

Windsor Financial Advisors
Market Timing Model Update
April 25, 2002
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Summary: In mid-March of 2002 I undertook the first major upgrade of the market timing model used for all Buy and Sell Decisions. This is the first significant upgrade of the model and was done to keep it in synch with changing market conditions.

History: The Ruttr timing model has been in use since the mid 1990's. It was originally developed using price data beginning in the late 1980's. Ruttr was very reliable in signaling turning points during the mid and late 1990's. Somewhere during the middle of 2000, however, Ruttr's accuracy began to decline. Both "Buy" and "Sell" signals began to come late.

With the benefit of hindsight, it's now pretty obvious to all that a bear market for U.S. equities began somewhere around the spring of 2000. At that time, the trading characteristics of the market began to change. Trends that had previously lasted 3-4 months were now reversing after 3-4 weeks causing Ruttr's signals generally to be late. Stop loss controls helped somewhat. With stop loss controls, if a fund's price declined by a fixed percentage from its most recent high since it had been purchased, it was sold.

The original Ruttr combined with stops did an excellent job of avoiding losses even when it was out of synch with the market. But there have been several opportunities that I feel should have been captured. I decided it was time to re-analyze the model and see if it could be updated so that it could better capture turning points in the markets, and by doing so, not just avoid losses, but generate gains the way it had in the past..

Changes: The first change I made was to shorten Ruttr's lookback period – the amount of historical price data Ruttr uses to gauge the market's momentum and make Buy / Sell decisions. This lookback period originally was about 3-4 months which corresponded with the length of the cycles Ruttr was trying to capture. The lookback period has now been shortened to about 3-4 weeks. Still, the idea is to match the lookback period with likely cyclic turning points.

The drawback to a shorter lookback period is the introduction of whipsaw trades. You can see some of these very short trades (often losers) in the charts of the new Ruttr model in Figures 2, 4 and 6 on the following pages. There was one in March and one in August of 2001. Unfortunately, there's no way around this. In order to make the model more responsive, there will be whipsaw trades. The trick is to find the best balance.

The second change I made was to make the model more index specific. I'll explain. The original concept behind Ruttr was that if you could identify periods when the broad market was advancing, it was safe to invest in any type of stocks. The Russell 2000 was chosen as a good measure of the broad market, because with 2000 companies, it contained a much larger group of stocks than the Dow or the S&P. Also important, was that it wasn't heavily influenced by a few large stocks, as the Nasdaq is. So the Ruttr model looked only at the Russell 2000 to generate its signals, which were then applied to any funds, whether they were small cap funds (like the Russell 2000) or S&P 500 or Nasdaq 100 funds.

In addition to shorter cyclical swings, the onset of the bear market in 2000 has also brought frequent divergences among the major indices. They still usually all go up together, but the Nasdaq and sometimes the S&P 500 will break down much earlier than the Russell. So if we're going to be trading index funds based on the Nasdaq 100 and S&P 500 in addition to the Russell 2000, it made sense to look at using the Nasdaq 100 and S&P 500 as the underlying indices for trading those funds.

Looking strictly at the numbers, there's not a huge difference between using signals from the three different indices than using signals based solely on the Russell, but there is an improvement. Even more important, though is the fact that this makes more common sense. And by doing it this way, there's no stop loss level that improves the model. (Though the stops will stay in there, for added protection.)

Two important caveats: First, this analysis was based on simulated results. I take more precaution than anyone I know to avoid curve-fitting, but that's always a possibility. Second, I only had 1 ½ years of data on which to base my analysis. I would have preferred to have tested over a longer period, but since the tone of the market changed in the middle of 2000, it would be counter-productive to include any dates earlier than that in the analysis. Over the year and a half though, the system generated about a dozen signals, which is a pretty sizable number and makes me confident that the changes I've made are appropriate and that the system is robust.

