STOCKS, FUTURES AND OPTIONS MAGAZINE

TECHNICALANALYSIS

Russell R. Wasendorf, Sr.

EDITED BY LAURA SETHER

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TRADING THE INDICATORS: Understanding Volume

BY KIRA MCCAFFREY BRECHT

Many technical traders will tell you that price is king. Everything comes down to price, and price is the most important indicator in and of itself. Experienced traders know that many technical indicators are simply price massaged, oiled, and spit out into a fancy blue or red line at the bottom of one's chart. But volume is a completely different animal. While you'd have to travel far and wide before you'd chance upon a trader who would say that volume readings are more important than price, they are useful and significant raw data readings that measure the amount of action and psychology of the market players.

Volume, of course, is simply the measure of the number of shares of Intel or Qualcomm or any stock traded during a day. In the futures arena, volume measures how many corn contracts or S&P E-minis changed hands that session. For those who are trading on an intraday basis, 5-minute volume bars can be found, or for traders more comfortable with a longer-term view, weekly or monthly volume data can be called up just as easily.

Remember back to high school physics: Newton's first law of motion reflects the concept underlying volume analysis in the financial markets. This law says that an object in motion will stay in motion unless acted upon by an unbalanced force.

Thus, many technical traders call volume the fuel behind a market move. Is the gas tank full and providing powerful momentum for that Porsche speeding down the Autobahn? Or is the gas tank nearing empty, which means the engine is likely sputtering, and the driving machine is slowing and limping toward the shoulder of the road? For a trader who is looking to put on a stock trade from the long side, knowing how much gas is likely left in the tank is an important variable. After all, how many smart drivers set off for a long trip with only a gallon of gas left in the tank?

Joe Granville, editor of the Granville Market Letter and developer of the popular volume tool called on balance volume (OBV) [we'll get to this later...], puts it another way and says that volume "is the steam in the boiler that makes the choo choo go down the tracks."

Use It to Confirm

"Generally speaking, volume has to confirm price," explains John Murphy, author and chief technician at Stockcharts.com. "When price breaks out to the upside [or downside], we normally like to see a nice pickup in volume to confirm that."

One of the basic rules of thumb for traditional volume analysis is that a healthy up-trend would see expanding volume on up days and contracting volume on down days. Just the opposite would be true for a down-trend. "When you get an exception to that, it can be a sign that trend is changing," says Phil Roth, chief technical analyst at Miller Tabak + Co. Daily volume data is easy to find and can even be tracked via the Wall Street Journal, and most charting software packages offer an option for volume bars across the bottom of the chart.

"A market rallying on light volume is a sign there isn't as much bullishness. It is a hesitant market," says Murphy. "When we don't get volume, we get more suspicious."

Or another subtlety for which to be on the lookout is "big volume in an up-trend, but no price progress. That could be a signal that you've hit resistance," adds Roth. The idea is that an unusual change in a volume pattern could signify a possible reversal.

Some other basic rules of thumb in relation to volume are that bull markets tend to have bigger volume, while bear markets tend to have lighter volume. "Markets must be pushed up but can sink on their own weight," notes Roth. In a down-trend, traders would like to see increasing volume on down days and decreasing volume on up days.

Brian Shannon, director of research at Marketwise, uses volume in his trading and analysis. He says "volume is second only to price. Price is what pays, and volume lets us know about the emotional condition of the buyers and sellers."

Shannon highlights a couple of his favorite reflections on volume:

- Big volume without further upside equals distribution;
- Big volume without further downside equals accumulation;
 - Volume tends to peak at turning points;
 - Volume often precedes price movement;
 - Volume is a relative study.

Shannon outlines an example for a stock that is rallying. "You'd like to see that stock advancing on increasing volume each day, say 600,000 the first day, a million the second day and a million-five the third day. Price pullbacks should see successively lower volume, such as 900,000, 600,000, then 450,000" to reflect a healthy advance.

One of the old market adages says that once a trend is established, it is more likely to continue than to reverse. "That is even more likely to be true if pullbacks are on declining volume," says Shannon. For traders who may have missed an entry opportunity on a breakout, if a stock posts a retreat on declining volume, that may offer a second entry opportunity for a trend move.

