Release notes for both Standard FastBreak and FastBreak Pro Version 6.5

Note: There was no Standard FastBreak Version 6.3 or Version 6.4. The FastBreak Pro V6.3 releases only affected changes to FastBreak Pro. The change (Combine/Complementary Systems) in FastBreak Pro V6.4 was primarily a capability that is useful for Pro users and we didn't build a Standard V6.4. The changes in V6.5 affect both Standard and Pro. We want to keep version numbers consistent when functionality affects both versions, which is the case for V6.5. This allows Standard FastBreak to execute strategies built in FastBreak Pro.

Combine/Complementary Systems
This was a capability added in V6.4 of FastBreak Pro and we are adding it as part of the V6.5 Standard FastBreak upgrade; however, the full power of the capability can only be realized in FastBreak Pro. In FastBreak Pro the optimizer will try to build a new system to complement an existing system or two systems. In Standard FastBreak the capability allows a user to combine a trading system in conjunction with one or two existing trading systems and show the Summary results and FNU for the combined system. One purpose of this capability is to build complementary systems that may reduce the MDD or volatility of an entire portfolio that is trading multiple systems.

As an example, perhaps the investor has developed a system that trades ETFs. The annual return of this system may be excellent but has significant drawdowns on a regular basis. This is often the case with a system that trades based on very long term trends without the benefit of tight stops. FastBreak now allows you to import the equity curve (FNU file) from this existing system and combine it with a complementary system that reduces the overall MDD when the two systems are traded together.

This functionality can also be used to combine FastBreak trading systems that complement non-FastBreak trading systems.

Bug Fix and Better Error Checking on Early Start Date
V6.5 fixes a problem when the Correlation Check option is used. Sometimes the correlation check wasn't properly being applied.

More and more users use ETFs that have a limited price history that would result in errors if a user selected a start date that is too early. We have made changes that will result in fewer errors/crashes if an early start date is chosen. A user should still try to select a start date that is relevant to the beginning of price data for funds in the trading family.

Buying Weakness and Selling Strength
Note: The Standard and Pro manuals go into more detail about the following new features.
Version 6.5 adds several new capabilities. Some of the changes are intended to build systems that are complementary to traditional FastBreak systems that always buy into strength. Some of the new options allow buying into temporary weakness and selling

into overbought conditions. This will become clear as each of the new options is explained. *Note: The new options will only work with Linear Slope ranking.*

BOOM (Breakout Optimization Method) with Linear Slope Ranking
Long term FastBreak users are familiar with the BOOM option for ranking. Read the description for the option in the manual. We have made BOOM available to use with the Linear Slope ranking method. In recent years we have found that Linear Slope is a great ranking method for stocks and ETFs. This ranking method appears to help adjust for the greater volatility of stocks/ETFs vs. the less volatile mutual funds so allowing BOOM to be used with Linear Slope was a natural extension. Also, using Linear Slope ranking was critical to the RAT and BAT features which we will now discuss.

RAT (Return Advance to Trend)
Typical FastBreak trading systems usually buy maximum price strength/momentum. Trading systems can take a different approach and successfully take advantage of buying temporary price weakness or selling into short term price strength. RAT is an option to take advantage of these temporary moves. As an example, in the following chart the stock has made a move above the price trend. The assumption is that the move is temporary and the price will revert to the trend.
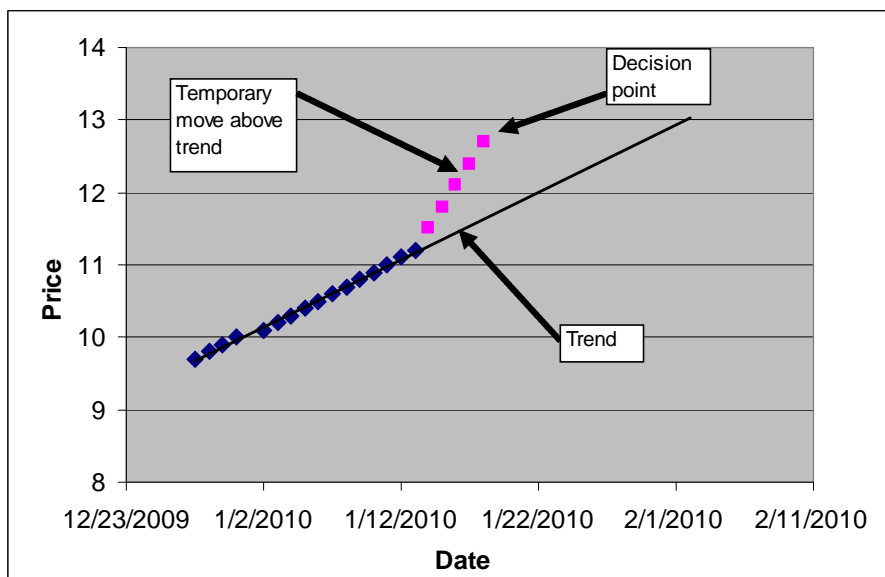
The decision point can either be a Buy or a Sell decision point. In this case the temporary move is a negative because the expectation is that the price will return to the previous trend. RAT uses an algorithm to penalize this stock's ranking by the degree the price is above the trend.

