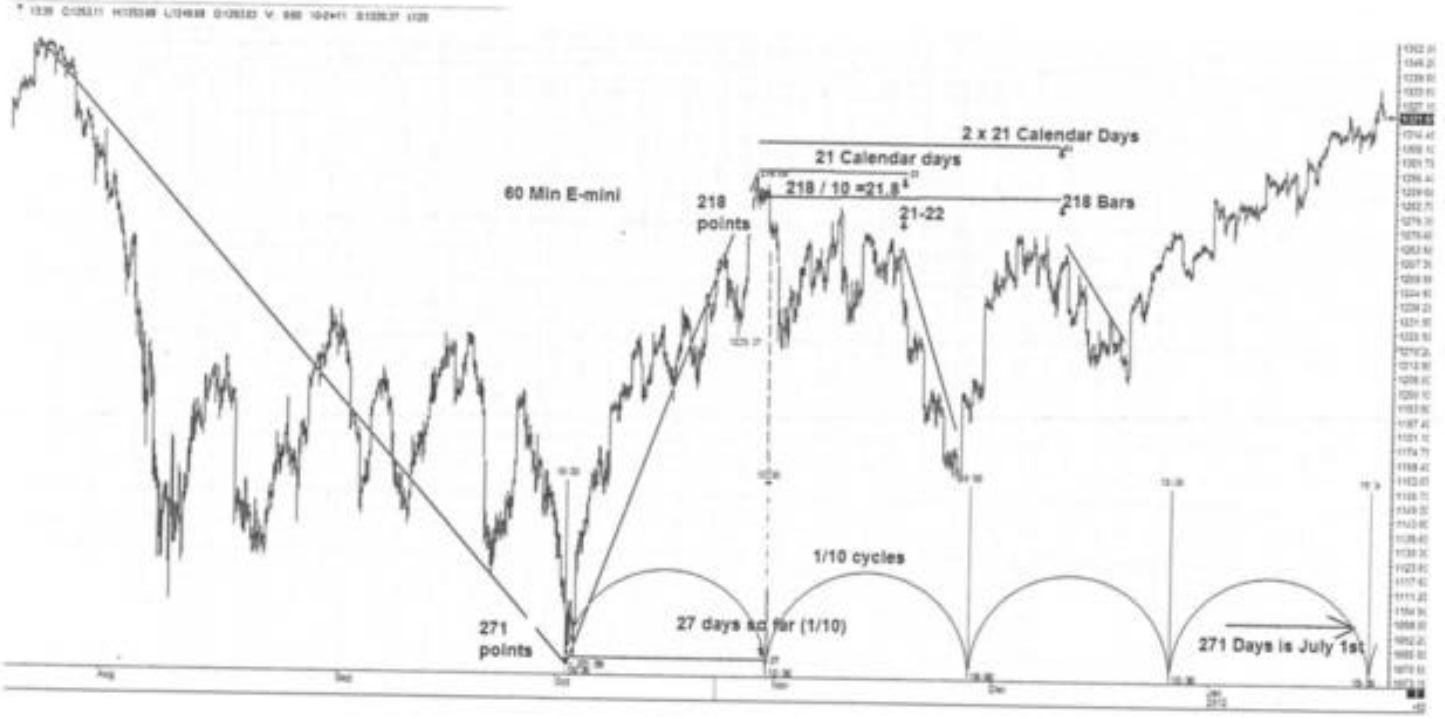
Square The Range Trading System

By

Michael S. Jenkins



Preface

The tremendous success of my discovery of **The Secret Angle Method** and the simplicity of having the chart itself tell you where its harmonic breakpoints fall led me to follow that method to its natural conclusion in finding the primary origin of all price chart fluctuations. I have taken those ideas and combined them with Gann's primary discovery that time and price are interchangeable and each swing in the market i.e. each 'range' could alternate between time and price vectors. In this work I have attempted to lay out a strategy of mapping these resultant cyclic turning points in a chart for trading purposes by identifying high probability entry points. I also have tried to 'educate' the reader a little into the fine art of chart reading and interpretation by looking at the basics of each chart 'wiggle' and finding it's corresponding origin point. I do not intend to demonstrate a perfectly programmable template for all trades since the problems of scaling for each user and his or her particular software or hand drawn charts might require another full book just on scaling techniques, but rather I have given here the theory and philosophy of finding each market turn based on geometry. Once you can grasp the principle and have some success in predicting the major reversals then you can advance to the more subtle pattern repetitions and the 'mirror image foldbacks' that lie at the heart of all great forecasting. I have only used geometry and trigonometry here so as not to cannibalize my life's major discovery of the way Gann used the planets to trade and which I still only teach 'face to face' in my private seminars. Even so the method explained in this work will substitute nicely for those who can't or won't accept the planets as natural forces driving the markets cycles.

I encourage you to read the *entire* book and not skip the early chapters that explain the theory leading up to the final solution. All the ideas have been explained in prior books and in my newsletter but like all things 'hidden in plain sight' few can ever grasp the principles of the whole pattern. This book will complete all my prior teachings and likely conclude my work in this area, but you won't grasp it all if you do not understand the basic building block principles explained in the first several chapters, so read everything to the end and try and contemplate the foundation principles as they will lead to even greater discoveries. I also urge you to read my earlier books on basic trading so you know how to identify a reversal bar, how to project targets, and support and resistance and basic cycle calculations. These tools when added to this key turning point system will greatly put the odds in your favor for a successful trade.

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Acknowledgements

I wish to thank the following software products for the use of their charts in the various illustrations:

Ensign Windows

Ensign Software

http://www.ensignsoftware.com/

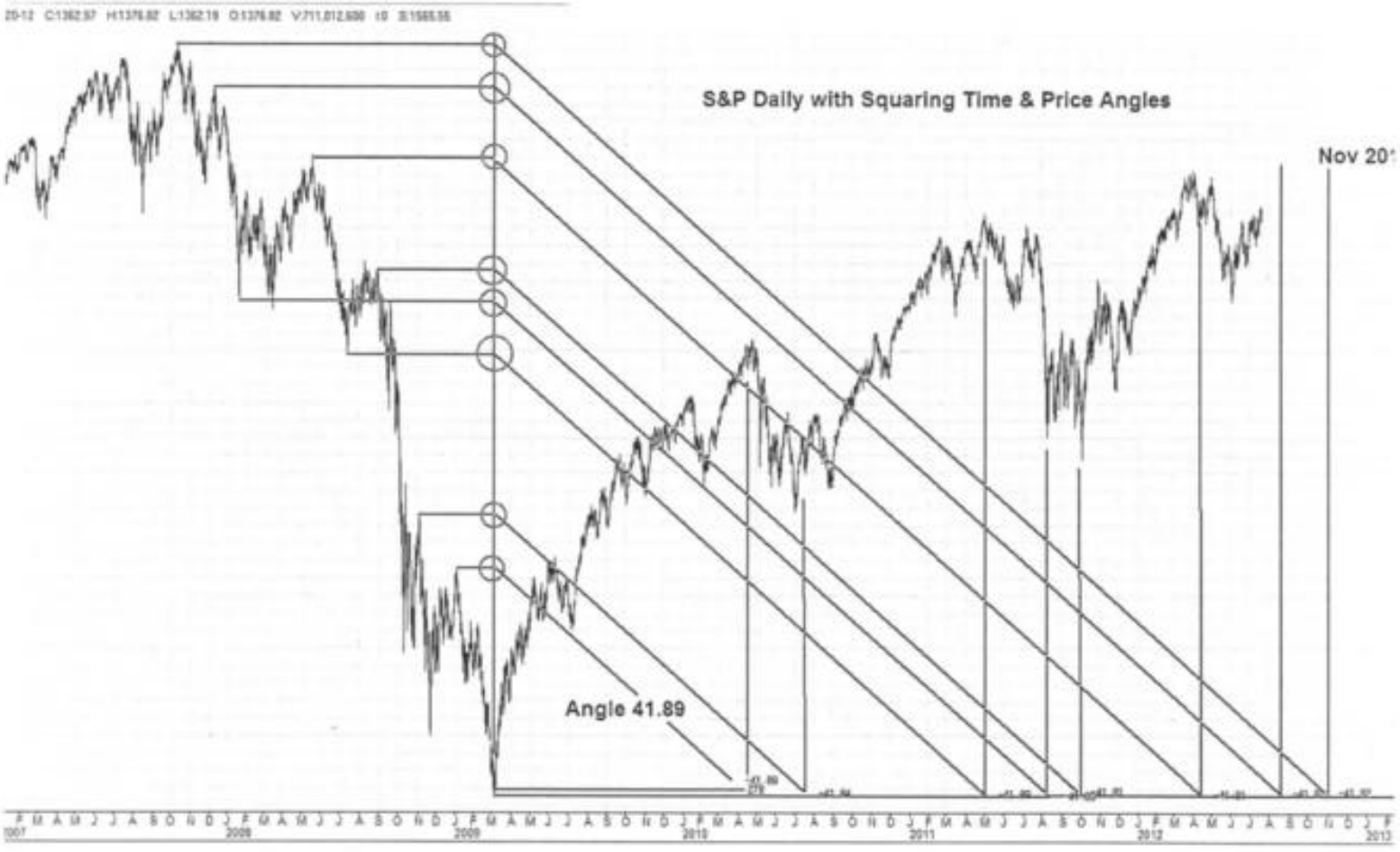
The vast majority of charts in this book were produced with Ensign Windows, but I am often asked what software I personally use every day and I use several products in addition to Ensign:

TradeStation: http://www.tradestation.com/

Market -Analyst: http://www.market-analyst.com/gann-astro-edition

MetaStock : http://www.metastock.com/

Any of these products can be used with the methods described in this book


S&P Daily with Squaring Time & Price Angles
Nov 20
Angle 41.89
2008
2009
2010
2011
2012
2013

Introduction

I have always said that every future fluctuation in a chart's pattern can be seen in a past movement and it is only the angular displacement of the current pattern which tricks the eye into not being able to discover the identical past movement. Cycles are not evenly symmetrical like a sine wave that we often use to represent them. There is the problem of 'left hand / right hand translation' where the amount of time of the advance is different from the amount of time of the decline. These types of patterns are often described as 'saw' waves or irregular fractal patterns. Patterns also can be plotted in a different plane and this appears to distort the original pattern. This is the reason no moving average system works or any MACD or oscillator type overbought / oversold system. The 'fractal' patterns are exact and although you can often 'see' the pattern with the eye, the various legs can still be compressed or expanded and while the overall pattern remains the same shape, trying to buy or sell at a particular leg pivot is still difficult. In this work I reveal a method that should enable you to precisely find these pivot points and many times trace them back to the origin fractal to get a feel for the length and time duration of the upcoming move.

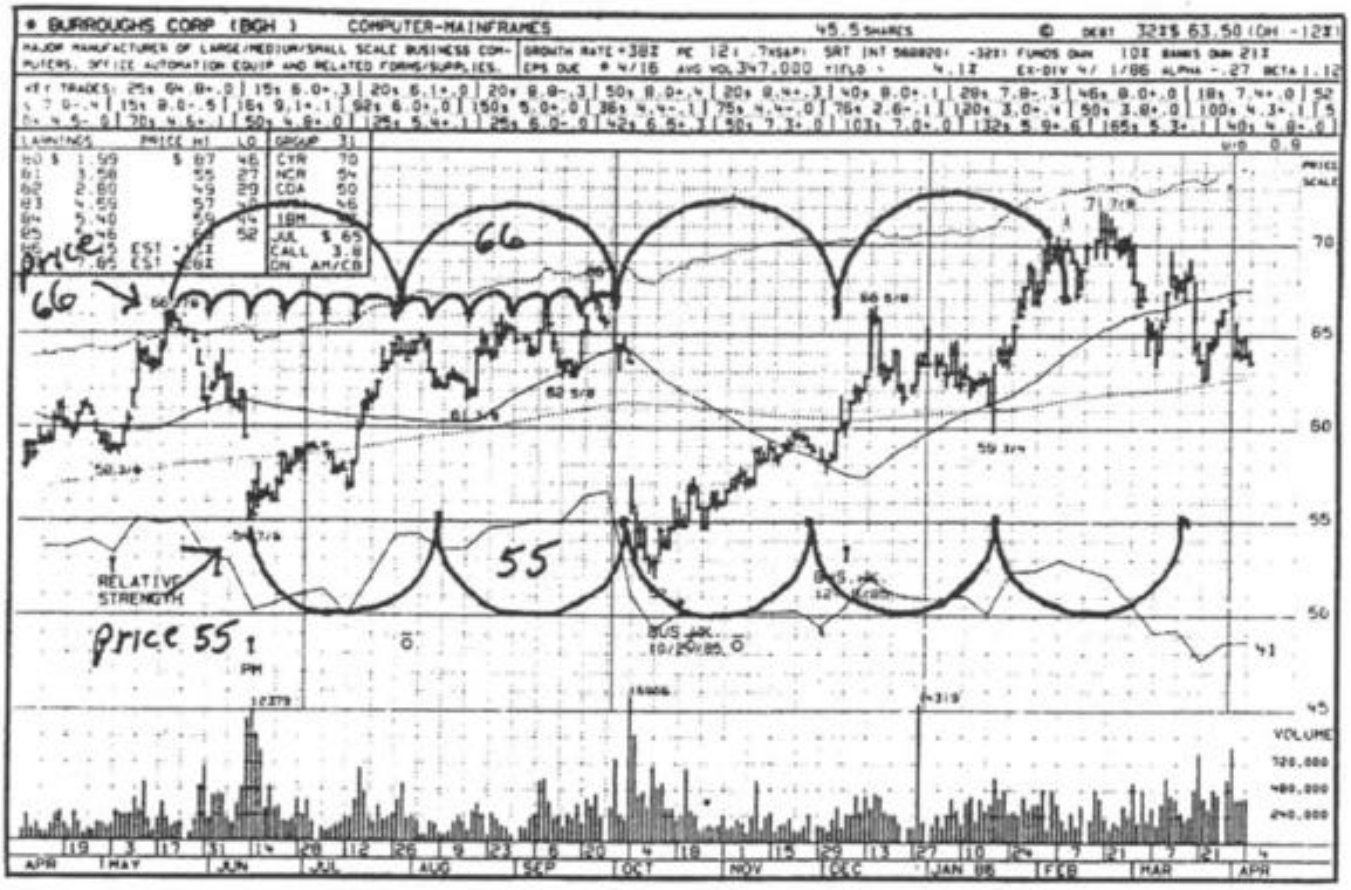
The difficulty academics have with the market is the 'regression to the mean' tendency of the market to vary about a central point. In the past the 'random walkers' always used moving averages to supposedly prove that the gains and losses of the market evened out and fluctuations were therefore random. This has largely been disproved with fractal studies but still the vast majority of institutional investors and academics are still in the dark concerning cyclic influences in the market. For example we all know that if you flip a coin (US) 1000 times you should approximately get 500 heads and 500 tails and this is simple statistics that no math teacher will refute. But what if there were peculiar fractals present in the coin flips that no one noticed. What if there were a pattern of 'heads' from flip 37 to 46, and the next eight 'tails' and then seventeen heads etc. This pattern would eventually return to the starting point and the average would come out 50/50. Of course a normal computer run of 100 trials of 1000 flips might pick up this fractal pattern but the more difficult fractals have reinforcing feedback loops so a run of 5 heads might generate 5 times 1.2 tails and that might generate 0.8 heads times the last series and each series affected the next and yet the entire series would return to average out. Even advanced computer runs might not pick this up. This is similar to a fraction like 1/7 which repeats 0.142857142857142857 but is again modified by another repeating fraction so the actual mechanism can't easily be found. This is what happens in the charts of stock price patterns where each fractal recreates itself but modifies itself at the same time. Our principle of time and price being the same thing is proven with the observed fact that a $50 high spins out 50 unit time periods and a break to

$17 would spin out 17 unit time harmonics and each high and low spin out harmonic cycles that eventually return to a common denominator and the pattern repeats as the different individual cycles merge into one new cycle. Imagine if you will, a 'timing line' drawn down from a stocks high of let's say $40, and when that timing line hits 'zero price' it turns back up and eventually the current price hits that trendline at a future price level that is quite different from the initial $40 but none the less may cause a top to form again in the stock. By following that timing line down and up you can 'see' the origin at $40 and without that timing line you would have no way of connecting the $40 top with the recent top. If this timing line is a simple 45 degree angle the patterns can be fairly easy to see and the repetitions are very similar. If however, the angles are Fibonacci ratios or strange fractions, then the future high or low caused by the timing line can be hard to visualize as coming from that origin point. In many of my newsletters I show the backwards zero angle approach of taking today's high and assuming it could be a square out and if so I expect to go backwards with a 1 point per day timing angle and find a similar pattern. This was true at the top in late April to May 2011 when the 1371 top pointed backwards 1371 days to the top in July 2007 and the same fractal 'crash' repeated. These kinds of 1 to 1 timing line pointers are easy to apply and use but what I will teach you in this book are the very sophisticated and advanced angles that are specific to each and every chart and will always work whereas a simple 1 to 1 angle will often fail. Scaling of your charts WILL be a problem but won't negate the validity of the method, but only cause a bit more work and testing. If you always test your charts with several of these methods you will be able to narrow down to a precise day or two where the big turning points will occur. By the time you finish reading this book you should be able to know where the turns are but unless you use common sense and develop a strategy you can still be unsuccessful. When forecasting a date to precisely time a change in trend, it is essential that you let the chart validate the change. In other words if you predict the exact hour of a high or low, look at the 15 minute chart for that hour and let the 15 minute pattern reverse for a bar or two to give credence to the predicted 60 minute expected turn. Also, only trade at your exact calculated support and resistance that appears during the forecasted period and not just at the market. 99% of trading consists of getting in at the right price and the right time. If you spend a little time studying your charts you will see that all the future pivots come from the past so you literally have months to years to get prepared for today's trade. There is no need to watch the news or act impulsively. This book is a thoughtful 'system' or systematic analysis of past patterns recreating themselves into the future. If you take the time to think about your charts you will greatly benefit from reading this simple book.