Signal History:

Original Ruttr*	New Ruttr Russell 2000 Signals	New Ruttr S&P 500 Signals	New Ruttr Nasdaq 100 Signals
B,06/15/2000	B,06/01/2000	B,06/01/2000	B,06/07/2000
S,08/14/2000	S,07/21/2000	S,06/27/2000	S,06/26/2000
B,08/31/2000	B,08/17/2000	B,07/14/2000	B,08/17/2000
S,09/26/2000	S,09/18/2000	S,07/26/2000	S,09/11/2000
B,12/29/2000	B,10/31/2000	B,08/14/2000	B,10/20/2000
S,03/12/2001	S,11/21/2000	S,09/08/2000	S,11/10/2000
B,04/30/2001	B,12/08/2000	B,10/24/2000	B,12/08/2000
S,07/09/2001	S,02/09/2001	S,11/16/2000	S,01/02/2001
B,10/15/2001	B,04/09/2001	B,12/08/2000	B,01/03/2001
S,01/30/2002	S,05/30/2001	S,12/20/2000	S,02/01/2001
B,03/13/2002	B,08/01/2001	B,12/28/2000	B,04/10/2001
	S,08/08/2001	S,01/02/2001	S,05/30/2001
	B,10/04/2001	B,01/10/2001	B,07/31/2001
	S,01/11/2002	S,02/09/2001	S,08/10/2001
	B,03/01/2002	B,03/30/2001	B,10/03/2001
	S,04/03/2002	S,05/30/2001	S,12/03/2001
	B,04/17/2002	B,07/19/2001	B,03/04/2002
	S,04/23/2002	S,07/24/2001	S,03/26/2002
		B,07/30/2001	
		S,08/14/2001	
		B,10/02/2001	
		S,12/03/2001	
		B,01/03/2002	
		S,01/14/2002	
		B,02/27/2002	
		S,03/25/2002	

*These are unfiltered, unstopped signals.