Divergence

Themes that come up over and over again in the field of technical analysis are the concepts of confirmation and divergence. Divergence often is used in the world of oscillator readings with such tools as stochastics or the relative strength index. Simply, the idea with those tools is that with a bullish trend, one should see rising oscillator readings. When that doesn't occur, a divergence occurs, and that is an important red flag warning signal that trend could be about to change. Example? If a price made a new high in an up-trend, but stochastics failed to make a new oscillator high and actually turned lower, it would represent a bearish divergence.

Take that concept and apply the same principle to volume. For example, in a bull trend, does a stock or a commodity price hit a new high for the rally move, but declining volume is seen for that session? Red flag time.

Blow-Off and Climax

Now for the exciting stuff: blow-offs and climaxes. Blow-offs tend to occur at major market peaks, while climaxes emerge at market bottoms. These terms simply reflect a huge amount of volume that emerges late in a market rally (or decline) with a sudden peak. Prices then abruptly reverse.

"Volume tells me where the action is. It shows me the collective psychology of the participants if they are fearful or overly optimistic," says Shannon. However, "it's tough to say what a climax or blow-off is until after it is over."

Confirm Pattern Breakouts

Another use of volume analysis is to incorporate volume readings along with pattern breakouts. For those schooled in traditional pattern analysis, volume can be a helpful confirming indicator for double bottom or top, flag, triangle, or any type of pattern breakout. How does it work? Jordan Kotick, global head of technical analysis at Barclay's Capital says that for him, "Volume shows conviction. Is there conviction in a move?"

Combining a price breakout with a volume confirmation simply helps a trader to see if there is conviction behind that price breakout. Let's say that corn futures have been in a down-trend. But because markets don't ever simply go straight up or down, the bear trend takes a pause, prices consolidate for several weeks, and a continuation triangle develops on the daily chart. Then one day, traders wake up and corn breaks out to the downside of that triangle, blasting below the lower triangle line at the final bell. On that day, traders could look for a high-volume day, a large and long volume bar relative to the recent sessions. A high-volume day would be viewed as confirmation to the downside breakout of that pattern.

For those wanting to take volume analysis to the next step, traders could study what is called upside volume, versus downside volume, when analyzing the major U.S. stock averages. Just as it sounds, the upside-downside ratio simply reveals the relationship between the total volume of advancing shares, versus the total volume of declining issues.

On-Balance Volume (OBV)

There are a variety of tools and ratios based on volume, but one of the early volume indicators, developed by Joe Granville in the early 1960s, is known as OBV. This tool can help traders avoid the subjective nature of eyeballing those volume bars streaming across the bottom of the chart. (Is that one slightly bigger or smaller?) The OBV indicator turns the volume data into a line graph, which can be displayed across the bottom of one's chart. Traders actually can draw trendlines on the OBV indicator just like a price chart. When the OBV turns and breaks that trendline, it can signal a potential turning point in price. It also can be used like an oscillator to help pinpoint divergences between price highs and volume peaks or price lows and volume troughs.

"If price is moving up, OBV should be moving up, too," explains Murphy. He also notes that OBV could actually be a leading indicator. "OBV can break out before the stock does," Murphy says.

The calculation behind the OBV is extremely easy to understand even for those who are as math-challenged as this author. The total volume for a session is given a plus or minus value depending on whether prices closed higher or lower that day. A higher close would result in the volume to be counted as a plus, while a lower close would result in a minus value. Thus, a running total is achieved by simply adding or subtracting volume, depending on direction of the market close.

For those who are just beginning to use volume as part of their analysis and trading, Granville advises students to "pick a stock, preferably a well-known stock. Follow it every day in the newspaper. Keep a running total of volume. If it closes up, add all the volume of the stock traded that day. If it closes down, subtract the volume of that day from the previous figure. You'll see a running commentary on the action of the stock. You'll see the evidence that volume precedes the price trend."

Equivolume Charts

Volume analysis has spawned a range of indicators and even a new type of charting technique, called equivolume bars. This type of chart actually combines price and volume into one bar or box. For those familiar with Japanese candlestick charts, the concept is somewhat

similar. Basically, the top of the equivolume box represents the day's price high, while the low is seen at the bottom of the box. The width of the box represents the day's volume. The wider the box, the heavier the volume during that session. "By just glancing at the bars, you can tell which days have heavier volume," explains Murphy.