Chapter 1

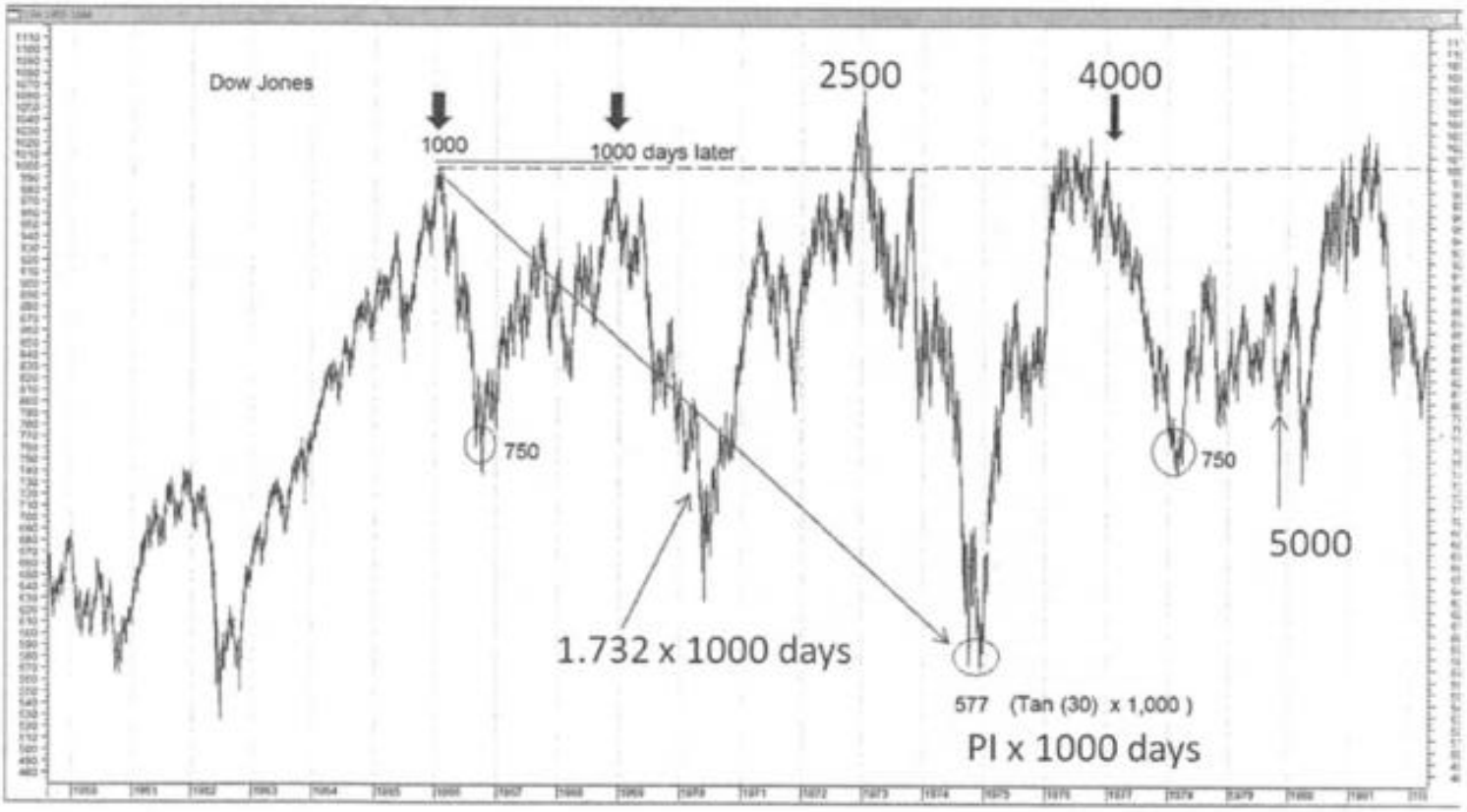
Time & Price Vectors

The primary discovery in all of technical analysis is that 'time' and 'price' are the same manifestation and are *interchangeable*. What I mean by this is that the psychological buying and selling of stocks or commodities is caused by time cycles and these time cycles are converted into prices. We observe this all the time and this can be easily be proven by taking say a $50 high and moving over 50 hours, days, weeks, or months and seeing harmonic turns in the stock price pattern. This implies that the cycle of 50 units of time is embedded in the $50 price. Below we see 66 day and 66 hour cycles from a high spinning out from a price of $66, and the subsequent low near $55 spinning out 55 time unit harmonics. Note the common cycle where 66 and 55 come together yields a 'crash gap' in the stock.



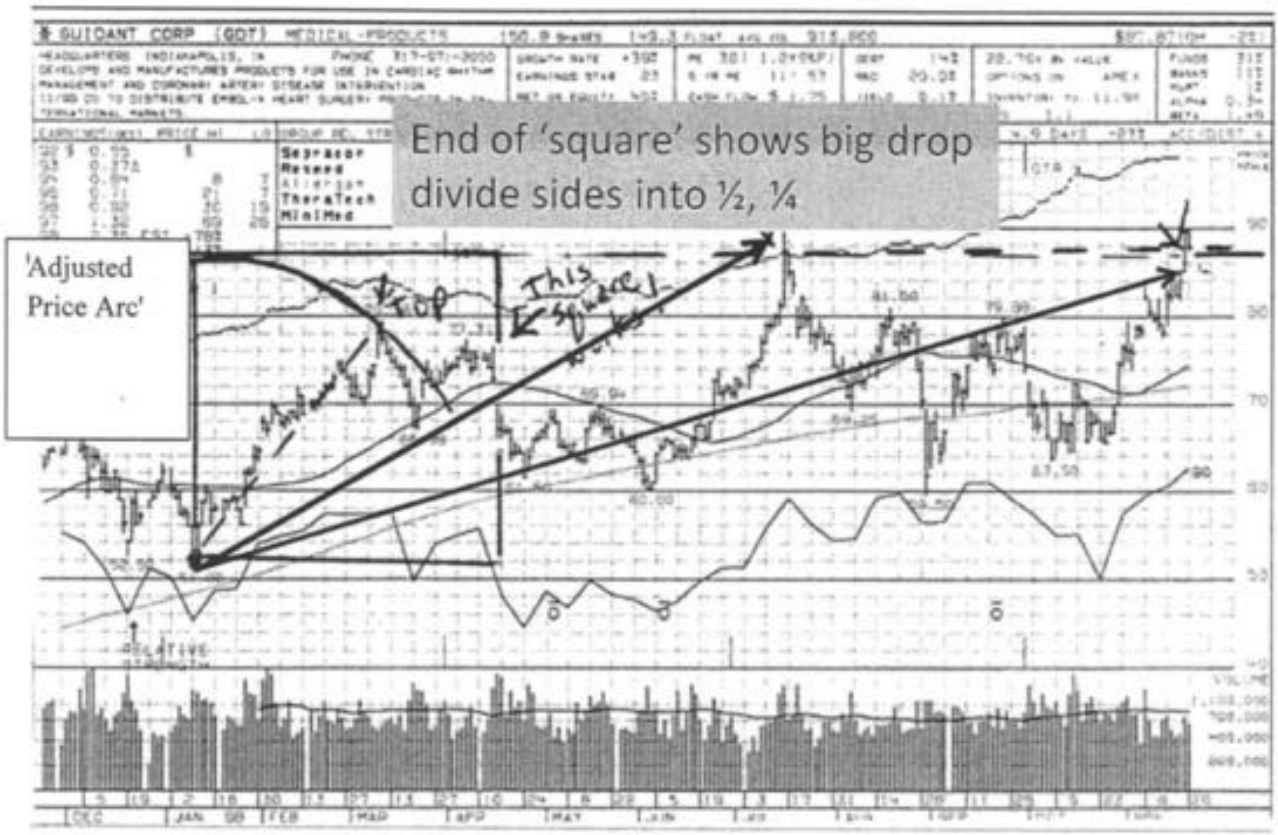
Usually the cycle length only shows up in an obvious fashion at the major highs and lows like the first top on the Dow Jones of 1000 back in 1966 revealing a time unit of 1000, and 1000 *days* later the Dow again topped and the *price* was back at 1000. From that historic high the historic low was in December 1974 at 570 and this 570 is the Tan (30) degrees

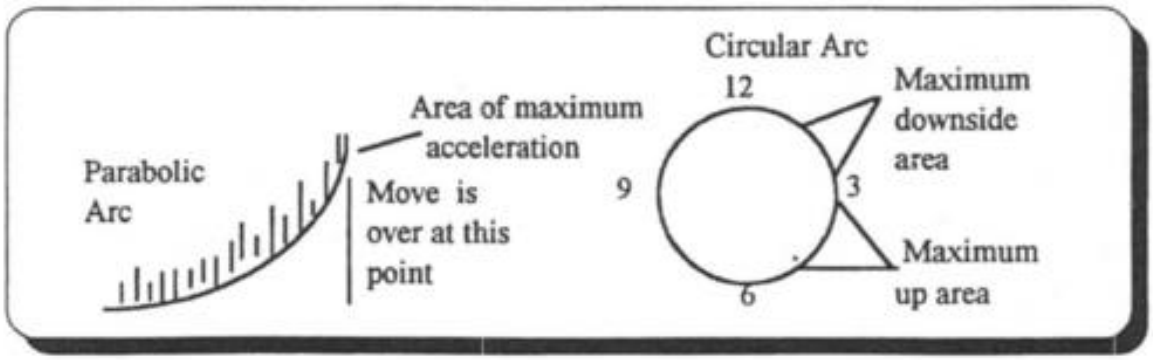
times 1000 and the date was approximately PI days later (3.14 x 1000). The 2007 top at 1576 times the Tan (30) degrees is 910 and that subtracted from the 1576 is exactly the low of 666. Also note the high of 1576 IS the Tan (30) i.e. 1576 = 1.576 or .576. Additionally the October 10, 2002 low of 768.50 with the decimal moved to 76.85 and converted to months (76.85 x 30.4375 average days = 2339) gives the exact next low of March 6, 2009 proving that time AND price are intrinsically connected.



The interchange of time and price and numbers lies at the core of W.D. Gann's methods and all the geometry I do in my own trading. Finding the 'seed' cycle, however, is not always so easy. The first place to start is to note that time and price energies are vectors. The price can advance 'straight up' or it can move forward and up at a rate of momentum. The 'angular' rate of advance in 'combined' time and price is what we usually call a trendline and it represents this combined force. Our job is to separate the time from the price components and try and find some cycle harmonics. This next chart shows the first step as drawing a 'circular arc' from the top of the price advance backwards and up to the 'straight up' maximum. This would give us the maximum possible price component if the time of the advance was almost instantaneous or zero time. We can then turn this maximum 'vertical' vector of price 'horizontal' (draw a 45 degree angle down to intersect low) and get the comparable time vector as if the price did not go up at all. In this way we can isolate the

combined time and price forces operating on the stock. Now we can stack the price boxes vertically up to get target prices or we can lay them sideways to get time cycles. We see in this chart that at the end of the 'square' we get a gap down so the time cycle is now validated.

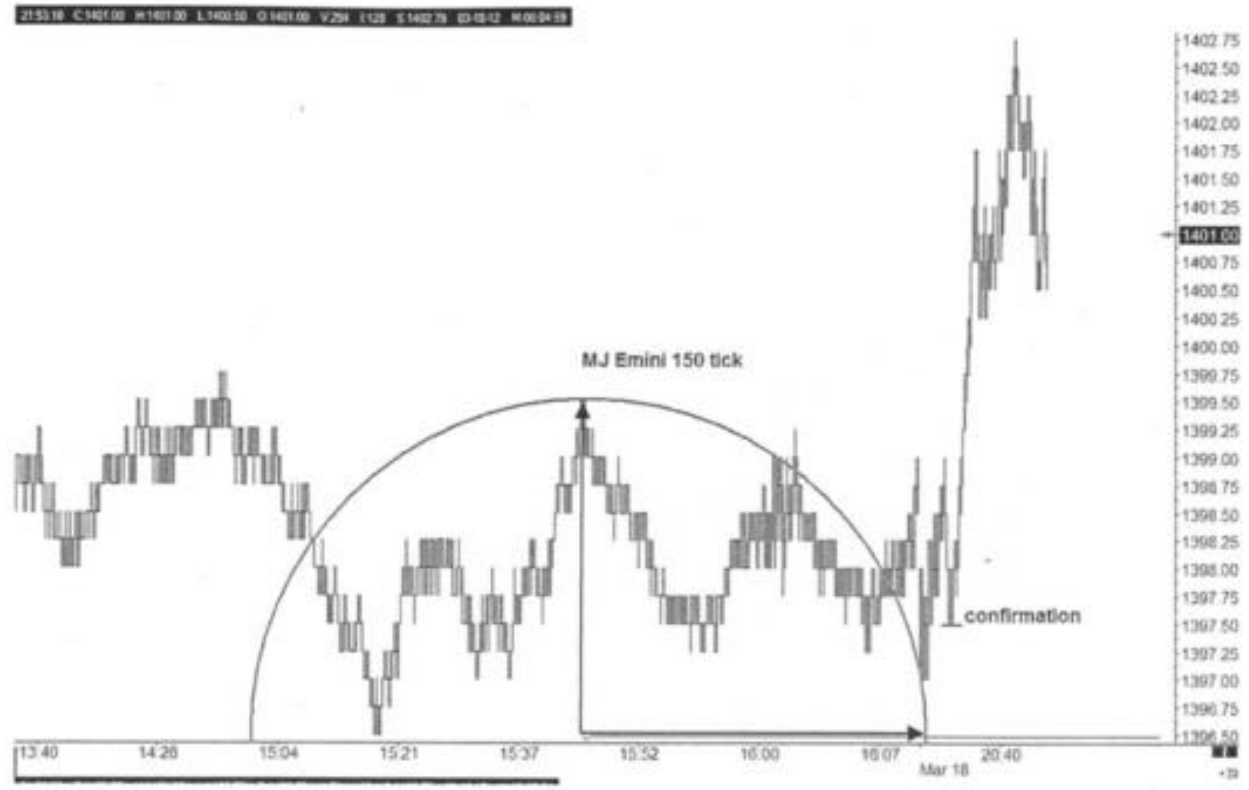




Arcs describe human emotional behavior in that as the arc goes parabolic any investors who *can* be invested *will* be invested. They cannot stand the extreme emotionalism of the vertical move and must commit. We find these points of maximum force on the clock analogy from 12 to 3 o'clock for the 'crash' peak and from 6 to 3 for the panic buying peak.