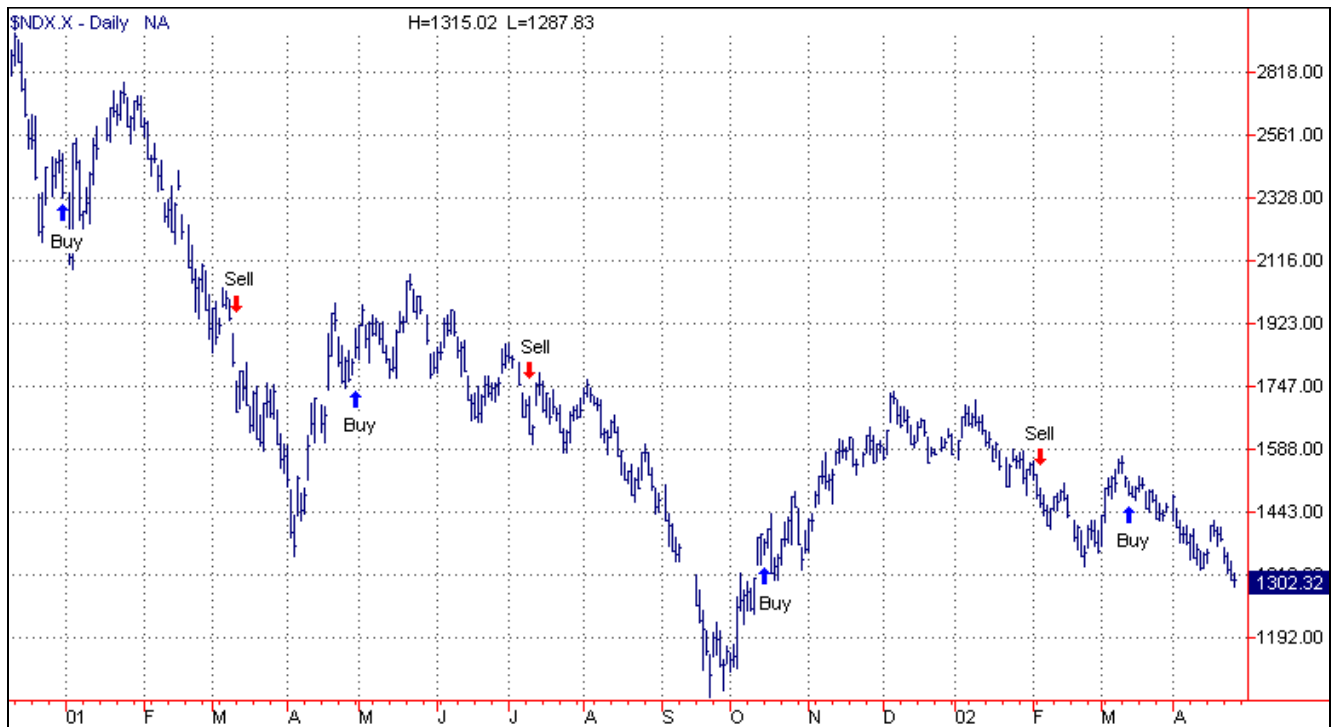


Figure 1: 'Old' Ruttr applied to the Nasdaq 100

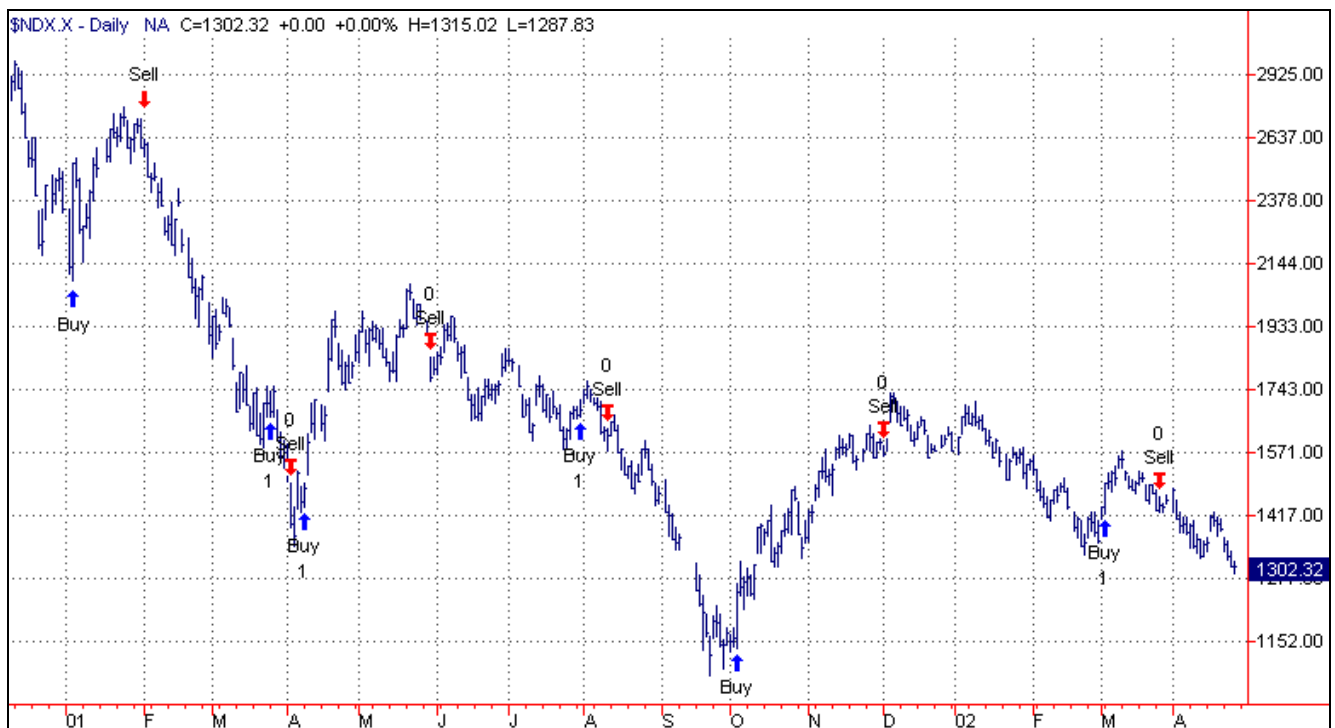