Traditionally, some technical analysts have combined volume with the study of open interest, which simply refers to the number of outstanding contracts still open at the end of the trading day in the futures markets. With the advent of 24-hour markets and the rise in popularity of foreign-exchange trading among individual traders, the study of open interest appears to have waned somewhat. But for those wanting to understand the basic rules of thumb, they still apply.

Traditional Open Interest and Volume Guidelines:

- If prices are rising and volume and open interest are increasing, it represents a strong market;
- If prices are rising while volume and open interest are falling, it reveals a weakening market;
- If prices are falling while volume and open interest are increasing, it represents a weak market;
- If prices are falling while volume and open interest are falling, itrepresents a strong market.

According to Marketwise's Shannon, one of the biggest misuses of volume is an interpretation when a stock is declining. Let's say a trader is long a stock and price begins to pull back. "People convince themselves to hold on because it [the pullback] is on light volume," Shannon says. But that may not be the best way to manage a trade. "Would you rather lose ten percent of your money on light volume or big volume?" asks Shannon. He instead advises traders to exit a position "based on price action."

Another common mistake is that many traders could point to a heavy volume day and be convinced that it is a climax or blow-off day. "Most people end up misreading big volume," says Shannon. "Just because it is the biggest volume in three days, doesn't mean the move is over. Volume could be even bigger the next day."

Timing Is Everything

Typically, trading in the stock market (and the futures market on the major stock indexes) sees the heaviest volume during the first hour-and-a-half of the day and then the last hour-and-a-half of the day. Traders can use this generality to help them in their intraday trading. "The midday doldrums occur because institutional traders are waiting you out," warns Shannon. Often times, major institutional players will execute large portions of orders in the morning and then wait for heavy volume and renewed trending action late in the day to finish orders.

This can be helpful information for those who are trading very short term on an intraday basis. "If you are a hyperactive trader and have to take your profits, take them during the first move in the morning," says Shannon. There may be another opportunity during the second late-day wave of action. Otherwise a trader who bought, say, the S&P E-mini early in the day and saw some profits in that trade may slowly watch that profit erode during the lunchtime doldrums as prices simply tick slowly lower. For those who get spooked on pullbacks or don't have the patience to wait for the afternoon move, it may be wise to simply book the profits early on.

Here are a few more tidbits on incorporating volume into your trading and analysis.

- Use volume simply as a screening tool. For those who are scanning thousands of stocks looking for a good trading opportunity, volume can help distinguish between those that are in an up-trend or down-trend (depending on whether one is looking for long or short trades). How? Those stocks with the best volume profile or pattern can help weed out the stocks most likely to continue with that trend.
- Barclay's Kotick closes with another tip for beginning volume followers. "It's not the level of volume that is key, it is the trend of volume. Look at it over a range of time." One day of volume can't be viewed in a vacuum. Volume analysis is most useful when compared to previous sessions. Some like to say volume is simply a reflection of supply and demand. A high-volume day simply reflects more demand in the marketplace. But overall, traders and analysts note that volume should be used as a confirming indicator. Most

still agree that price remains the most important factor to consider while trading. Volume may offer up warning signals, red flags, or generate trading ideas. But use it as a supplementary tool.

• If you've haven't incorporated volume readings or analysis into your trading, it may be worth exploring. "Volume is very useful and important. You can't do good technical analysis without looking at volume," concludes Murphy.

Kira McCaffrey Brecht is senior editor at *SFO* magazine. She has been writing about the financial markets for sixteen years. Posts during her career include Chicago bureau chief at *Futures World News*, market analyst at *Bridge News*, and technical analyst at MMS International. McCaffrey Brecht holds a political science degree from Brown University. This article originally appeared in *SFO* in August 2005.

INCREASE YOUR ODDS WITH MULTIPLE TIMEFRAME ANALYSIS

BY BRIAN SHANNON

We have all heard the market cliché "the trend is your friend" for good reason. Making big money in the markets is accomplished by entering a position at the onset of a new trend and then having the patience to hold the position long enough to allow the profit to accumulate into a large winner. Participation in a long-term trend is the dream of every investor. To have a huge winner that we believed in and held well beyond the point where most participants would have been shaken out on a short-term pullback is what allows successful investors to reap large gains.