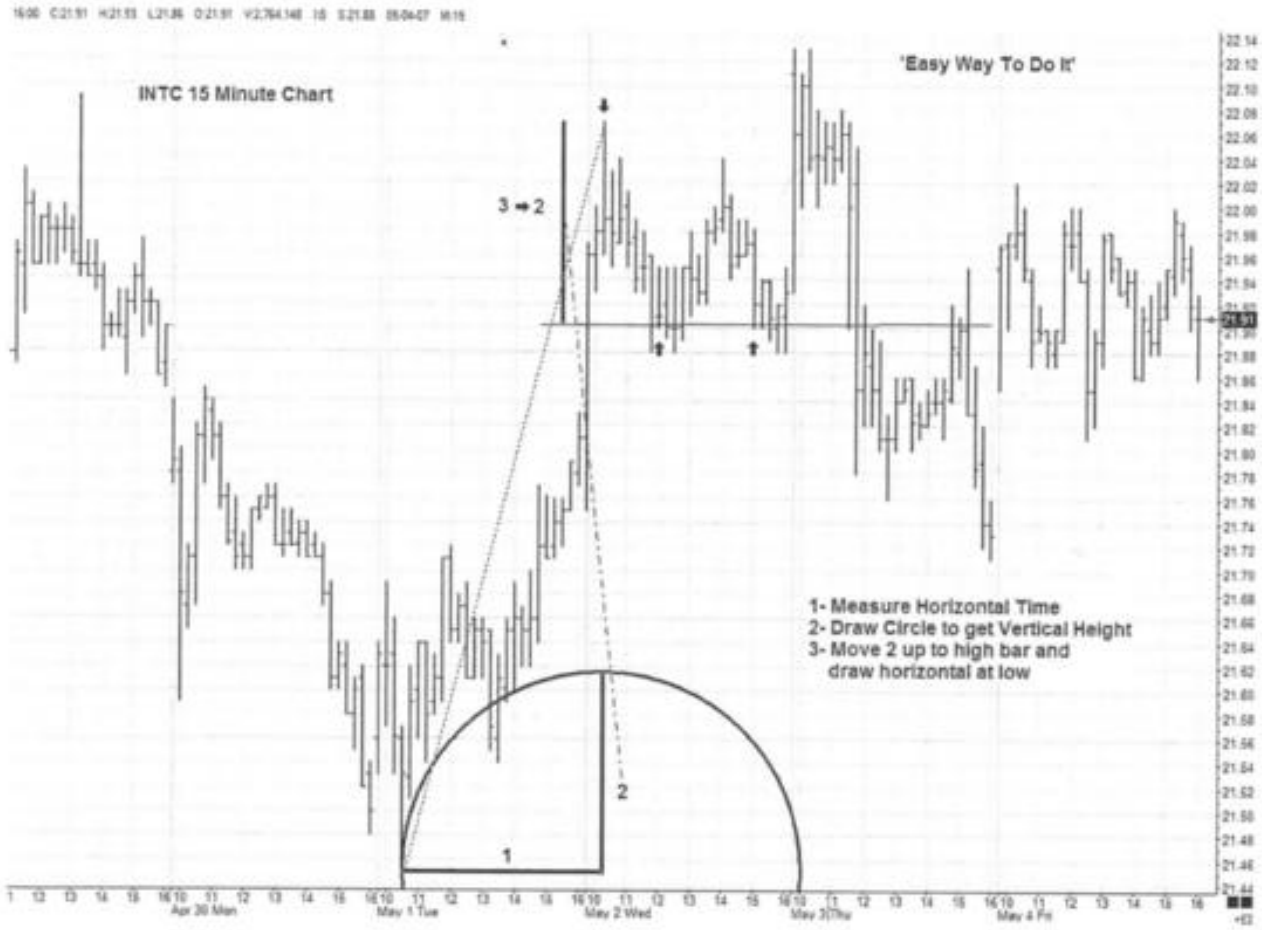
Arcs can be used as full circles of support and resistance. At each individual point on the circumference of an arc or circle the combined vector forces are identical. Once you 'escape' from an arc the vector strengths change and either time or price overpowers the other showing a new or accelerating trend. In most cases we observe the principle that **'as much as they go up, they must go sideways or down'** i.e. time and price equality. *This is the key to everything you need to learn.* Keep thinking this after every sentence in this book. This is shown here where we see a low to high arc defining the amount of the decline or consolidation, with the 'low' due at the end point of the arc. The arc swung up from the high back thru the low gives a support arc and it's end point defines the end of an advance phase.

In the chart below of a 1 min S&P E-mini future we see where we will use this principle to make trades. The amount of price advance in price MUST be equal to the amount of the time consolidation or decline, so if we can measure this precisely we can exactly time the point of equilibrium where a new trend will emerge. In this case the easy method is to draw a circle AT THE LEVEL OF THE STARTING LOW and UNDER THE HIGH. In this way our arc will go down by a radius dimension that will equal the advance vertical price radius.



This equality of vertical price and equal time balance is the key to all of Gann's methods. The only difficulty we will face is the scaling of the charts since that can lead to uneven radius segments if we just use circles. Computer graphics programs constantly rescale charts every few bars so these circles must be set to a fixed scale to be effective long term (note above 150 ticks to a bar, and below 144 ticks to a bar- much more on scaling in a later section).

In my *Basic Day Trading Techniques* book I introduced to the world the concept of the **TCB** or **Time Conversion Bar** in which I took the time of the advance and turned that into a price bar to measure equality points in the chart



In this chart the *time* duration of the advance becomes a 'DNA' bar to be hung from the top for a typical correction length in *price*. Here we take the time from the starting low to the high and use a circle to convert the horizontal time radius '1' to a vertical price equal distance '2'. We then attach this 'bar' to the high to find a balancing point for a correction low area. If you note on this chart, after the first top there was a second higher top at the point on the bottom circles' right hand side. If you now take that full diameter length of the time and hang that length vertically from the high you will get the next correction low (not drawn but prove it for yourself). This is a method of squaring a range, but the range is time in this case.

Below is a weekly chart with this same method and you can see it does an amazing job of identifying the time and price equilibrium points for market reversals.

Weekly charts can often give you a much better perspective about how big a correction you will need to balance the advance. The 'small misses' on this chart are accounted for by momentum and as we now see in the next exhibit, an angle drawn up thru these TCB's will account for this discrepancy.

Here we see another key solution to our problem in that we have now created a TCB ANGLE. Note how trendlines drawn thru these TCB points create unique support and resistance trendlines that the chart pattern responds to because they equally balance time and price in the exact proportion as the price data does. The TCB angles are totally unique to each chart because each time and price advance is unique.

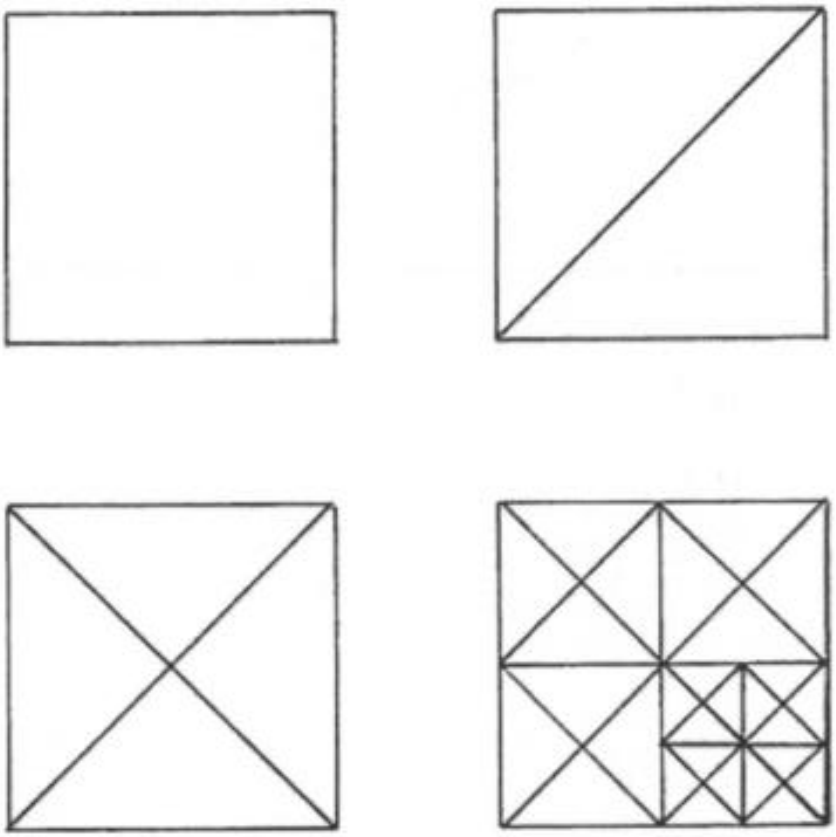
These TCB's above are created from the *time* element which is then converted to price. In my **Stock Cycles Forecast** newsletter for 2011, I used an adaptation of this principle to forecast the EXACT closing high date for the year and the week of the closing final low for the year (I was using a weekly chart-but I personally knew the exact day from a method shown in the following paragraphs). I used the full TCB circle based on *price* length and converted it to time to make these forecasts. Below we see the chart the forecast was based on, and the April 29th end of the vertical maximum part of the circle.

To follow this analysis we start at the final bottom low and look to the very last swing down going into that low. That high to low vector is swung sideways (3 o'clock) to give us the first big top of April 26th 2010, AND it also caught the high price with the top of that same circle. From THAT high we now follow to the next correction low and swing up another price arc to get our May 13th top. Now we go back to the next to last swing *prior* to the ultimate low in March 2009 and that 'big' price drop is swung up to give us the April 29th closing high prediction.

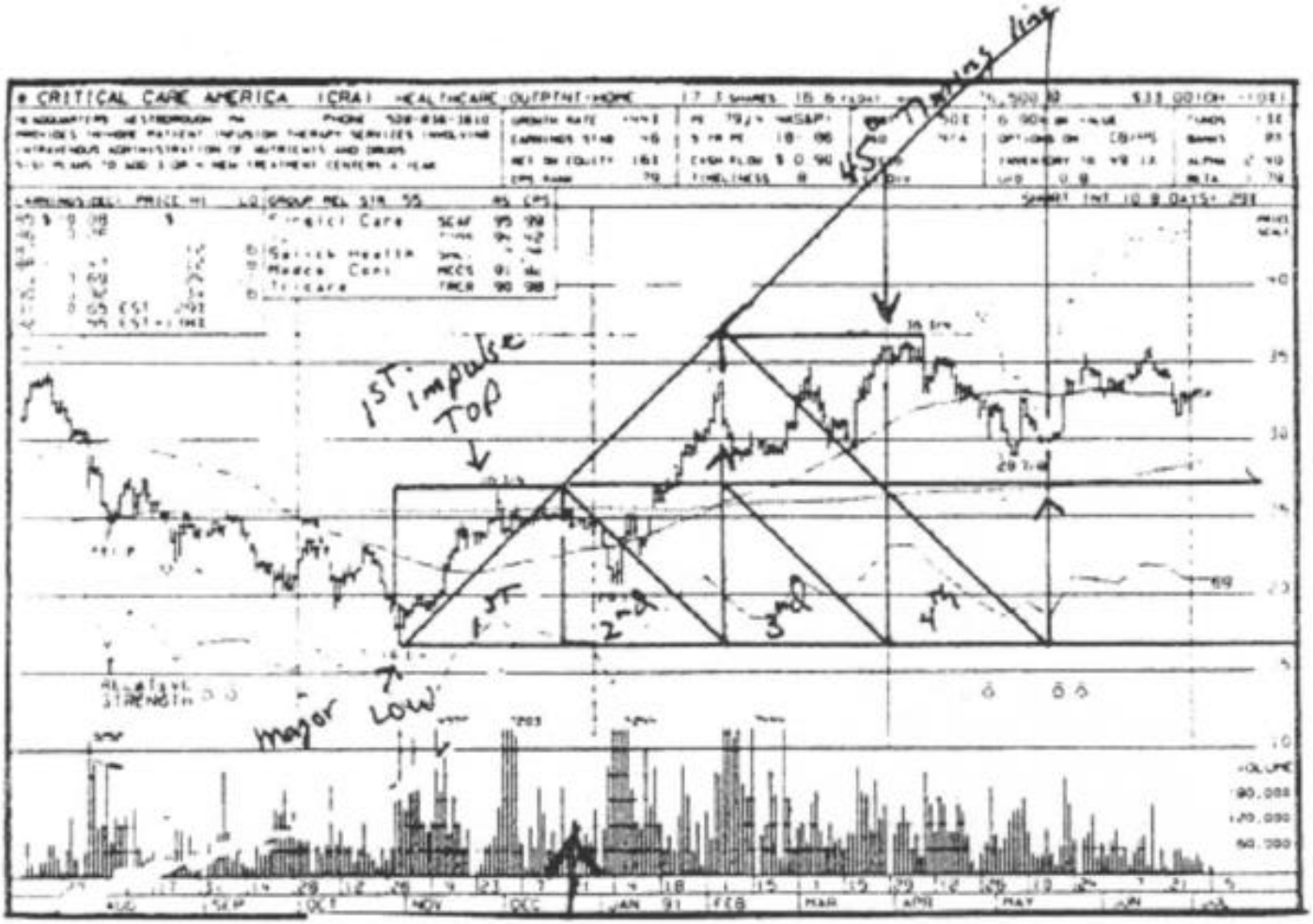
The above TCB analysis is derived from the principle that time and price are intrinsically linked and the vector ray or trendline incorporates this combined energy. The circumference of a circle includes all these equal points of force and the radius is the measurement of the 100% factor either straight up or sideways. W.D. Gann referred to these balance points as time and price 'squared' since the horizontal and vertical distance were equal at a market turn and could be visualized as a 'box'. Below are some boxes that represent these points of force and we note that the primary '1 to 1' correspondence is the 45 degree diagonal of a square and we can bisect these squares to get smaller internal squares with 'nodal' points of force. This is where our typical 50% retracement or eighths or quarter retracements come from- these nodal points of force. Prices will try and gravitate to these areas. The problem again is one of scaling and if you don't have a scaled chart then these 'boxes' become

distorted rectangles but can still be used since the diagonal of a distorted rectangle is still a 45 degree representation on that particular chart scale.

TIME AND PRICE SQUARES



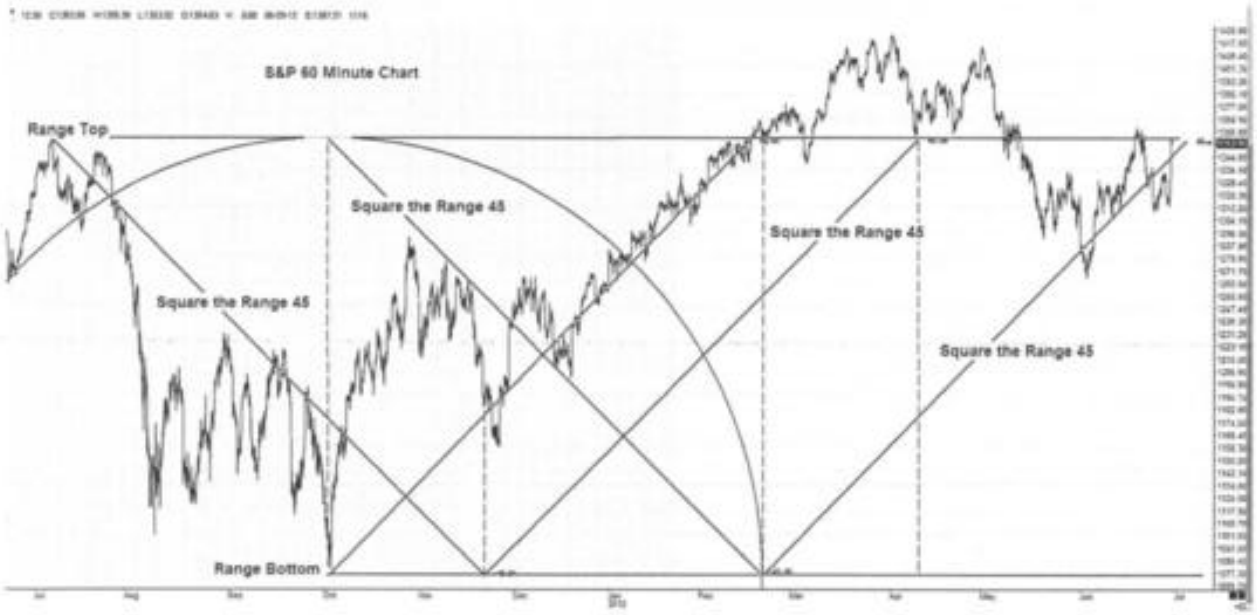
A very quick analysis can always be made with an ascending 45 degree angle and placing the end of a box at a market top to find harmonics and levels like the following picture shows. This is just a 45 degree up and down 'tic tac' to create the same size boxes based on the chart pattern prices. Note this method is *not* the same as the arc from the top swung backwards and as such will not be as accurate, but none the less will give a quick analysis for estimating turns.



