that allow for slippage. To do this you would first have to create UDF's (User Defined Functions) for this purpose in the **EDS** application and then incorporate these UDF's into the EDS strategy file. The UDF's could then be selected from the *Pricing* screen.
2. Click **Next** to move to the last screen.

Step 8. Complete Tickers screen

The *Tickers* screen, which is the final step in the procedure, is used to specify a source and type for the tickers that will be screened for positions using this simulation strategy.



Tickers screen

□ *Proceed as follows:*

1. For *Source*, select **All Tickers**. This means that the screening will include all the tickers in your TradingExpert Pro database.
2. For *Analyze Only*, select **Stocks**. This limits the screening to stocks only.
3. Click **Finish**. When the *Portfolio Simulation* dialog box is redisplayed, **ER UP plus TS**, the name of your newly created simulation strategy, will appear in the *Strategy* list box.

Note

To test your newly created simulation strategy, see next section, *Back testing a simulation strategy*.

2. Back testing a simulation strategy

Once you have created a simulation strategy for mechanically entering and exiting stock and mutual fund positions, the *Portfolio Simulation* function allows you to test the strategy. You simply enter the starting capital amount, the start and end dates, and then click the *Run* command to begin the simulation. If the simulation strategy is one that has been previously tested, you can modify any aspect of the strategy before retesting.

While the simulation is being calculated, a line at the bottom of the *Portfolio Manager* window displays the progress. When the back test is completed, a printable summary page is displayed. This page, which is identical to an EDS Summary Report, summarizes results of the back test.

□ *To conduct a simulation strategy back test, follow these steps:*

1. Open the *Portfolio Simulation* dialog box by clicking the **New Simulation** toolbar button.

Portfolio Simulation

Simulation Account Information

Name:

Description:

Comments:

Broker: myTrack

Strategy: test

New Edit Delete

Available Cash: 0.00

Start Date: MM/DD/YY

End Date: MM/DD/YY

RS Ticker:

Include open positions held at least 5 days

Run Cancel

Portfolio Simulation dialog box

2. In the *Simulation Account Information* section at the top of the dialog box, enter the following:
 - **Name** - Enter a short name for this simulation. This is the name that will appear in the Account List when you are in Simulations View.
 - **Description** - (optional) Your own description of the strategy.
 - **Comments** - (optional) Any comments you would like to attach to this strategy.
 - **Broker** - This item determines the schedule of brokerage commissions that will be used to compute transaction fees. Make your selection by clicking the arrow in the text box.
3. From the *Strategy* list box, select the simulation strategy that you want to use.
4. If you need to modify any part of the selected strategy before running the simulation, choose **Edit** to open the *Strategy Properties* window. This window contains a row of tabs which are used to display pages for the six different categories of information for the simulation strategy. Data for each of these pages is explained in the preceding section, *Creating a simulation strategy*.
5. Complete the remaining entries in the *Portfolio Simulation* dialog box as follows:
 - **Available cash** - The amount of trading capital available at the start of the simulation run.
 - **Start Date** - Date that the simulation will begin.
 - **End Date** - Date that the simulation will end.
 - **RS Ticker** - For comparison with strategy test results, the buy and hold performance of this ticker will appear on the Statistics/Analysis report.
 - **Include open positions held at least _ days** - Check this option if you want open positions to be included in the summary of results. Then use the arrows on the *days* list box to specify the number of days that a position must be held.
6. When you have completed all entries, click **Run** to start the simulation.
7. When the screening of your data is complete and position entry and exit points have been determined, a list of transactions is saved and the *Account Statistics/Analysis* window appears displaying a summary of test results. Use the **Print** button to produce a hard copy of this information for your records.

Note

To edit or delete a simulation strategy, select its name in the *Strategy* list box and click the **Edit** or **Delete** command to open the *Strategy Properties* window.

Account Statistics/Analysis

Start date: 01/01/99
End date: 12/31/99

	Winners	Losers	Neutral
Number of trades:	38	19	8
Average periods per trade:	94	131	8
Maximum Profit/Loss:	114.73%	[30.98]%	
Average Drawdown:	(5.82)%	(3.44)%	(10.42)%
Average Profit/Loss:	8.70%	29.85%	(11.67)%
Average SPX Profit/Loss:	41.6%	7.57%	8.74%
Probability:	59.00%	58.88%	
Average Annual P/L:	33.67%	88.81%	(74.38)%
Annual SPX (Buy & Hold):	19.80%		
Reward/Risk Ratio:	2.48		
Account default strategy:	ER UP plus		

OK Exit

Account Statistics/Analysis

- 8 . To view complete details of the simulation including all positions entered, etc., use the tabs on the main **Portfolio Manager** window.

Maintenance Note

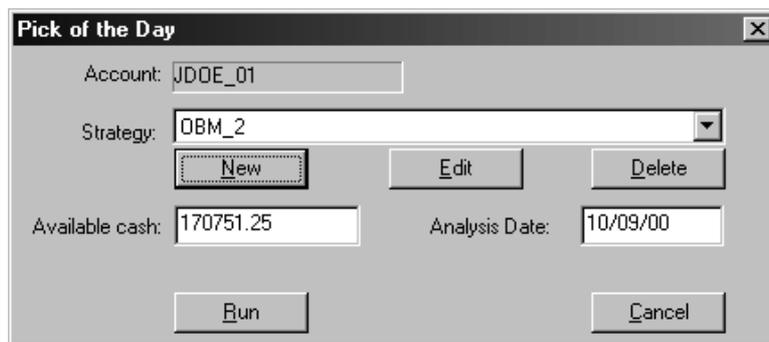
To maintain retrieval speed, etc., the **Portfolio Manager** database requires periodic defragmenting. For this reason, you should occasionally execute **Compact Database**, a command found on the **Account** sub-menu. To backup your **Portfolio Manager** database and/or remove transactions for closed positions from your database, use the **Archive/Purge** functions on the **Account** sub-menu.