Many investors may find their most satisfying winners in a three-year hold. But that timeframe does not fit all market participants. There are those of us who believe that long-term capital gains should be recognized after just a few days. For those traders, three years seems like a lifetime! Short-term trading can produce outsized returns, as long as losers are properly managed and winners are larger than the losers (but then again, that is true for any timeframe).

In order to attain larger winners than losers, the easiest way to get the odds in your favor is to trade with the primary trend, regardless of whether you are an investor or a trader. Think of the most basic definition of an up-trend, which is price making higher highs and higher lows. In an up-trend, the sum of the rallies will always be greater than the sum of the declines; otherwise the trend would not be intact. The opposite is true for a down-trend; the sum of the declines will always be greater than the sum of the rallies, which obviously makes

the short side more profitable in a down-trending stock. The simple math of trends is the biggest argument for why it makes sense to participate in moves that are aligned with the direction of the primary trend, rather than trying to pick tops and bottoms. Even if one can accurately predict turning points in a market, the reward will not be as great as it would be if one were participating in the trend.

Market Corrections

The way that markets correct is another factor that stacks the odds against those who attempt to profit by trading against the trend. For those who are beginning technical traders, there are two ways markets can correct after a move in either direction.

The first type of correction is one that occurs by price. For example, an up-trending market will experience a pullback in price, or a down-trending stock will experience a short-term rally before the primary trend re-exerts its dominance. The other way a market corrects is through time, meaning that instead of a countertrend move, the market will trade sideways as the buyers and sellers battle it out for control. A correction through time is typically marked by low volatility in a tight range, which can frustrate the person anticipating a reversal. Because numerous trends are often prevalent in a given market, the surest way to stack the odds in your favor is to use multiple timeframe analysis for trend alignment, before risking your capital.

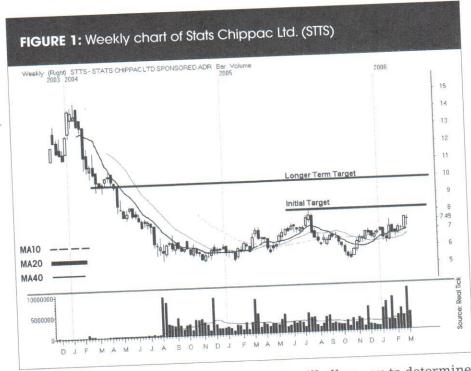
In theory, trend trading is simple: buy low and sell high for longs, and sell high and buy back low for short positions. In reality, many traders find trend trading frustrating because they are not focusing on the right trend. A little over one hundred years ago, Charles H. Dow wrote a series of editorials in the Wall Street Journal in which he laid out his views of how the stock market works; collectively these writings are referred to as the Dow theory. The work of Dow is still referred to today and is the underlying premise of technical analysis.

Three Types of Trends

One of the foundations of the Dow theory is the identification of three types of price trends: the primary trend, the secondary trend, and minor trends. The primary movements were compared to oceanic tides. They are the main trend of the market and can last from a few months to several years. Primary trends cannot be manipulated, as the forces of supply and demand are too large for any one participant to successfully influence the collective reasoning of the crowd. Secondary movements were referred to as waves and they are known as reactionary moves, trends that typically last from two weeks to three months. The secondary movements are often created by a large participant (mutual fund, hedge fund, etc.) exiting all or a significant part of their position; once that supply (in an up-trend) is absorbed by the market, the buyers regain control and the stock continues higher in the primary trend. Finally, minor (or short-term) trends were viewed as insignificant ripples, which lasted less than two weeks and were given little significance because they represent fluctuations in the secondary trend. The short-term ripples in the market can be difficult to predict because they are often driven by emotions. However, skilled day traders thrive on this type of emotional short-term movement.