Figure 2: 'New' Ruttr applied to the Nasdaq 100

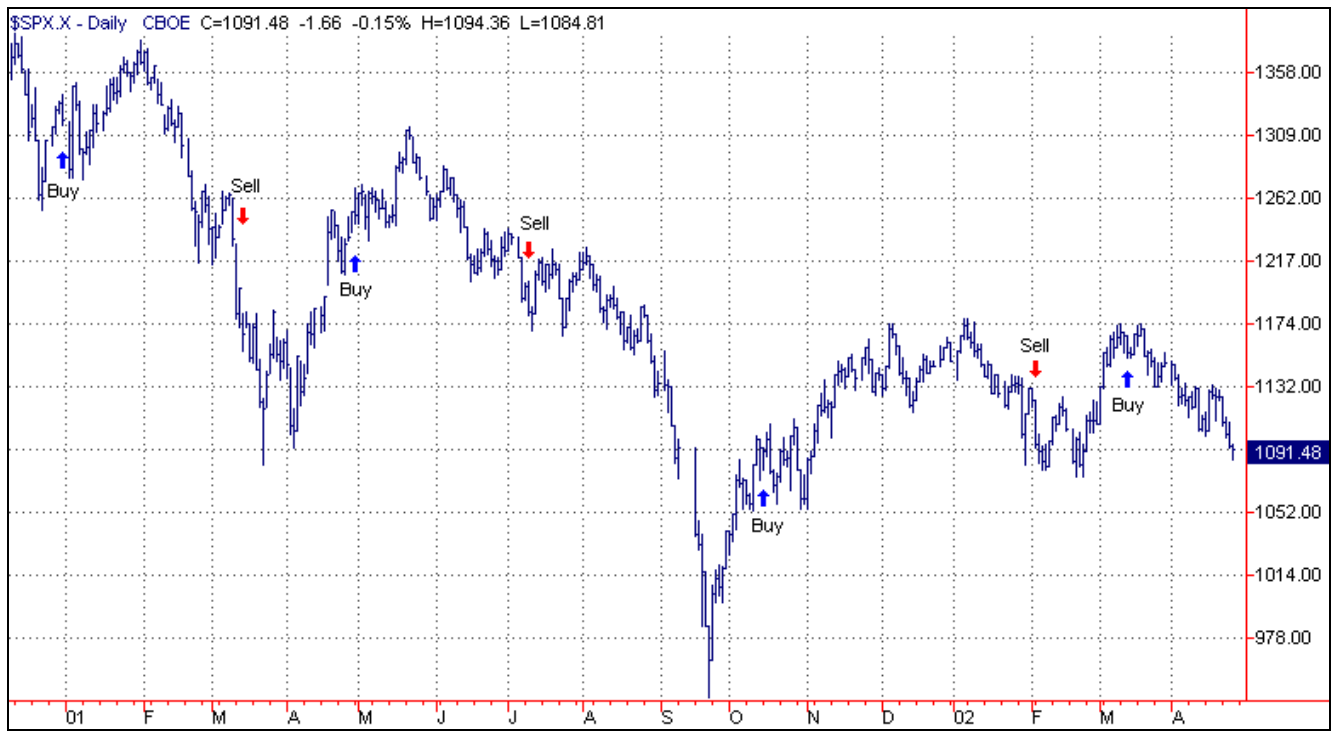


Figure 3: 'Old' Ruttr applied to the S&P 500

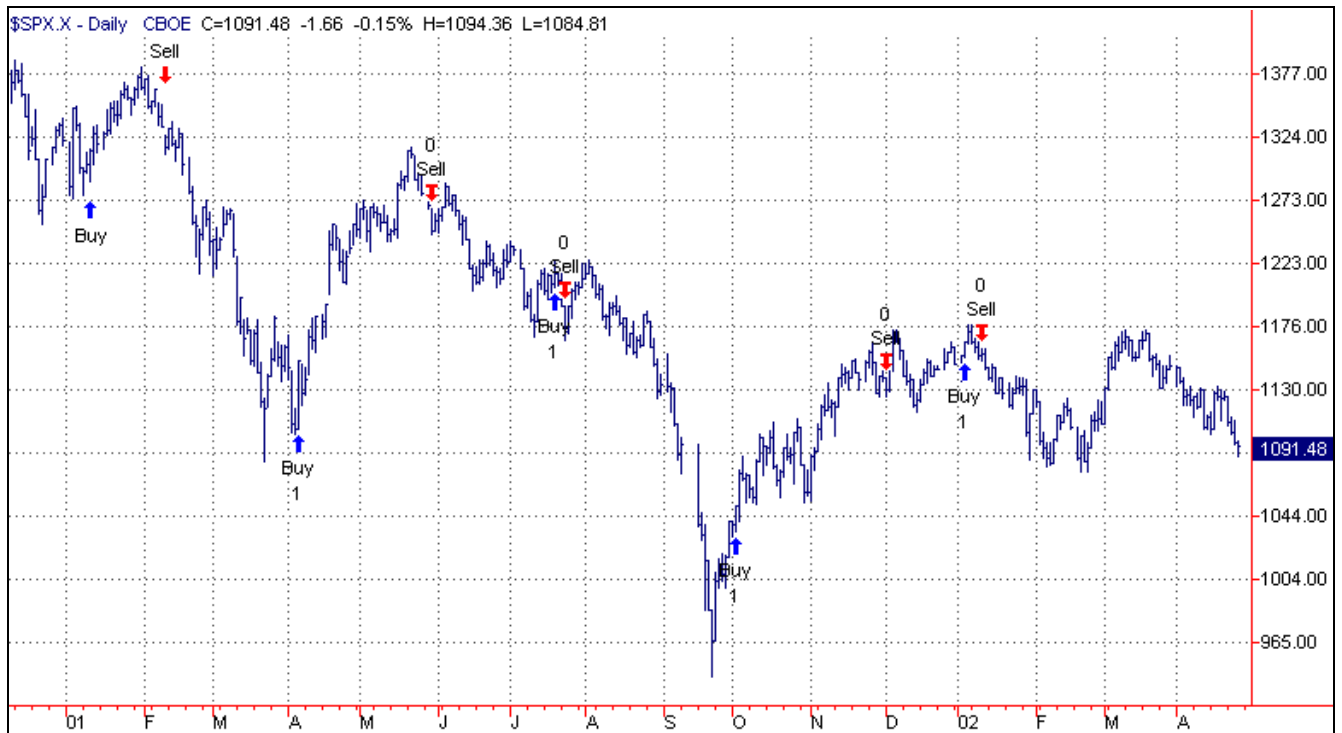