3. Using *Pick of the Day* to find trading candidates

The daily process of screening your data to find tickers that meet your selection criteria is very easy. Only a few clicks with your mouse are required.

□ *To screen for Pick of the Day selections:*

1. From the Account List, select the account you want to use and then open the *Pick of the Day* dialog box by one of the following methods:
 - Choose the **Run Pick of the Day** button on the toolbar.
 - Choose **Run Pick of the Day** from the *Account* sub-menu.

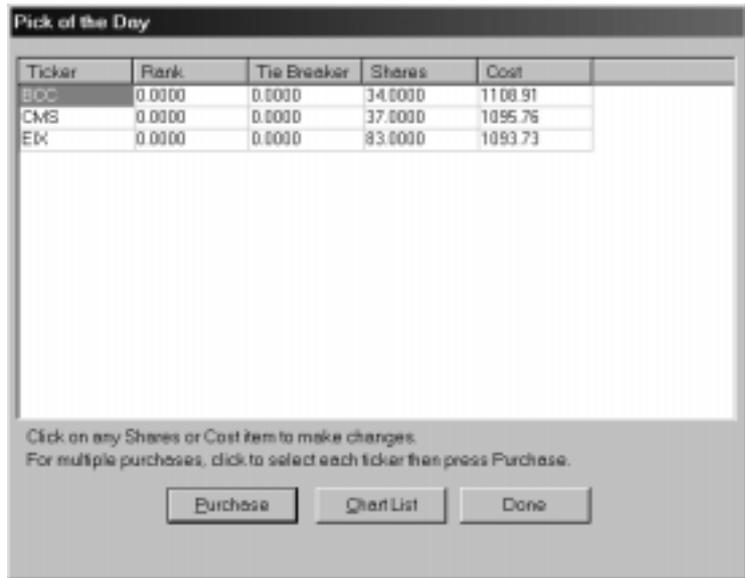


Pick of the Day dialog box

2. Verify that the strategy shown in the *Strategy* list box is the one you want to use. If not, click the arrow and select the strategy you want from the list of available strategies.
3. Verify that the amount of cash for this account that is shown in the *Available Cash* box is correct. If not, enter the correct amount.
4. Verify that the date shown in the *Analysis Date* box is correct (i.e., the last date that your data was updated). Revise the date if necessary.
5. Click **Run** to start the screening process. The *Pick of the Day* window that appears allows you to monitor the progress of the screening of your data.
6. During the screening, each ticker that passes the screen is added to the list displayed in the *Pick of the Day* window. *Rank* and *Tie Breaker* scores are listed for each ticker. When the screening is

completed, all tickers in the list are sorted by their scores* and the list is reduced to the *Entry trades per day limit* number that is specified in the *Capitalization Rules* screen. After the list is reduced, *Shares* and *Cost* amounts are listed. These are derived from *Available cash* and any capital constraints entered for the strategy.

*If *Ranking* and *Tie-Breaking* UDF's (User Defined Functions) have not been specified in the *Entry* screen during the process of creating the simulation strategy, tickers will be sorted alphabetically and reduced without regard to rank.



Pick of the Day selections

7. At this point, you have two choices before closing the window and deleting the list:

- Enter transactions for *Pick of the Day* selections (see below).
- View charts of tickers in the list (see below).

8. Click **Done** to close the window and delete the list.

Entering a transaction for a *Pick of the Day* selection

□ *To enter a transaction:*

1. From the tickers listed in the *Pick of the Day* window, select the ticker that you want to trade and add to your account portfolio. To select multiple tickers, hold down the **Ctrl** key.
2. To revise the *Shares* or *Cost* values to agree with actual trades, click on the value you want to change and then type in the correct value.
3. Click **Purchase**. When the *Portfolio Manager* window is redisplayed, your *Pick of the Day* transaction will be entered and added to all tabs of the selected account.
4. All transaction data fields are automatically completed. These values are transferred from the *Pick of the Day* window or computed from the entries in the *Account* and *Strategy* setup screens. To change any of the transaction values that do not conform with your actual trade, right click on the transaction, choose **Edit Transaction** and then use the *Edit Transaction* dialog box to make your changes.

Charting *Pick of the Day* tickers

To view charts of tickers shown in the *Pick of the Day* window, you first create a list. You can limit the list to a specific ticker, selected tickers, or all tickers.

□ *To create a list of tickers to chart:*

1. First, select the ticker(s) that you want to chart. Hold down the **Ctrl** key to select more than one.



Chart List dialog box

2. Click **Chart List**. The *Chart List* dialog box will be displayed.
3. The default list name *AIQPDAY* will appear in the *List Name* box. Type in a new name or accept the default name.
4. From the *Tickers* section, choose one of the following:
 - *All Tickers*
 - *Selected* (Only selected tickers will be added to list)
5. Click **OK**. The **Charts** window will open displaying a chart of the top ticker in the list. In addition, the name of the list you created for your *Pick of the Day* tickers appears in the list box located on the **Charts** window toolbar.