This idea of a 45 degree angle balancing the time and the price vector energy, can also be referred to as a 'timing line' when used in this manner since it is not a trendline but a time and price equilibrium line and when an angle started from a origin low reached the top price it 'squares out' the range as the timing angle is then up and over the same amount as the price, and an equilibrium point is reached so a change in trend is indicated. All cyclic analysis has as its core idea, the equilibrium of time and price on different time frames so you can keep track of these on an hourly chart, daily, weekly or monthly by using a simple timing angle of 45 degrees to intersect highs and lows (this applies to scaled charts- 45's will differ, and we'll cover that later). This intersection of highs and lows is 'Squaring the Range' whereas an angle started from a high and going all the way down to 'zero' price would be a 'square of the high', or an angle going down from a low to the zero price would 'square a low'. As long as a market or stock stays in a trading range you just 'zig zag' up and down this range looking at each end point to find the possible end of the consolidation zone. On this above chart, we see major market turns at the end of each zig zag range end point. These timing ranges are cycles that we will trade.

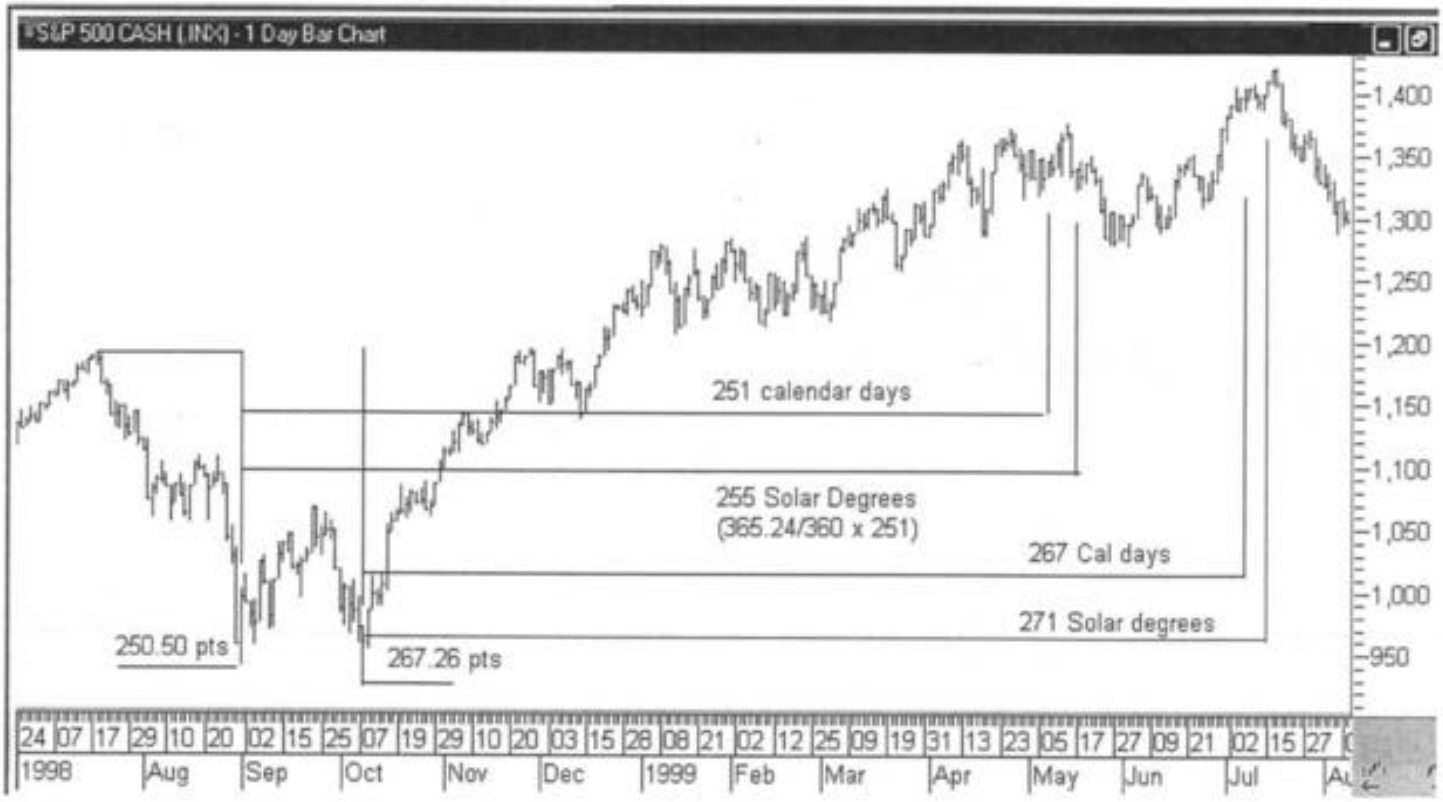
Chapter 2

Square The Range



This chart is a good study in 'Square the Range' ideas. It's a good study because it shows the technique and it also shows why 99.9% of all Gann students lose money or don't understand the principles. The 'problem' here is scaling. The diagonals are true 45 degree timing lines and a few close 'hits' are seen but nothing to write home about. The Arc by the way is only put on from the October low to the prior top level (centered at the low) to demonstrate to you that a 45 degree angle coming down from that high is the same as an arc radius and we can see both end points reach the bottom at the same time (late Feb. 2012). This means you can take any circle and use the angle between any of the Cardinal Points (N.S.E.W.) and a line between each 90 degree segment will be 45 degrees. That way you can make parallels to these slopes and move them around the chart to apply 45's to other points and 'square' smaller segments and you can also draw a 45 degree angle if your software doesn't tell you degrees but you can draw a circle. The first thing to note here is the inappropriate use of the first 45 down from the top at the left to square the range. It does give a close hit with the secondary low but remember our principle that the amount of the drop in price must be squared and the full amount of the vertical price drop from the first top to the low is measured by the angle starting at the LOW and going up to the top. Then you will have a time period equal to the drop. While the first angle down did give that same time period and did result in a secondary low, most of the time was used up BEFORE the bottom was hit so the more appropriate use is from a low going back up to a top for a square

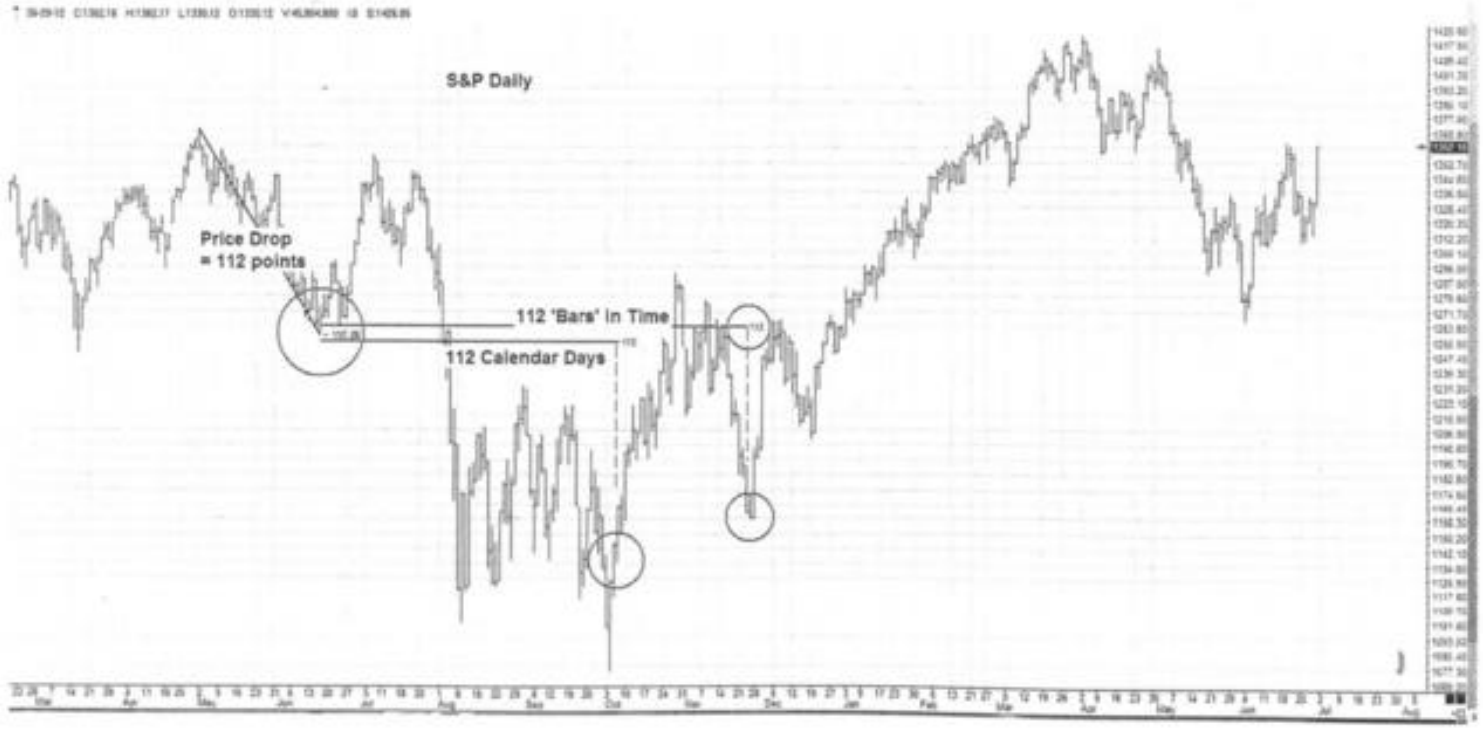
out OR starting at a top level but starting above the low and coming down like the arc did in this example. Remember we must have a PRICE change complete (from top to bottom), and then we need a TIME duration to equalize that drop. In this case if we look closely we see that the full advance from the October 4th low to the range top (where the arc hits bottom) encompasses 80+% of the move. At the point of the top intersection, the chart pattern actually started an up and down swinging distribution pattern prior to the breakdown whose midpoint of the top was the secondary low 45 degree angle, coming up to the top. Also of note on this chart is the 'midpoint' where the 45's cross and if you follow that intersection in December 2011 to the right and left you will see the support and resistance nodes of this square.



This exhibit from my *Secret Science* book shows the square the range principle in that a price drop of 250 and then 267 S&P points (range), led to counterbalancing up moves of those same amounts in calendar days or solar degrees which resulted in tops. This also explains why bear markets and financial panics are often short term compared to bull moves. The prior bull move takes a few years of time 'creeping up', such as 365 to 900 days duration while a sharp drop of those many points in a panic will balance out that time and create a bottom in perhaps just a few weeks or months.

Now let's see some of these simpler and more exact methods of doing square outs. These always result in a 'one to one' correspondence of time and price so by definition we must get a turn.

Here we have a 112 price unit drop for the initial range, and a time unit of 112 trading chart 'bars' which almost perfectly catches the secondary low. But why didn't it catch the primary low?



Now we see why. The primary low was a simple time factor of calendar days so the 112 point drop was a true one to one correspondence of one point to one calendar day. The next exhibit shows a number of these square outs alternating between 'bar's and calendar days but this type of analysis can be done on any time frame like 1 minute, or 15 minutes, 60 minutes, Daily, Weekly or Monthly. W.D. Gann made up numerous translation tables like the 'Square of Nine' or 'Square of 24', or 'Hexagon Chart' and many others, in an attempt to find unit price to time unit translation schemes that would square out. Once you found one for the stock or commodity you were trading it would usually be good for a lifetime.

We can see above that this is a very powerful technique and VERY PRECISE. One could make a great trading system from this alone and especially suited for option trading since the turns are almost never off by more than one bar. If you do these enough you will also find that many of these swings repeat the same type of 'measured move' so once you get the turn you have a good idea of how far it will run both in time and price amount. For example if we take the big high of May 2, 2011 at approximately 1371 and the final low on October 4, 2011 near 1075, the price drop is 296 so 296 calendar days later we will get a turn (July 26, 2012- probable big top phase as it defines the 'rally' phase from the price DROP low). A simple conversion of calendar days to trading bars is about 1.44 (365 /254) so the trading bar square out will be longer or 296 x 1.44 or about 426 calendar days (December 3, 2012). As your forecast progresses you want to 'adjust' it since often the price drop range is not accurate. That may be due to the 'running of the stops' and a big down bar on the last day, or a big emotional spike bar up on the high day. You might want to consider using closing prices rather than extreme ranges. For example in the above example of 296 price points of range, the closing ranges would yield only 237 points or some 59 days or bars difference.

Now this would be unacceptable for a trading system but there are solutions. The first is you don't have to trade if you think you have questionable price data, but you watch and observe the tape for the turn to be verified, then you trade. The second and best approach is to divide the time period up into quarters or thirds and see if they have 'hit' so far. If your cycle is 296, what happened at day 148 (1/2)? In this case it was February 29, 2012 an exact top, so the 296 will probably be valid.

Below is a daily chart of Amazon which is a great trading stock and as you can see each of the swings results in a great trade at the predicted turn. These are all 'bars' as time units but

if I put the calendar days on it would work just as well. Again, remember the primary principle we are dealing with is that change can only come when the price differential is equal to the time passage. Each advance needs a time decline or consolidation, and each decline needs a time advance or consolidation, before the next move can began.

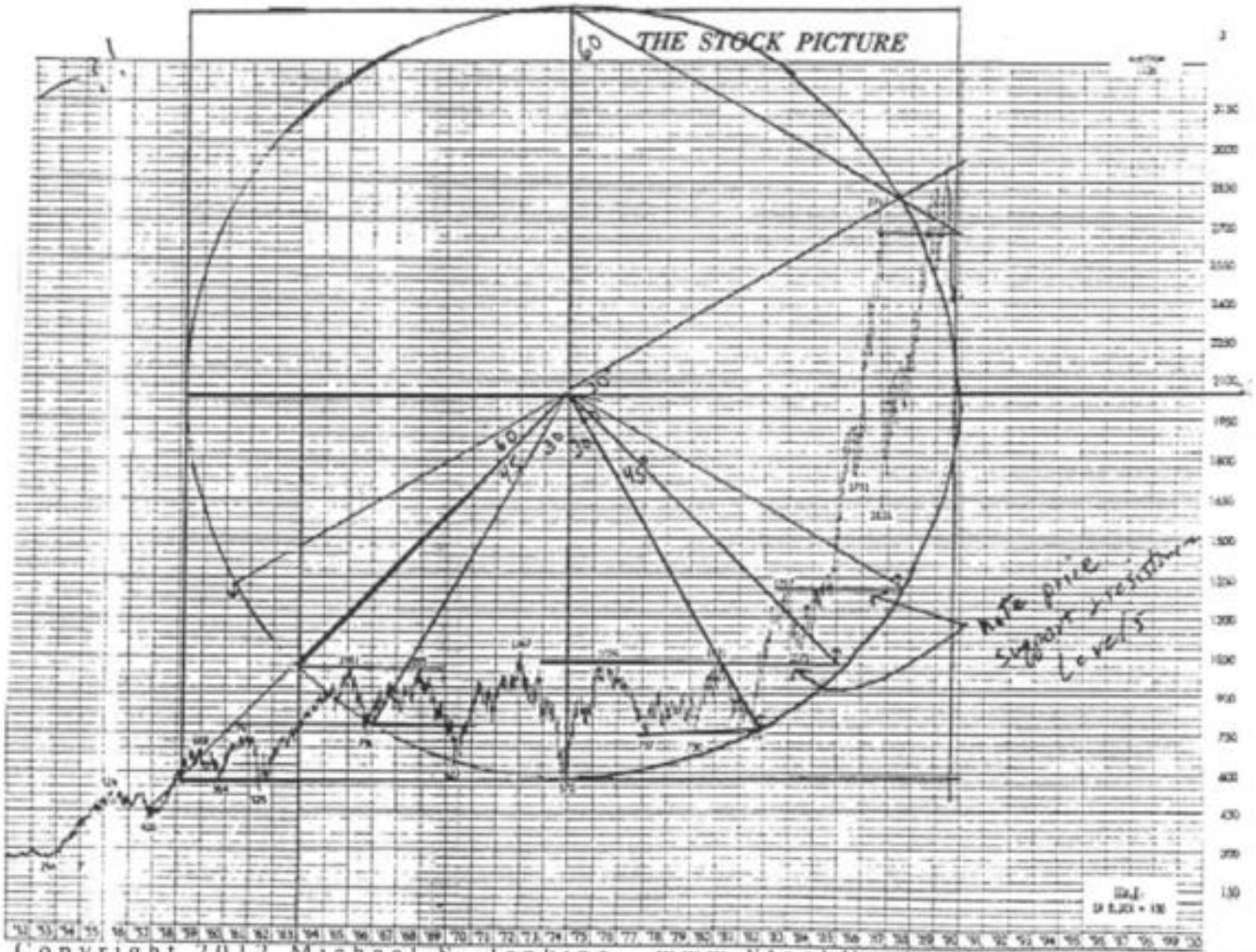
Most of the above are '1 to 1' price and time in either bars or days but most times the scaling factor is different and may require a small amount of adjusting the scale to find the right fit. Usually you can take the rise in price and find the 'obvious' low after that top and see if there is an obvious ratio like 2 to 1 or 4 to 1 or a decimal point move like 10 to one of price change to time change in bars or days. A simple example of this is seen in this next chart of Apple which shows a potential fit of ten price units to one time unit. You would keep doing this for all the little swing movements to see if it continued and if so probably adapt it as a permanent conversion unit for the next several months to years.