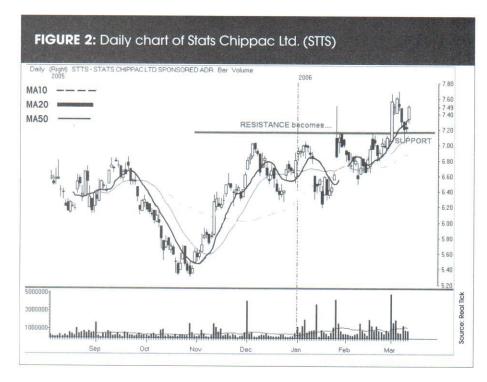
One of the most important elements in successful trend trading is to determine which trend to focus on. Deciding which timeframe to engage the market is largely determined by individual factors. These include time available to commit to the markets, capital base, experience level, risk tolerance, and even one's level of patience. Investors are naturally attracted to the primary movement, while the secondary moves are going to be the focus of a more intermediate-term participant (swing traders). And, the minor trends will be the obvious choice of day traders. Even as simple as that concept may seem, it becomes more complicated because technical analysis is about timing, and you must look at more than one timeframe if you are truly to have the odds in your favor:

ABLE 1: Know your timeframe			
	INVESTOR	SWING TRADER	DAY TRADER
Primary Trend	Week	Day	60 Minute
Secondary Trend	Day	60 Minute	10 Minute
Minor Trend	60 Minute	10 Minute	2/1 Minute



In order to make timing decisions that will allow you to determine a low-risk area to get involved and still have large profit potential, it is essential to conduct your analysis on multiple timeframes. We will now explore three different timeframes that investors, swing traders and day traders should consider. To make this analysis real we will use an example of a current setup in the market as if we were going to enter an investment or a swing trade. Because of the short-term nature of a day trade we will outline the timeframes to consider but will not study an actual trade setup (see *Table 1*).

Whether you are an investor, swing trader, or day trader, the first timeframe that you should study is one that represents the primary trend. The longer, more powerful trends are the ones that you want to be sure not to fight, as mistakes can be quite costly. The long-term timeframe is not about timing—it is about idea generation. For an investor, the timeframe to start with is a weekly chart that encompasses at least two years worth of data. Looking at *Figure 1*, the weekly chart of Stats Chippac Ltd. (STTS) shows the stock has been bottoming out over the last eighteen months. The recent increased volume suggests the stock may be ready for a sustained move higher that could see

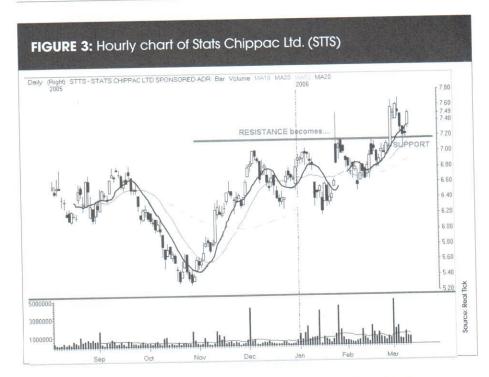


the stock trade near the 10-level. This is the type of chart that should get an investor interested in further study on shorter timeframes (of course, having a fundamental reason for being involved—in this case increased earnings and revenues—is always a bonus).

The primary trend for a swing trader will not be quite as long term as it would be for an investor; this is why the swing trader's analysis of a long-term trend should take place on a daily chart, which shows at least 150 days of data. A swing trader would have good reason for being bullish on the daily trend of STTS, as the stock is in a strong up-trend, which is defined by a strong volume pattern and the stock holding above rising key moving averages (see *Figure 2*). It is also encouraging to bullish traders that the stock found support at the prior level of resistance near \$7.20 on a recent low-volume pullback.

Drilling Down

Day traders will find it necessary to bring their analysis of a longterm trend to an even shorter period of time. That can be accomplished by studying price action on a 60-minute chart, which shows price movement over at least 25 days. The 60-minute chart of STTS



(see *Figure 3*) is telling day traders a similarly bullish message as was seen on the weekly and daily timeframes. The 60-minute timeframe shows that the buyers have once again taken control of the stock by pushing past the short-term resistance at \$7.30. Notice how this action has also turned the moving averages higher, confirming that the short, intermediate, and longer-term trends of this timeframe are now higher.

The units of time studied in these examples are starting points. It is often necessary to look further to the left to see older data that may be relevant to the primary trend. The goal of the long-term timeframe is to allow the participant to recognize signs of a new trend or a stock that appears to be early on in an established trend, and then move to a shorter timeframe for further confirmation of a reason to get involved in an actual trade.