Figure 4: 'New' Ruttr applied to the S&P 500

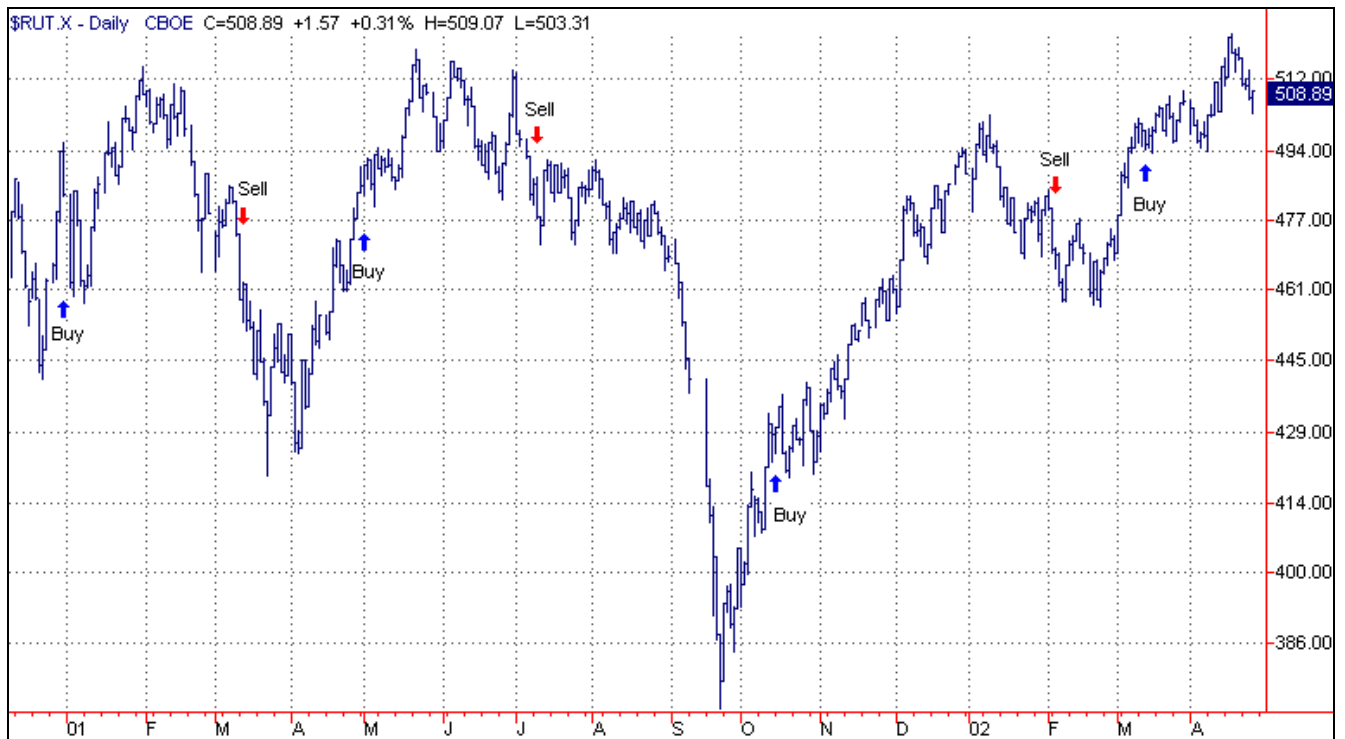


Figure 5: 'Old' Ruttr applied to the Russell 2000