Many times you would also find that the 1 to 1 units always work so you would keep tract of them but the small swings would be 'mapped' out first with the 10 to 1 conversions. Also remember that there are many small 'swings' to a larger 'wave' in a long term time frame so also do this analysis on the very big swings from an intermediate swing low to high (like six to nine month swings).

Chapter 3

360 Degree Time and Price

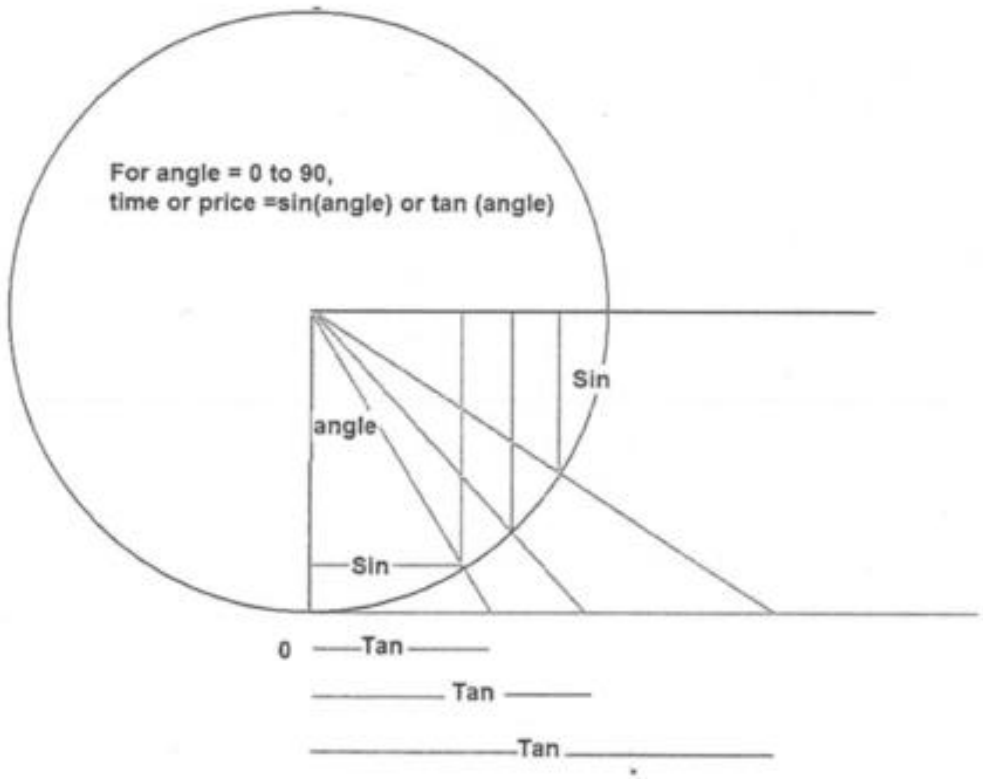
Before we can advance to the deeper understandings of time and price squaring we must go back to the basics of the circle and review how angles within a circle create time and space or price. The below chart is my favorite of all time and if you're read my other books you probably have seen it a number of times. Now we will get to break it down so we can apply its principles. The first thing about circles is that you need only 3 points to create a circle and in this chart the three points were the lows in 1966, 1970 and 1974. From these points the origin center of the circle was found and it's corresponding radius and circumference. Next I drew standard 30, 45, and 60 degree angles down from the center. What we now realize is truly astounding in that ALL the future points past 1974 WERE KNOWN IN ADVANCE! It did not matter who was President or what the Federal Reserve did or even what the economy did, the future price structure of the Dow Jones followed the pre-calculated nodes on this circle. As each angle down from the center intersected the circumference, a new bull up leg started at that point. The horizontal plane to that



intersecting circumference point created the future bull and bear market trading zones. Those 'horizontal' support and resistance lines look like Sines and Tangents to our 30, 45, and 60 degree angles so we need to first review some Trigonometry.

The exhibit that follows shows the typical circle and a few angles coming down from the center to represent 'time' which is always horizontal on our price charts, and the angles viewed going to the right represent 'price' or the vertical component. The angles from the center of a circle form triangles with the 'end side' either a Sin or a Tangent. The Sin length is measured from within the inside of the circle and the tangent from the outside tangential point. The three tangent lines shown below the circle are really just that one line at the bottom connected to the circumference but the different angles had differing lengths so I showed them below the drawing.

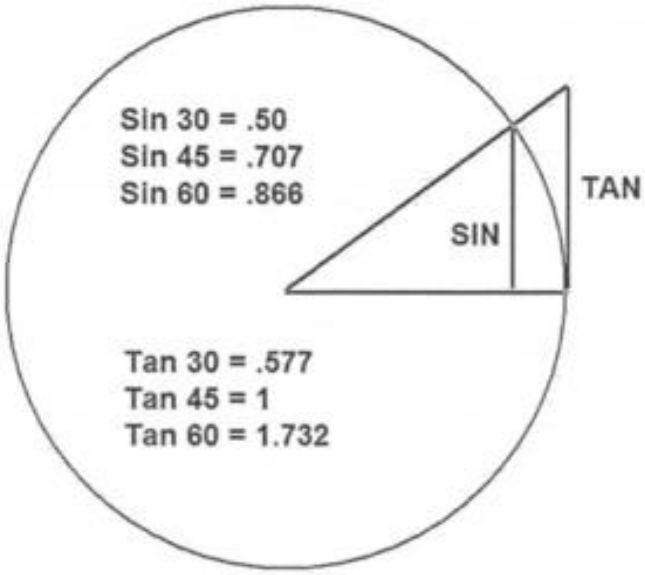
Angles Up or Down Create Time & Price



This next picture below shows another representation along with the typical ratios of the standard angles 30, 45, and 60 and their sin and tangent ratios. These ratios are quite familiar to traders as popular retracement levels and since they are fundamental truths, if we

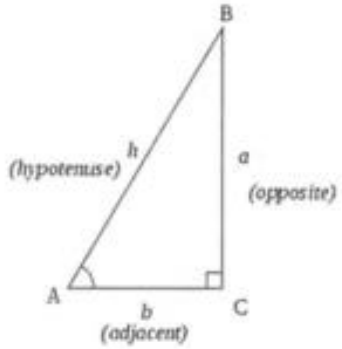
apply them to the proper starting point we can make some great market predictions.

The Circle Creates Support and Resistance in Time & Price



Tan 30 Deg Create Time & Price Targets

This chart from the 1998 October low when the S&P hit 923.32 as a PRICE, then uses the Tan (30) times that price to get the TIME factor for the up move. That factor of Tan (30) x 923.32 = 533 as days and *exactly* 533 days later was the all time high on March 24, 2000, and the exact end of the bull market.

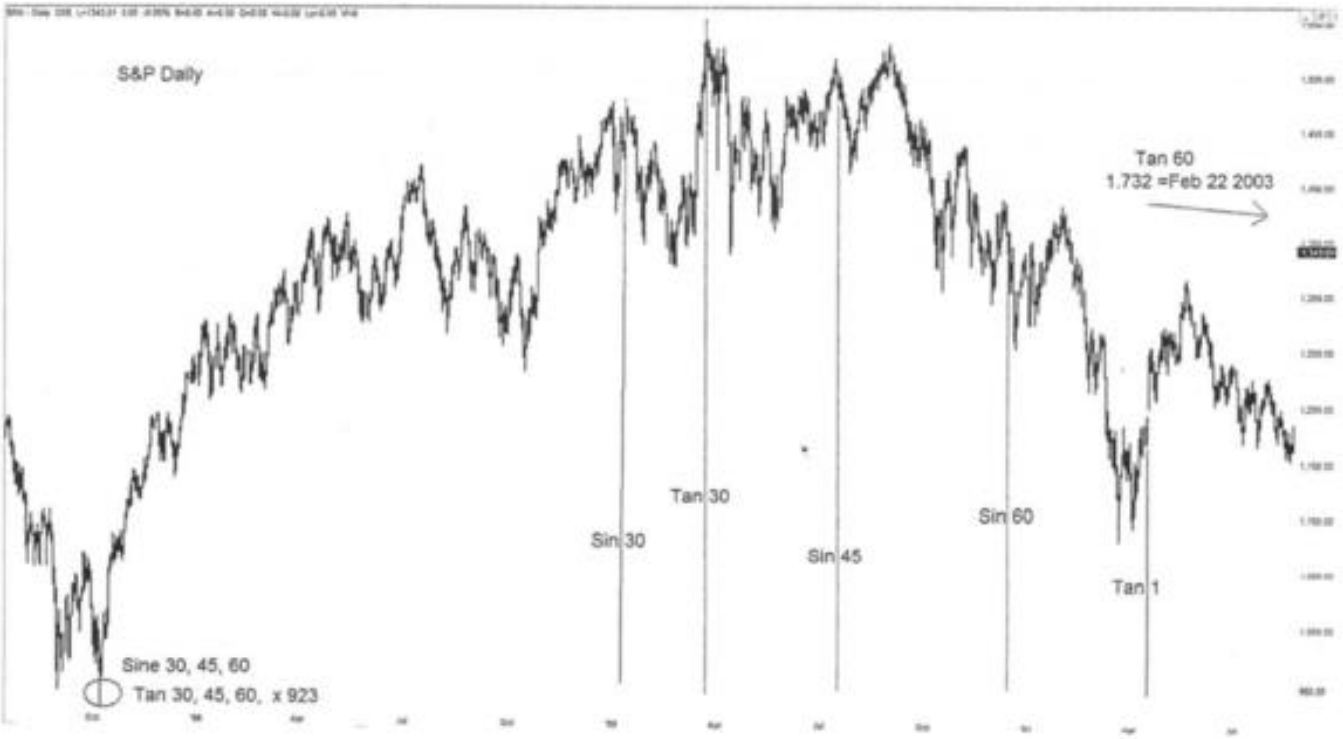


$$\tan A = \frac{\text{opposite}}{\text{adjacent}} = \frac{a}{b}$$

These Trig figures may help you visualize the 'vertical' PRICE and the horizontal TIME components and the relationships to Tan (30) and its inverse Tan (60).

Continuing along this line of reasoning that the price low spins out trigonometric functions of price and time and that these alternate, we can apply the various trig ratios and get the following results:

Circle Segments as Time/Price



These functions applied to prices will usually alternate between time and price distances but sometimes you can get a price to price relationship as previously noted how the October 11, 2007 all time high of 1576 calculated out to the exact 666 low in March 6, 2009. This is shown in the next exhibit as a differential of the Tan (30) of the top prices, subtracted from the top.

You may be wondering by now why Tan (30)? They all work (degrees 1- 90) but most numbers in geometry spin out from the primary roots of the square roots of 2, 3, and 5, and a few Fibonacci ratios and PI. The Tan (30) is 0.577 which is the multiplicative inverse, or reciprocal of the square root of three which is 1.732, i.e. 1 / 1.732 = 0.577. Many times the square root of three is the maximum expansion of an impulse series and those who have examined my 'box' method from prior courses have used this series to find culmination end points. Now if you apply the Tan (45) you of course get the ratio of '1' so this is your common price = time equation. The Tan (60) is the full square root of three or 1.732 so this is why we see these most often. Of course all principles must work on any time frame and while the 30, 45, and 60 degree segments are the main geometric fulcrums, the principle will work on each and every degree. If you have a math or computer programming mind you will quickly see how you use a simple formula like:

For x = 1 to 90 (degrees of quadrant circle)

Sin (x) times Price = calendar days or 'bars' (you can also use 'Tan' instead of 'Sin').

For example Sin (1) =0.0174524 x 923.32 =16.11 days and if you go back to that October 8, 1998 low of 923.32 and count 16 days you will get the very first top to the move. Rather than give you a giant table of these 90 degrees, I'll make the point with the 'strong' harmonics of every 15 degrees:

Sin (15) =239 calendar days = June 4, 1999 (i.e. Sin (15) * 923.32), this was a major low.

Sin (30) =462 = Jan 13, 2000 - first 'Final' top in S&P.

Sin (45) =653 = July 22, 2000- missed top by 4 days.

Sin (60) =800 = December 16, 2000- 4 days after top, beginning of breakdown.

Sin (75) = 892= March 18, 2001-the major low for six months was 4 days later, March 22.

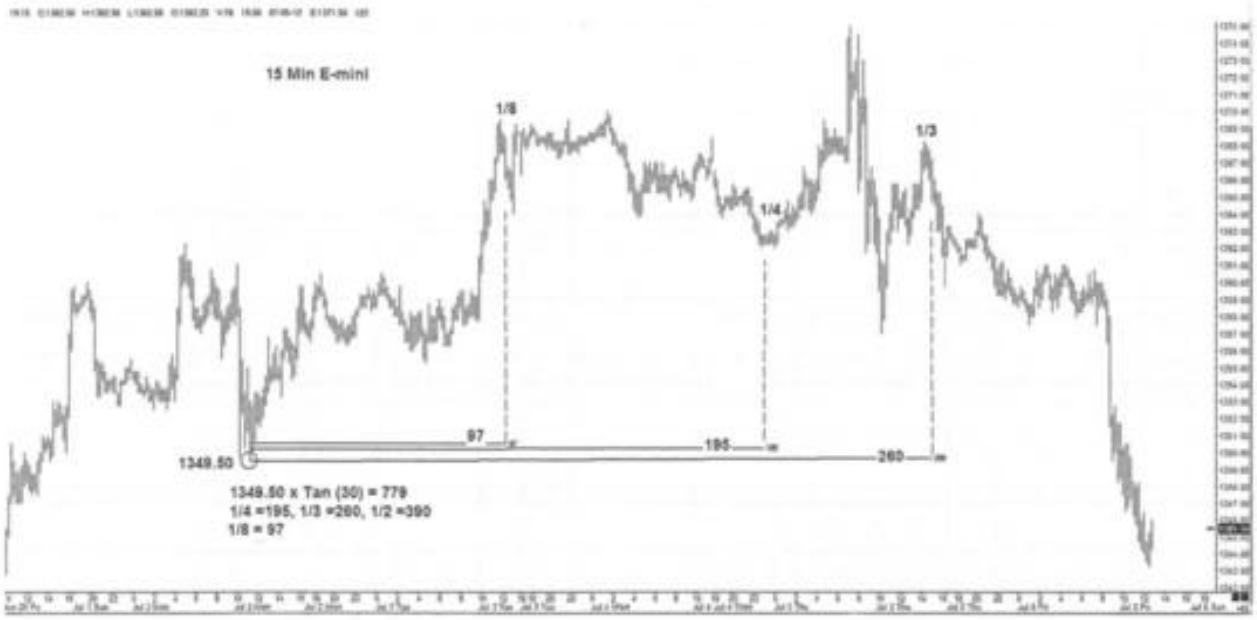
Sin (90) = 923 = April 18, 2001- 2nd leg blastoff 'gap' from March 22, low.

These are all calendar days but if you check the trading bars you will see other significant hits.