If on the other hand, the price moves below the trend then the expectation is that the price will return to the original trend. See chart below.
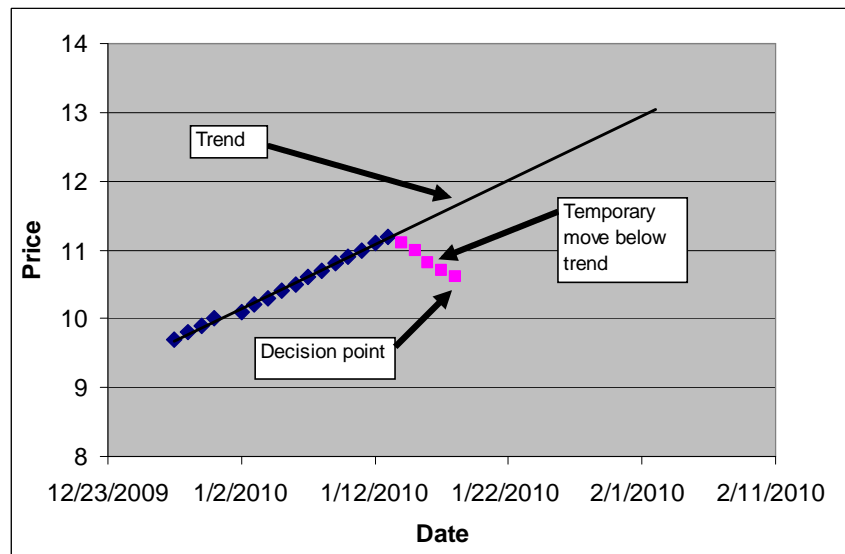
In this case the temporary move is a positive because if the price returns to the previous trend there is addition profit to be made. The RAT algorithm will enhance this stock's ranking by the degree the price is below the trend.

You may notice a significant increase in trades when using RAT. One explanation is that the moves away from the trend are short term in nature and a system that trades more frequently can take better advantage of the return to the trend.

Here are a few additional comments about using the RAT option. First, **RAT only works with Linear Slope**. It will not work with any of the other ranking techniques. Second, how can we be sure that the temporary price moves, especially to the downside, are in fact temporary? You can never have certainty on price moves, but some of the Stop options may come into play. For example, perhaps the strategy uses a 50 day EMA Stop. As long as the stock remains above the Stop the price move is somewhat confirmed as a temporary move. On the other hand, perhaps the upward price move above the trend is permanent and rather than penalizing the stock, it should in fact have an improved ranking. This second case can be handled by the BAT option which will be discussed next. Sometimes RAT will get the price move wrong. RAT allows the user to test strategies and determine if it is more often a benefit or not.