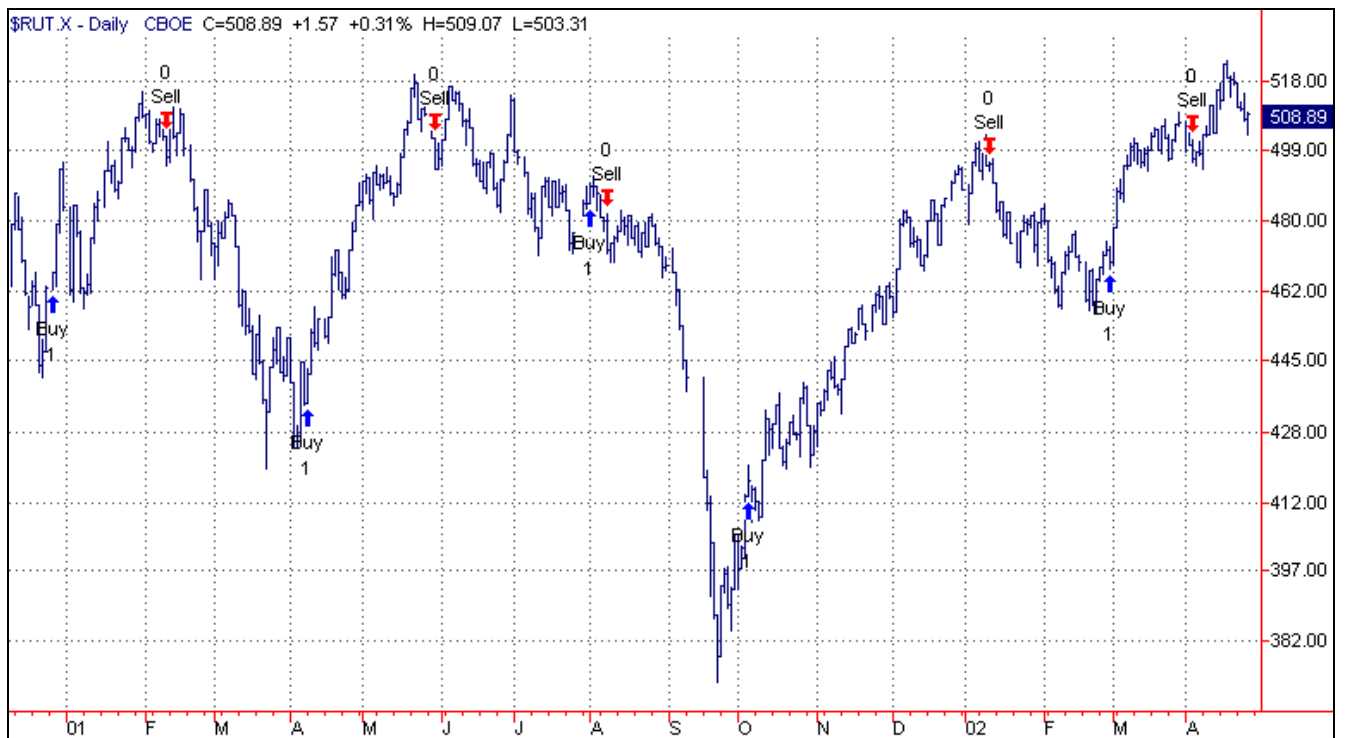


Figure 6: 'New' Ruttr applied to the Russell 2000

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