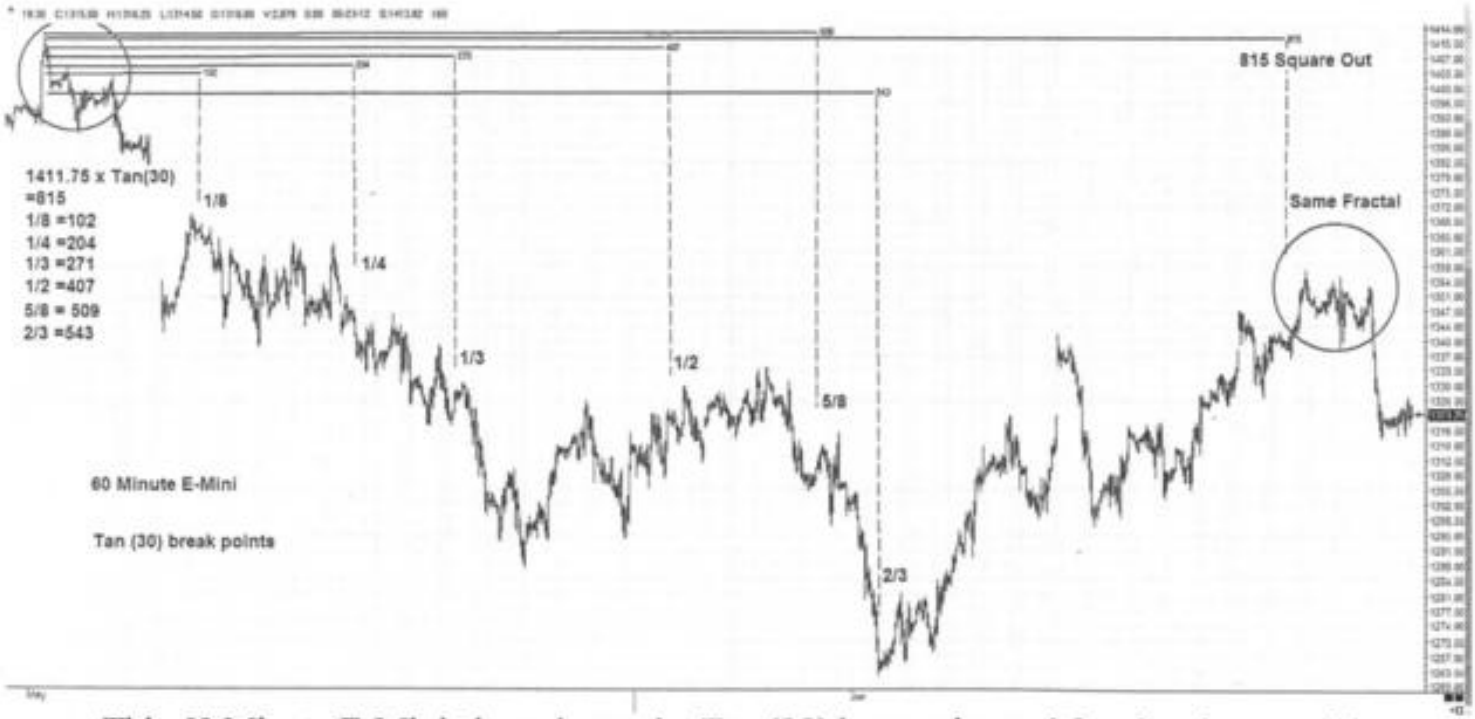
By the way, I have said that you usually 'alternate' time and price amounts, well if you take the October 8, 1998 *PRICE* of 923 and after that calculates the March 24, 2000 high with the Tan (30)* 923 =533 days, you then take the 923 Price and pretend it is a *TIME* (923 days) and add it to the March 24, 2000 top and you get the October 3, 2002 bear market low! (Oct 3, vs. actual Oct 10th).

While the above 15 degree sines are all significant 'hits' from only ONE time and price origin, you may wonder why a few are off by a day or four. This is because the 923.32 price we are using may not be exact. Most panicky lows have 'slippage' and stops being run with little or no volume of transactions taking place at those prices. To be safe you usually take the extreme low *and* the close. Note that we are basically taking a number like 923 (low) and 959 (close) and if we multiply them with our Sines or Tangents we get a range of target dates (like a 36 day range in this example). This is still good for long term forecasts in searching for a low or top but it's basically just a warning to pay attention. When we get to the forecast time zone then we can switch to the more exact 'square the range' with price drops equal to time counts as shown in the previous sections. This should get us to within one day of the exact high or low. If you examine my archives section of my website **www.StockCyclesForecast.com** for old newsletters you will see that I caught almost every

bull and bear market beginning and ending date for the last 25 years within a day or two in most cases and once or twice within a week to 10 days. Predicting where these events occur is not as hard as you think. Having the courage to look for the reversal bar and make the trade when every talking head on TV is distracting you is the hard thing to do.



Here's a 5 minute E-mini chart with the Tan (30) applied to a low and breaking that length up into eighths, quarters and thirds in terms of trading bars.



This 60 Minute E-Mini chart shows the Tan (30) harmonics and fractional parts of the whole 815 distance in bars. Note at the end of 815 bars the fractal top pattern from the origin repeats again.

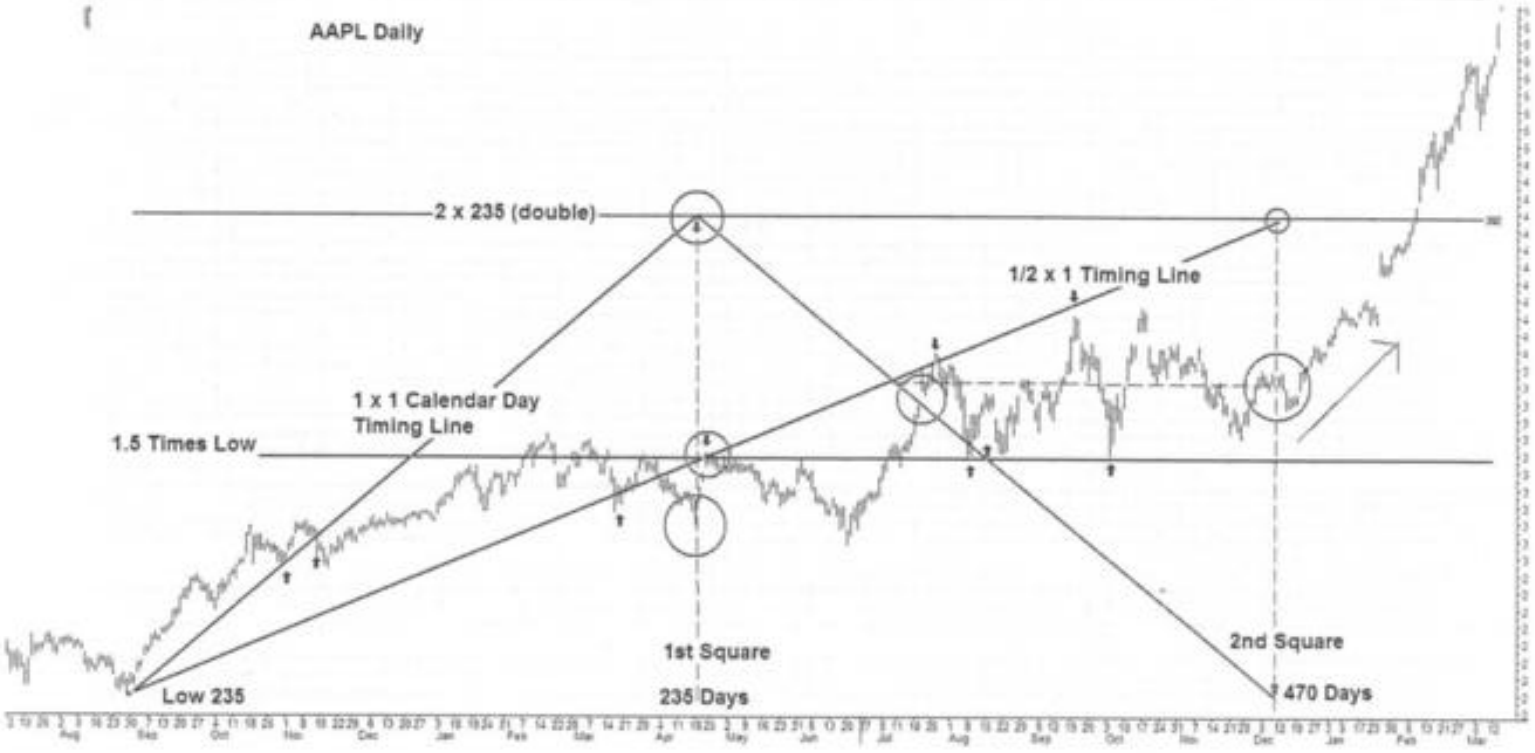
It has not been my intention here to teach trigonometry and those well educated will note that in a circle of 360 degrees each 90 degree quadrant can have a negative or positive angle. This will often give you strange results like Tan (923) =0.42 but Tan (985)= 11.43. We must try other methods in these cases or reduce the whole numbers to numbers within 360 i.e. 985 -360 -360 =265 and reduce this to within 90 degree quadrants, or use Sines. Usually a geometric construction using a circle on the chart can replace all the math of the Sin and Tan functions to simple straight lines.

This next chart shows the Tan (30) in time 'bars' rather than calendar days. This is the Amazon chart shown previously but I have now added three 'Tan (30) in Bars' calculations from a top, bottom, and top, and you can see they picked up the correct price reversal pivots perfectly.

Chapter 4

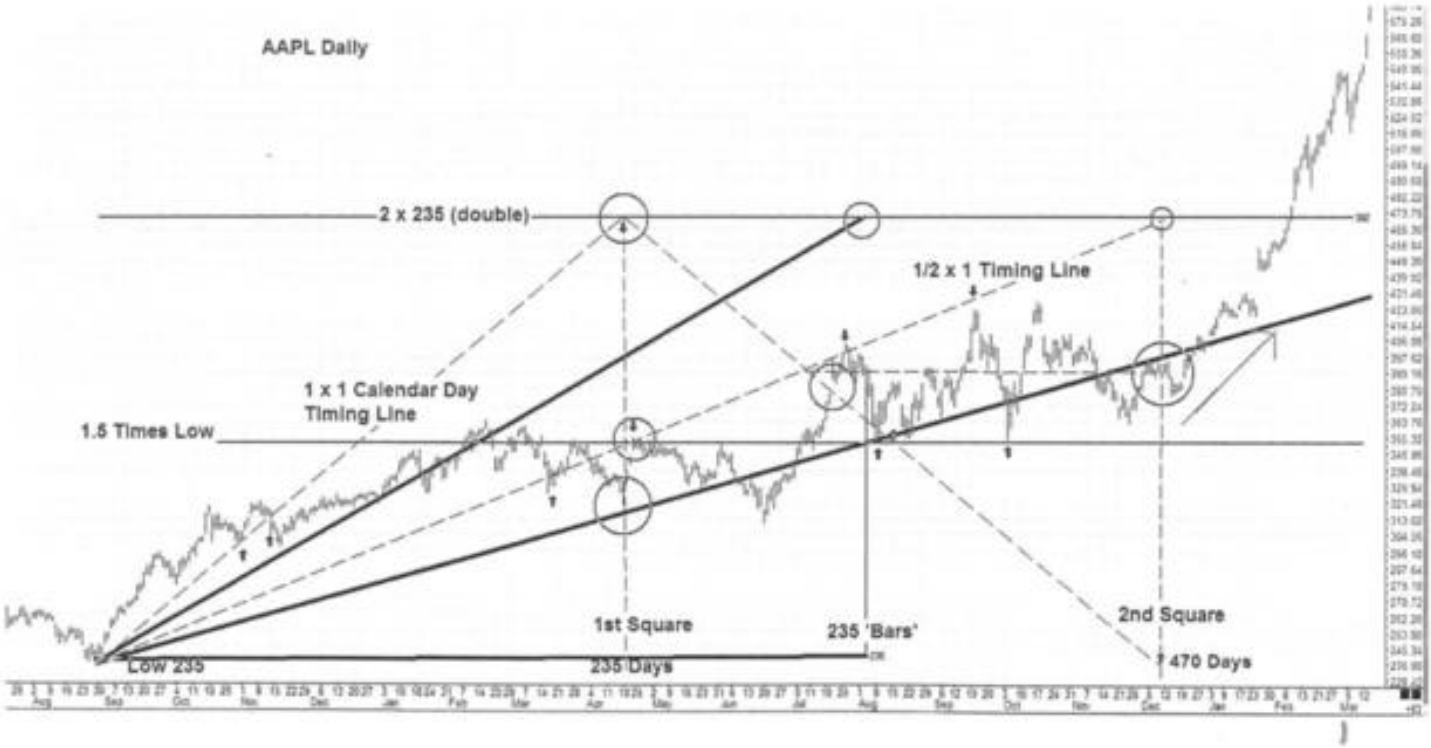
Ratio Timing Line Square Outs

The Idea of 'time & price' squared or equal, assumes a perfect balance. This is what you would have when a stock's price is resting on a trendline provided that the trendline is a true 45 degree slope or a one unit of time and one unit of price. When the stock touches such a trendline the time duration is exactly equal to the price change so the balance is perfect and we then see the stock either bounce off the trendline (a kind of change in trend- acceleration of existing trend) or it breaks thru the trendline and a reversal trend is started. Since stocks bounce off trendlines all the time but don't reverse the market there must be something else at work to create the ONE time the stock hits the trendline and breaks thru it. If you have understood the prior paragraphs up to now you will instantly know the solution. Since the 45 degree trendline is a '1 to 1' relationship, which means that a stock with a $30 low will have a trendline at 31 one day later and 37 seven days later. If the stock touches the trendline now it will not reverse because it needs to square the 'full' low of $30, so it must touch the trendline 30 days later when the 'final' low is squared to the time of 30 days or time units. This is a full 'Square the Low' event but if the recent past high was $50 going down to $30 for the low, then we could 'Square the Range' (i.e.20) when our up trendline from $30 crosses the $50 price. Note that this is a 'timing line' and not really a trendline (it could be but usually isn't). A timing line just goes up keeping track of time in an exact proportion like 1 to 1 or 2 to 1 or 4 to 1 or even a Fibonacci ratio like 1.618 to 1. When these timing lines square a high, low, or range, you can still get tradable turns in the market but usually the final highs and lows to start and end major bull and bear moves are 1 to1 angles on some time frame. Most traders use one point per calendar day or one point per trading bar and these usually work but the big breakpoints in patterns often form near Fibonacci ratios like .382 or .618, or 1.618. These timing angles going up from lows or down from highs will intersect the current price level at Fibonacci relationships and often give bigger turns in the short run but don't always change the major trend. Many times its easier with a chart to just draw a straight line that keeps going as a timing line rather than zig zag up and down and perhaps lose some accuracy each time you turn the angle 45 degrees. The alternative is to draw a continuous line and look for doubling levels in price so a $50 stock will see a turn when a timing line reaches $100 or $150, or $200 just as it would if it went from $50 to 'zero' then back to $50, then back to zero.