Once the stock has been identified as a viable candidate for a commitment of capital, the next step is to determine key levels of support and resistance, which brings our analysis to the secondary timeframe. A trader must first identify the existence of a primary trend, using the appropriate longer-term timeframe. The next step for a trade set-up

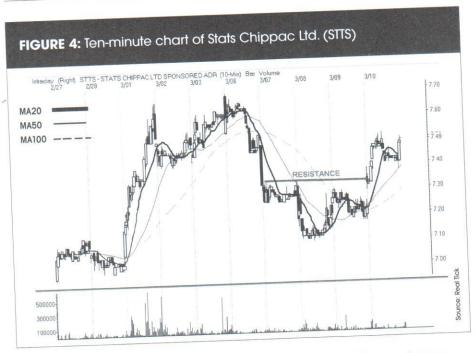
is to determine if there is sufficient potential for reward relative to the perceived risk—essentially this is where we plan our trade. The evaluation of the risk-reward scenario should take place on an intermediate-term timeframe that allows for easier recognition of levels of support and resistance, which might not have been visible on the longer-term timeframe.

To view the secondary trend, an investor would study the action on the daily timeframe of STTS (*Figure 2*). On the daily chart, the investor should notice that the stock recently rallied from 7.00 to 7.60 on heavy volume and then experienced a lower volume pullback to previous resistance at 7.20. At this point, it appears the 7.20 level is where there should be good support for the stock, but the investor may want to set a stop under the rising 20-day moving average (MA), which is now at approximately 7.10. This would give the investor a theoretical risk of approximately \$0.40. Setting the stop under the 20-day MA instead of under the support at 7.20 exposes the trade to more risk, but it also reduces the chance of getting stopped out of the position prematurely.

Coming up with an upward price objective could not be done on the daily timeframe because of the limited price action above 7.00, so the investor would have to revert back to the weekly timeframe (*Figure 1*) to come up with an initial target near 8.20, which is the high for the stock in 2004. Because the stock had limited trading history at the 8.20 level it is unlikely that resistance would be very strong, thus making a target closer to 10.00 more feasible. Even the 10.00 level could prove to be conservative, as there is further potential for the stock to rally up toward 12.00, which was a support level broken in late 2003. Whether the stock eventually rallies up toward 10 or 12, the risk of getting involved with a stop of just \$.40 makes this a very attractive long-side candidate.

Finding Support and Resistance

After identifying STTS as a good potential swing trade candidate on a daily timeframe, the intermediate-term trader would then drill down the analysis of support and resistance by looking at the hourly timeframe (*Figure 3*). The way a swing trader should interpret action seen on the hourly chart is that the stock is in an ideal area for purchase, as the buyers have just regained control of the trend on this



timeframe. By clearing the short-term resistance at 7.30, the buyers are back in control of the intermediate-term trend, and the stock now has strong upward momentum, making it an excellent candidate for a swing trade. The minimum upward objective for the swing trade would be the recent high of 8.20, and determination of where to set the stop would come from an examination of the minor trend, which can be seen in *Figure 4*.

The final timeframe to be studied is the minor trend. The goal on this timeframe is to capture a more accurate entry price. The minor trend for the investor is found in *Figure 3*, the hourly timeframe. If the investor is looking to enter the stock while it exhibits upward strength, he may choose to enter at the same level the swing trader was targeting, 7.30.

A swing trader should analyze the short-term trend by studying price action on a ten-minute chart, which covers ten days of trading activity. As we saw on the 60-minute chart, the ideal purchase would have occurred as the buyers gained control of the short-term trend when they pushed the stock past short-term resistance at \$7.30 (the 10-minute timeframe shows this level in greater detail). While the 10-minute timeframe does not offer any particular advantage over the

60-minute timeframe in the case of STTS, it does often provide greater detail that allows us to fine tune not only our entry price but also where to place our initial protective stop.

Multiple Timeframe Analysis Can Help

The concept of using multiple timeframes for trading is one every market participant should consider because it allows for a greater level of objective analysis of what the market is actually doing, rather than relying on our opinions to make important trading decisions. Using three different timeframes allows market participants in all timeframes to find the idea (primary trend), create a plan of action (secondary trend), and capture more accurate entries (minor trend). In the end, multiple timeframes allow us to become better at holding our winners and cutting our losers, a goal common to all investors.

Brian Shannon is an independent trader and highly regarded market educator. His work can be viewed at www.alphatrends.blogspot. com Brian can be reached at alphatrends@gmail.com This article originally appeared in *SFO* in May 2006.