BAT (Breakout Above Trend)
Note: The real power of BAT can only be realized in FastBreak Pro because there are three different parameters that need to be optimized. We are putting in Standard FastBreak so that trading systems built with FastBreak Pro can be run in Standard FastBreak.
Sometimes a stock will have a good positive long term price trend, but for various reasons new buying will come into the stock and an even better trend will be established. This is different from the BOOM option which tries to determine when a stock that has been falling breaks out to the upside. See the following chart:
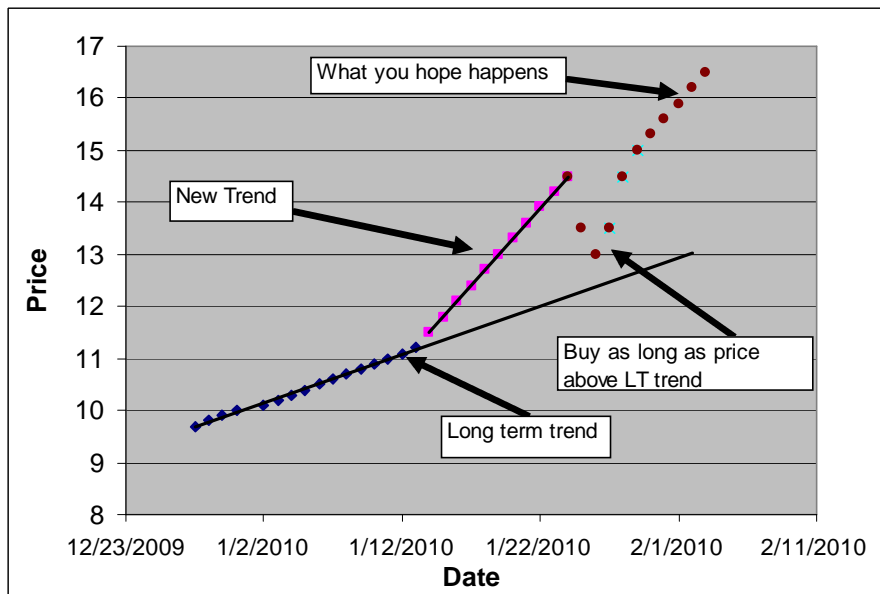
There is a lot happening in this chart so let's step through it. First, we see that our stock was on a long term price trend. At some point the price breaks upward and forms a possible new trend. It wouldn't be appropriate to use the old trend data to determine the ranking so in this case only the new trend data points should be used to calculate the ranking; however, we must first determine if this is in fact a new, better (steeper) upward trend or just a temporary price aberration. FastBreak performs two checks to make a determination on the trend. First, you will see that BAT has three parameter text boxes similar to BOOM. The nature of these parameters is very similar to the BOOM parameters, and as with the BOOM algorithm they are propriety. Suffice to say, the parameters are used to make a statistical determination if the breakout is real.

BAT makes a second check to determine if the new trend is valid. BAT looks at all the price points beginning with the estimated breakout point to verify that the price points have not violated the original long term trend. The theory is that as long as the price stays above the long term trend then at a minimum the long term trend is intact. If the price breaks below the original long term trend then BAT will continue looking along the ranking period for other possible breakouts to the upside.

If BAT doesn't detect a new price trend, then the algorithm simply defaults to Linear Slope ranking for that time period.

Using RAT along with BAT
RAT can be used in conjunction with BAT **if a new trendline is confirmed or all the time**. If RAT is activated with BAT then the assumption is that short term price moves (above or below the new price trend) are in fact temporary. The assumption is that the price excursions from the new price trend are temporary and the price will revert back to the new trend. See previous chart. Just as with the earlier explanation for RAT, this can

be a positive or a negative depending on if the price moves below or above the new trend respectively. One advantage to using RAT in conjunction with BAT only (and only when a new breakout is confirmed) is that a check is made to be sure downward temporary prices moves don't violate the original long term price trend.

It wasn't clear when it was best to use RAT when also using BAT so we put in checkbox options to cover all cases.
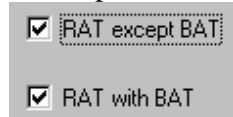
To use RAT along with BAT but only when a new breakout is determined, then use the following check box:

☑ RAT with BAT

If you are using BAT and want to use RAT but not when a new trend is determined then check this box:

☑ RAT except BAT
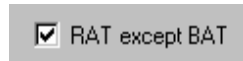
If you are using BAT and prefer to use RAT all the time then you will need to check both RAT options:

☑ RAT except BAT

☑ RAT with BAT

Putting it all together
BOOM, BAT, and RAT can all be used together. Here are the steps:

1. If BAT option checked, then determine if a new, stronger, uptrend breakout has occurred.
    a. If a new trend **isn't found** then the slope will default to a simple linear slope ranking
    b. If a new trend **hasn't been** found and **Use RAT except BAT** is checked then RAT will be applied to adjust the slope value (either up or down) according to how much the latest price is above or below the new trend.
    c. If a new, steeper, trend **has been** found, i.e., BAT, and the **Use RAT with BAT** option is checked then RAT will be applied to adjust the slope value (either up or down) according to how much the latest price is above or below the new trend.
2. If BOOM is checked, FastBreak will calculate a slope value using the BOOM option and apply the RAT adjustment if **Use RAT except BAT** option is checked.
3. Finally, FastBreak will compare all the slopes calculated in the previous steps and choose the maximum slope for the purpose of ranking the equity.