This daily chart of Apple shows a one point per calendar day timing line from a low of $235 and a lower 1/2 point per day timing line. Early in the advance the timing line became a trendline as the stock touched and bounced off and then broke thru this angle. In both cases the main long term up trend did not change from up to down. At the timing line 'double' or square out of 235 days from a $235 price there was a low in the market but the price was not ON the primary 1 x 1 trendline so a major change from the origin point trend was not seen, but the 1/2 harmonic line touched the price very near that exact date and hit the 1.5 price resistance level from the low, causing a two month decline but not a major bear market. Likewise on the way down from the theoretical double top line (zig zag timing line) the price gaped thru and then bounced off the angle but the long term trend did not change. Even the intersection of the $235 low for the 2nd square just gave another reiteration of the long term uptrend. These types of harmonic timing turns can give great trades but rarely change the market from a bull to a bear long term trend. Note the intersection of the 1 x 1 and 1/2 x 1 angles gave rise to a horizontal support and resistance line (dotted). It is important to note that THIS intersection is not just 1/2 of the price range since the intersection came with the 1 x 1 angle coming down from the theoretical double price. The intersection nevertheless was a good support and resistance level and created a 'harmonic node' which we will deal with at length shortly. In many of these timing line price hits, we are dealing with *ratio or proportion* square outs of a fractional harmonic of time and price like 2 units of time and one of price or 1/2 of price and 1 of time, or even less

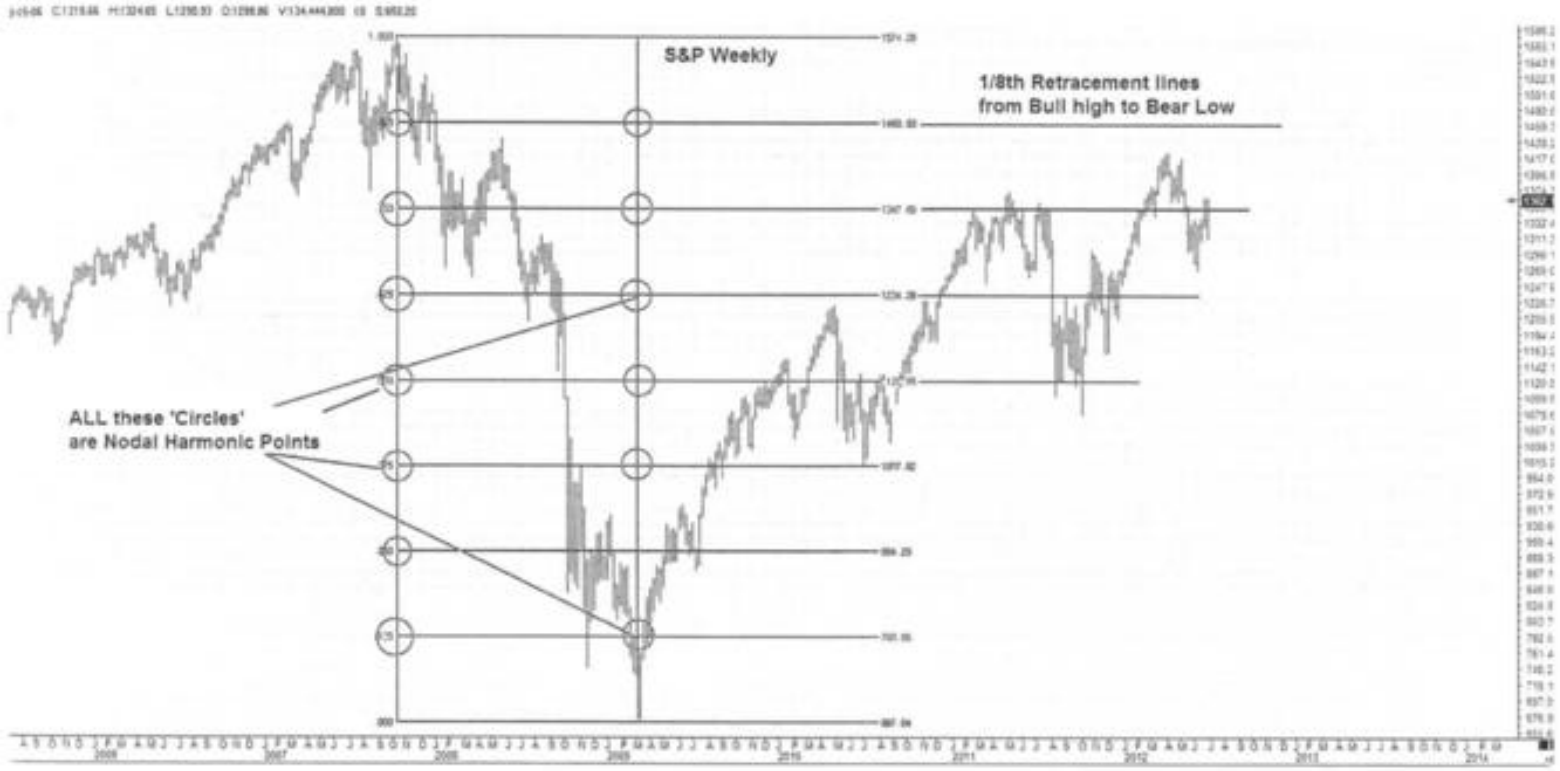
obvious ones caused by the intersections of the various timing angles at various nodal points. Before we leave Apple let's look at one more alternative and that is the one unit of price to one 'bar' of time. The Bar angles are the heavy lines with the former calendar day angles now appearing as 'dotted' lines. Now we can see slopes that more closely follow the pattern of the stock's price and the big culmination run and break occurred right at the 235 bar count double in time and the 1/2 by 1 bar angle caught the decline perfectly. Following up the 1/2 by 1 bar count angle to its top at the 2 x 235 line will result in the next major turn in July 2012. Both calendar days AND trading bars seem to work and give us turns but what is the single best one to use? This goes to the heart of W.D. Gann's methods and I only reveal them in my personal seminars but know that they are astrological based time counts and various planets as well as pairings that move at variable speeds. The reason he was so perfect in his predictions, however, is that from the date of birth of the stock it could be determined for once and for all time what time factor would be used and what kinds of angles would result in bull and bear markets. That is far too advanced for a book available to the public but as we develop these types of ideas further we will see that we really don't need the astro to make lots of money in the market and many numerological angles can be extremely precise down to the minute every day if we apply the correct method. The lesson here is that timing lines will turn the market or stocks at full and fractional price levels of the origin, and the full square outs are usually the bigger turns and chances for major long term reversals.



Chapter 5

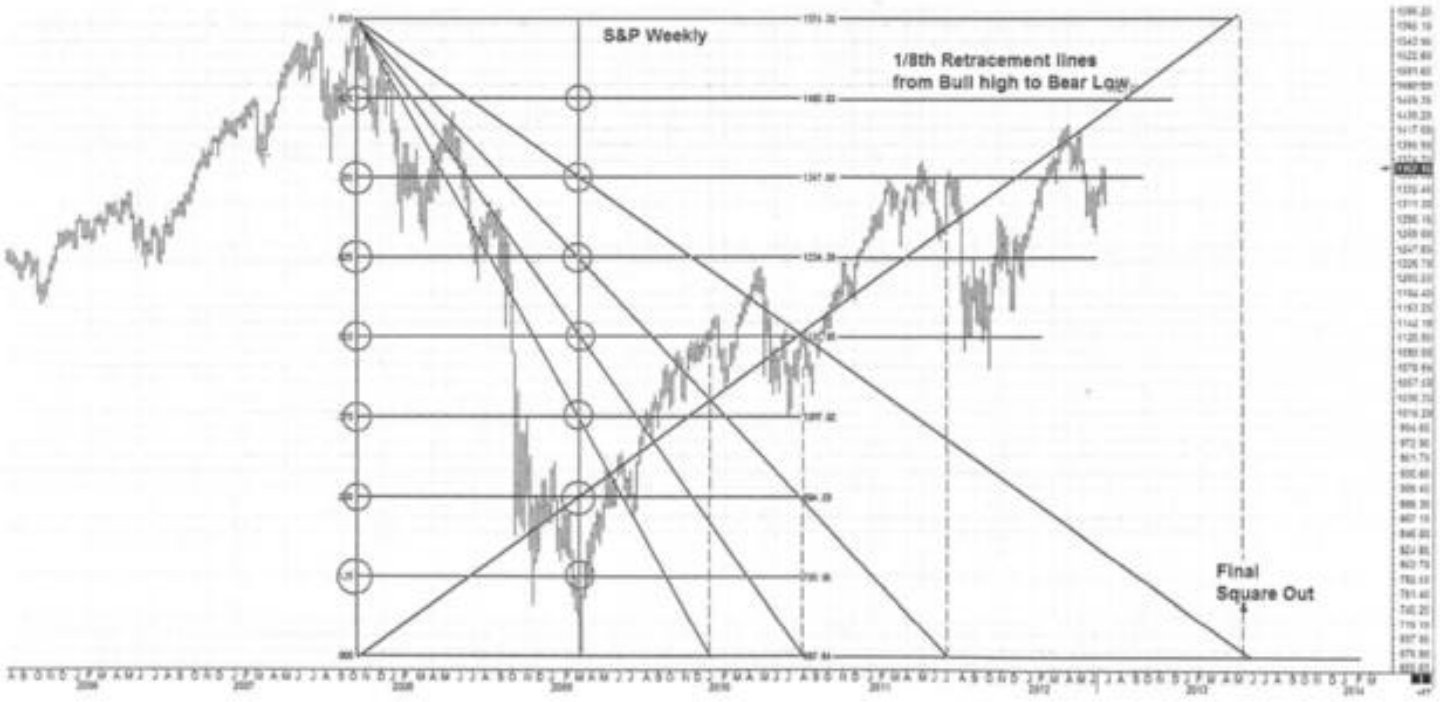
The Nodal Pivot

Let's now look at some proportion and ratio timing angles in a more systematic fashion and see if we can find some principles to their use.



Here's a simple weekly chart of the S&P showing the October 2007 top and the March 2009 low and overlaid is a simple 1/8th 'retracement lines' analysis that most computers draw. I have added the vertical lines above the low week and down below the top week and have circled the retracement levels at those key 1/8th price points. I call these points 'nodes'. You see, every major high or low has what I call a vertical axis 'tree' where harmonic prices of the major high or low vibrate strongly. In my 1987 **Stock Cycles Forecast** newsletter I achieved a certain amount of notoriety by predicting that October 19th would be a low and there could be an 'immediate crash of 500 points' into that day. That prediction came true and in retrospect I looked like a genius but if you had asked me on that very day during the 500 point decline what would be the end point, I did not have any idea because great price decline momentum can crash thru any barrier. After the fact there were all sorts of trendlines you could draw connecting far back bottoms with the low of the day but during the day there were also trendline levels like down 90 points, down 180, down 360, down 500, etc., and recently we saw a 'flash crash' of 1000 points down in a single day on the

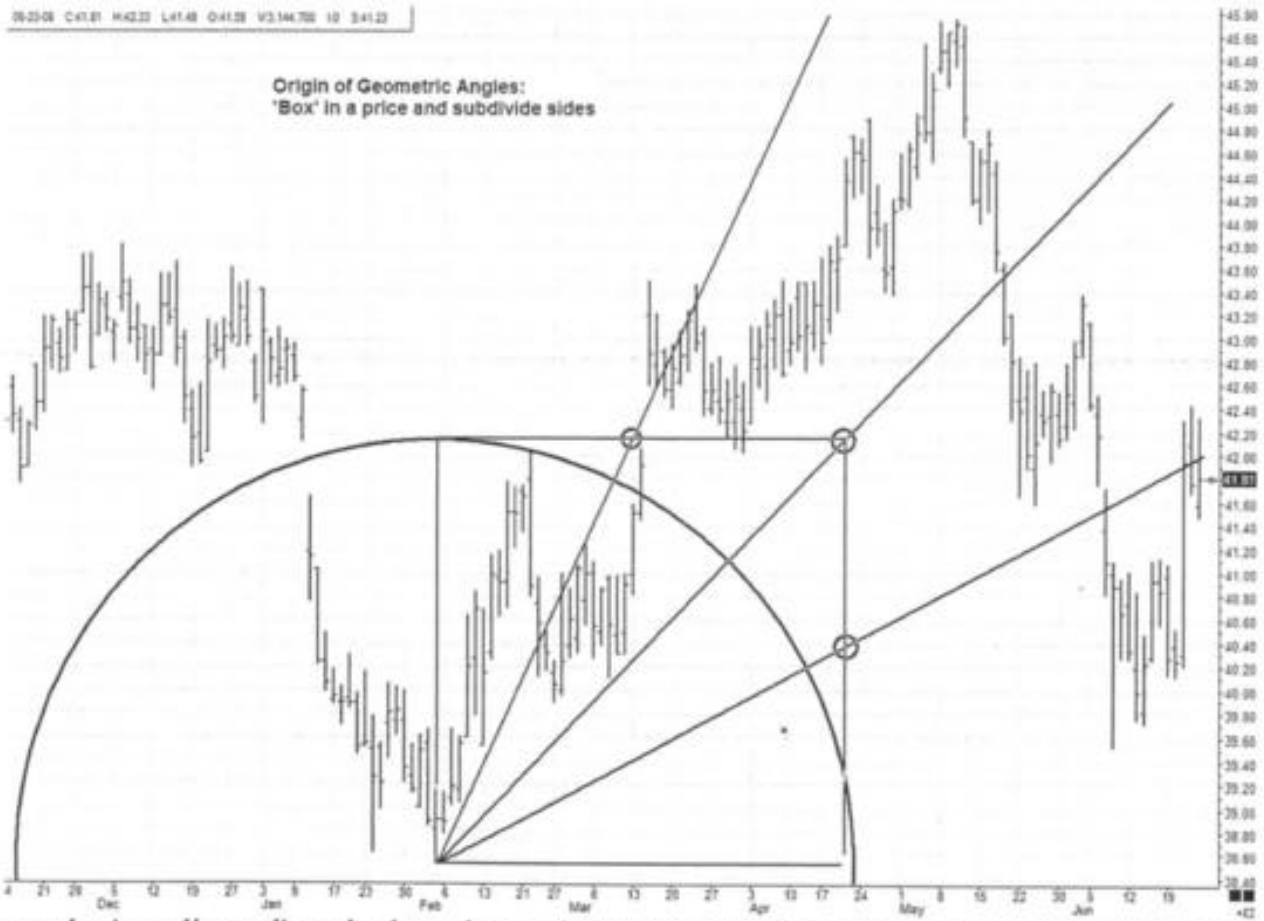
Dow Jones. Stocks and commodities act much like electrons around an atom and if enough external force is applied to them, they can 'jump' to an outer valence ring even if they normally don't want to do so. Gann's belief was that the subconscious mind of man translated *motion* into price (primarily planetary movements) and on certain dates the high or low was fixed, due to the position of a planet and the translation scheme. We can track the energy 'foot prints' of the planetary movements with chart patterns so we can mathematically arrive at the same conclusions without using the planets position. Note, however, that there could be several 'octaves' of possible price translation. Assuming for a moment that Gann was right about the planets, and assuming a particular planet that rules wheat was located at the zodiac position of 60 degrees, then that translation into money might show up as 6.00 dollars per bushel or 60 cents on some other commodity or 600 on some index. The actual translation, however, would have real world supply and demand constraints like supply of wheat, demand, droughts, floods, storage supplies, transportation, etc. These constraints would only allow a price translation into a 'realistic' window of real world commerce so while the planet was at 60, real world conditions might be a price of 30 or 15, or 90, or 120, all harmonics of the 60 'translation'. This same principle holds true for stocks and indexes and this chart of the 1/8th nodal points on the S&P represents various vibratory areas that the price will gravitate to under certain conditions. We use this everyday with retracement support and resistance levels we buy or sell at without thinking but these nodal points can give us much more information if studied closely.



In this chart I have drawn timing lines *thru the nodal points* and the ones coming down from the top, where they intersected the low gave significant market turns. The sole ascending

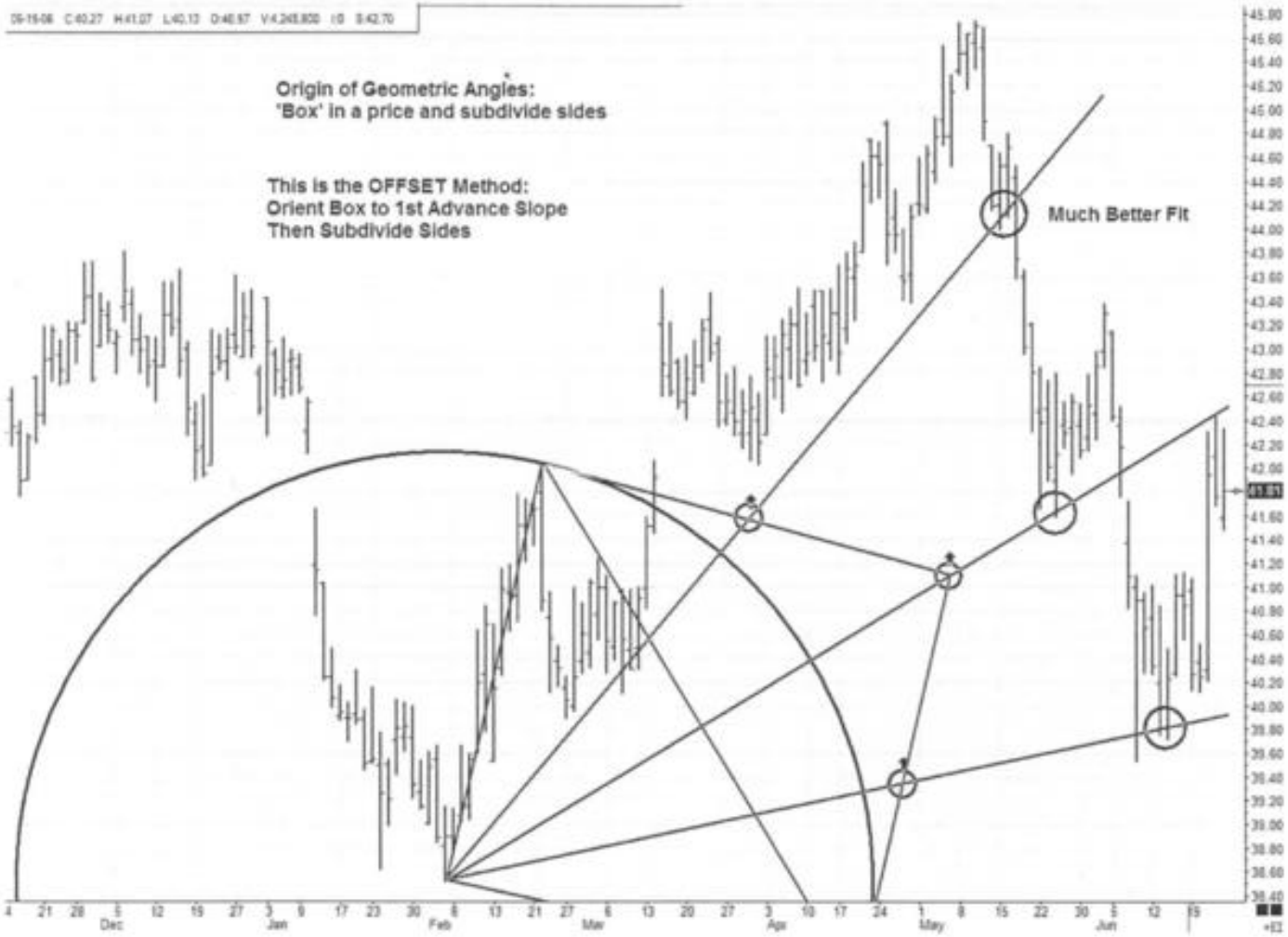
line which goes thru the 1/4 retracement line near the bottom intersects the top at a cycle point I have labeled as the 'Final Square Out' located near June 2013 (actual days to first quarter was 512 so final low date would be May 20, 2013). This is because in many cases a major drop will often occur at the 1/4 point of the time cycle so the distance from the October 2007 top to the March 6, 2009 low (512 days) would be 1/4 and a timing line up or down thru the 1/4 retracement level would intersect the top or bottom when four of such segments would be lined up side by side. If you notice the intersection of the two 1/4 lines at the 50% retracement level, it occurs at the 1/2 point of the cycle and at the 50% price retracement and that intersection marked both a major low and a price hit so the 'end point' from such lines should also be important.

These 'nodal points' shown above are simple horizontal retracement levels but charts themselves don't know that we are graphing them in a perfect vertical and horizontal plane. Usually the energy is multidimensional and *manifests at an angle* to the vertical and horizontal. If you have read my other works you know the first thing I ever do is adjust my angles to the axis plane *of the chart*. This is demonstrated in the next two exhibits. The first



shows the 'unadjusted' typical angles and the second adjust the angles to the plane of the

initial impulse axis and you can clearly see the big difference and how the adjusted plane method is superior.



Lets now look at *angular* nodal points coming from chart patterns and because these arise from offset angles to an advance or decline, we can often use 'standard' angles like 30, 45, 60 or 90. This next chart is a 'foldback' pattern or 'mirror image' with the year 2000 top on the S&P and its downward vertical axis creating nodes where 45 degree angles intersect it. The labels 'A' 'B' 'C' 'D' are the legs prior to the top and a 45 degree timing line coming down from those points intersect the axis tree and pivot back up to create the mirror image on the right side. Sometimes these levels are very similar to the horizontal past ones but if you note point B and point B' are quite different in price since the 45 angle on the right side has a slight different length then the decline from A to B on the left side. The reasons for these 'fractals' is that as the time cycle folds back thru 360 degrees it can also vary in speed and one half of the mirror can be faster or slower than its counterpart.

Two major points are made by this chart but not highlighted. The first is the 'horizontal' effect of those intersection points under the axis tree. If you look at the angles from C and C', that intersection point if followed to the right catches the C' plunge, then the A' top and later the plateau top in late 2004. These nodal points create major vibration areas in this price structure. The intersection of D and D' gave us our March 2009, 666 area low. The second conclusion is what we'll turn to next and that is the 'square out' potential of following these angles up to intersect the final high point on the right. In other words follow the up the 45 degree angle from the nodal point near C' and continuing that up to the horizontal with the final March 24, 2000 high price. On this chart that is estimated to be in the vicinity of the first top just to the left of A'.

These kinds of patterns are usually referred to as 'mirror image foldbacks' and they occur all the time and I trade off these patterns every day of my life. They are most important and we will soon see a method or two that will show us where to look for the repeats.

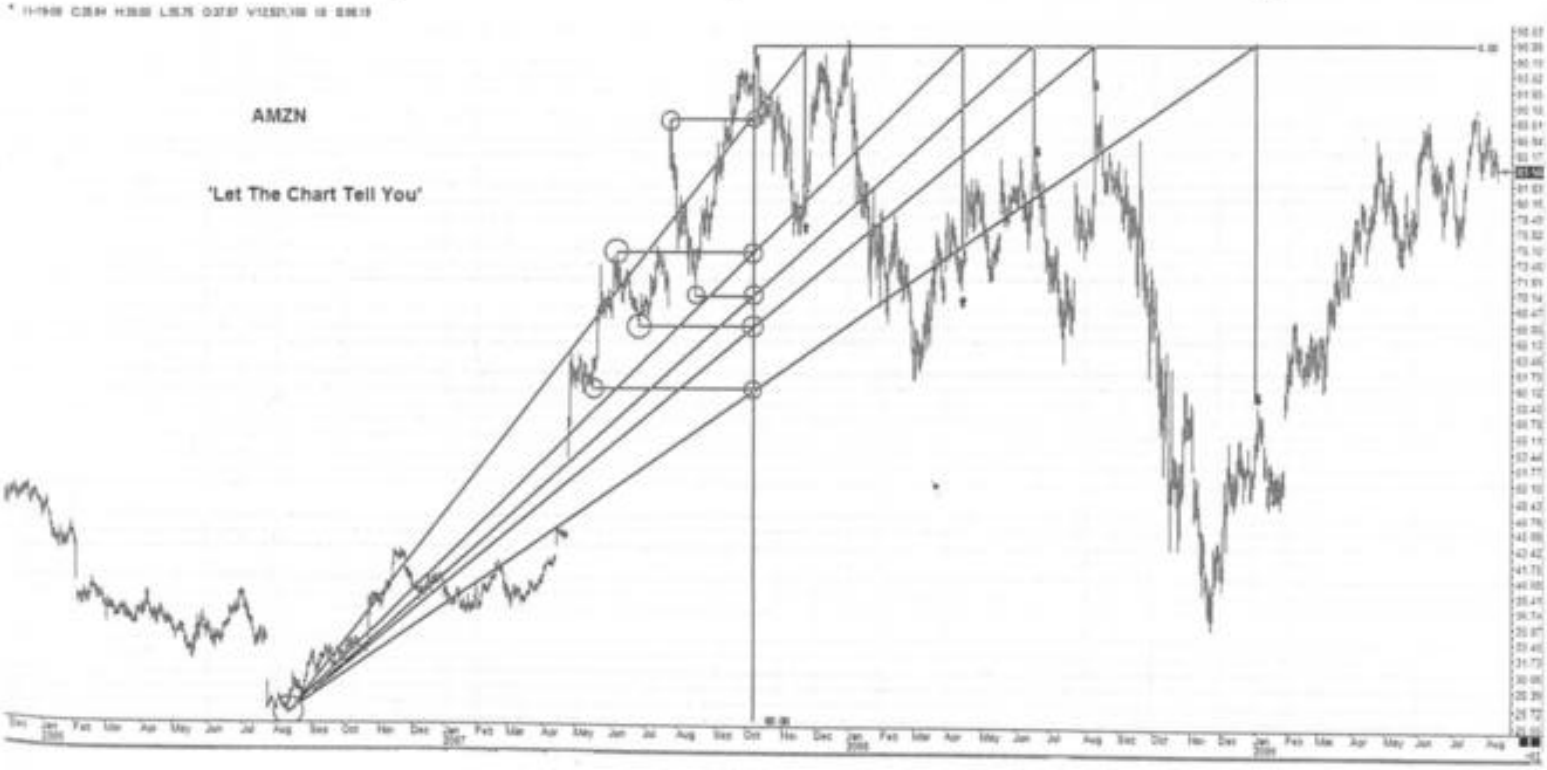
Below is a chart of the Daily S&P which shows these two areas 1) the extension of the 45 degree timing angle up to the top and 2) the horizontal support to the nodal point. The top intersection gave a nice reversal because it squared out a major leg from the left side of the chart whereas the horizontal gave a support area since the origin point was a support area.

Now I have added the 30 and 60 degree angles to square out the high and the horizontal support areas.

This next chart below is the final chart with all the pivots from the left side of the axis tree, reflected on the right.

These 'standard angles' will give us good turns but there is a better and easier way. *Now we will finally get to the actual method for trading that I propose in the title of this book.*

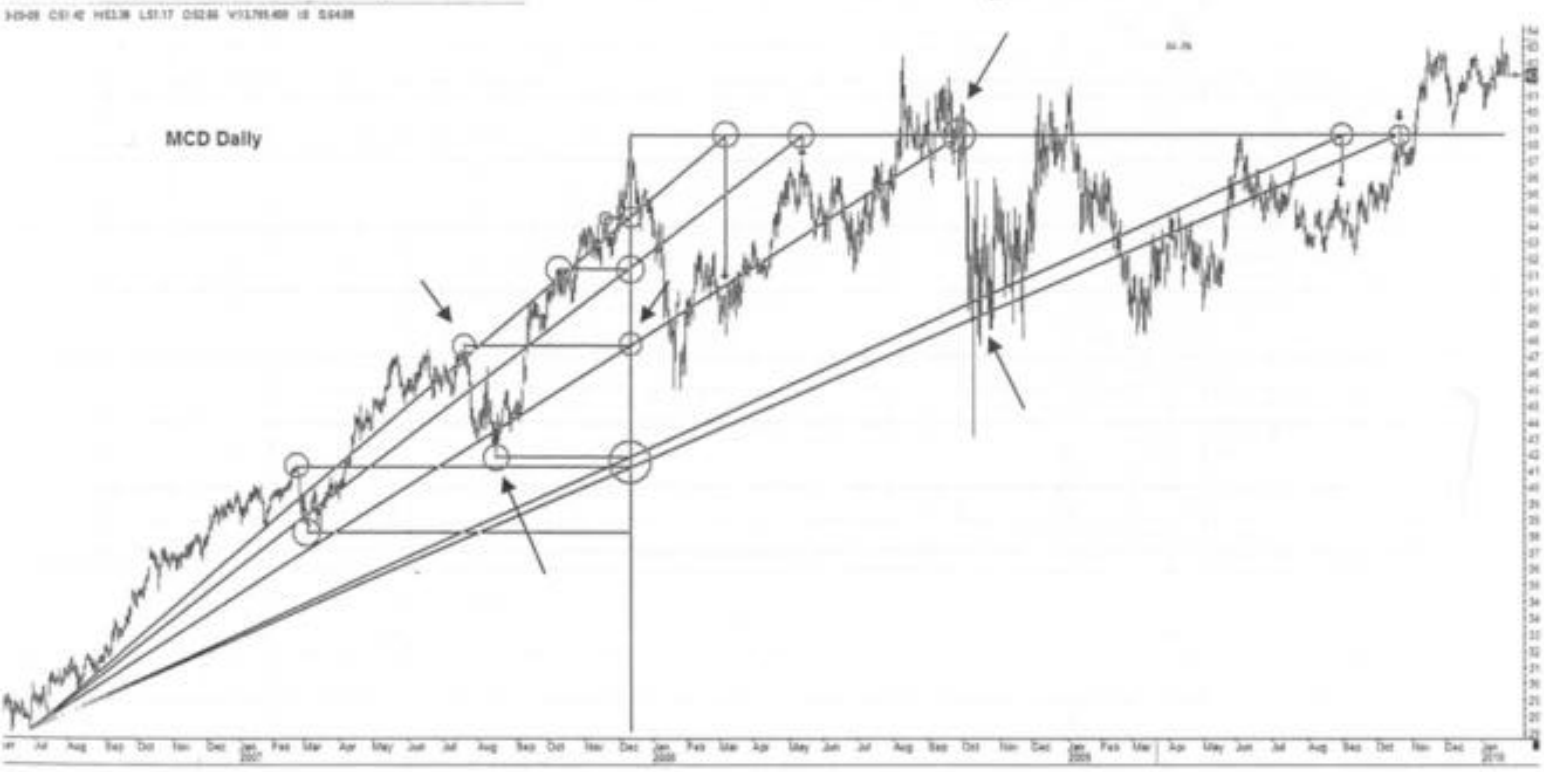
I let the chart itself tell me where the important nodes are. These are usually just horizontal



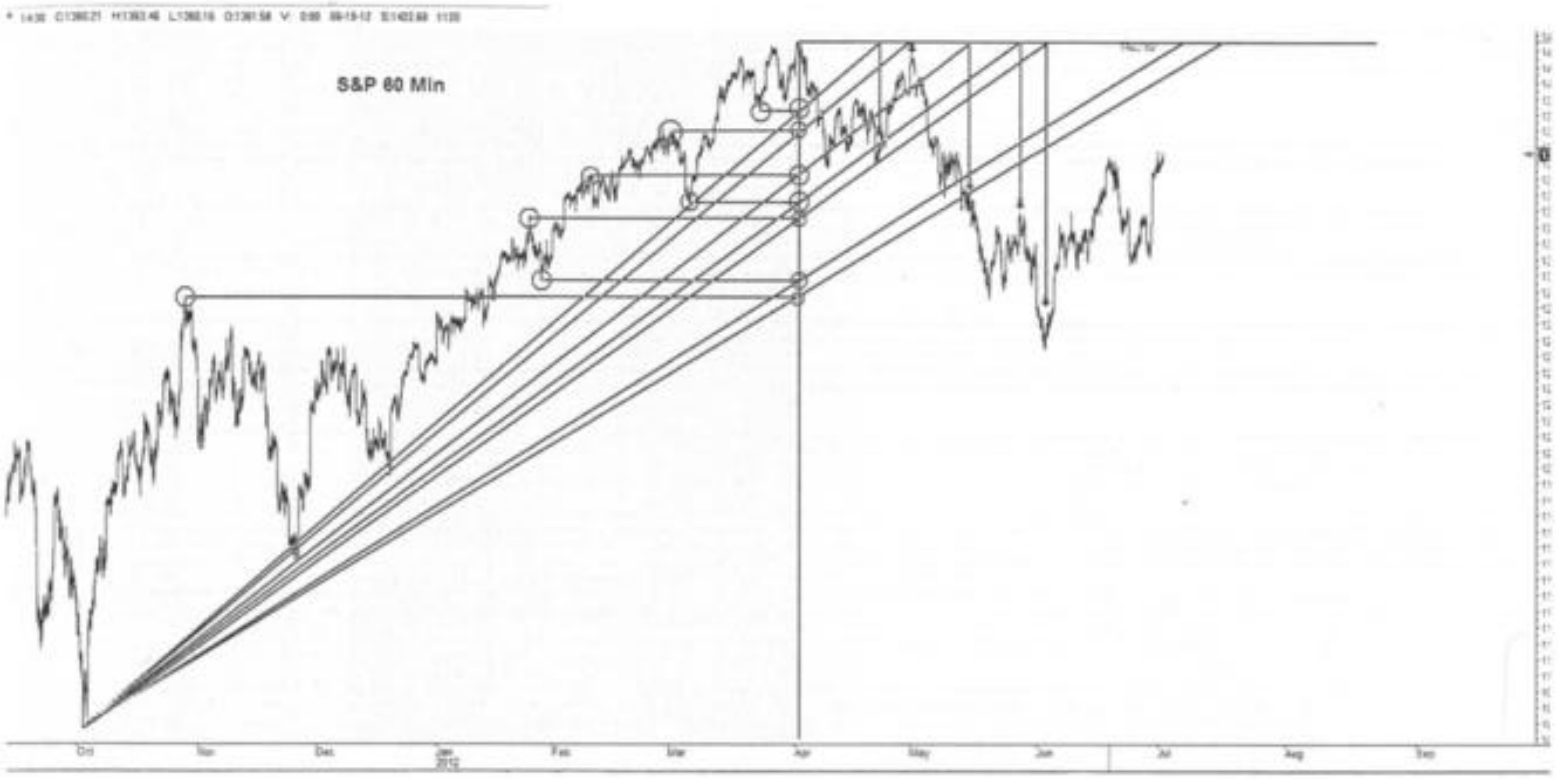
intersections of the axis tree from prior major pivots on the way up. This will always result in square outs of the distance between the origin point and its angular relationship to the final top.

We see now that EACH of the significant reversals on the left of the vertical tree are reflected in significant reversals on the right side and all of these are great trades defined to the day and only limited to the accuracy of your drawing.

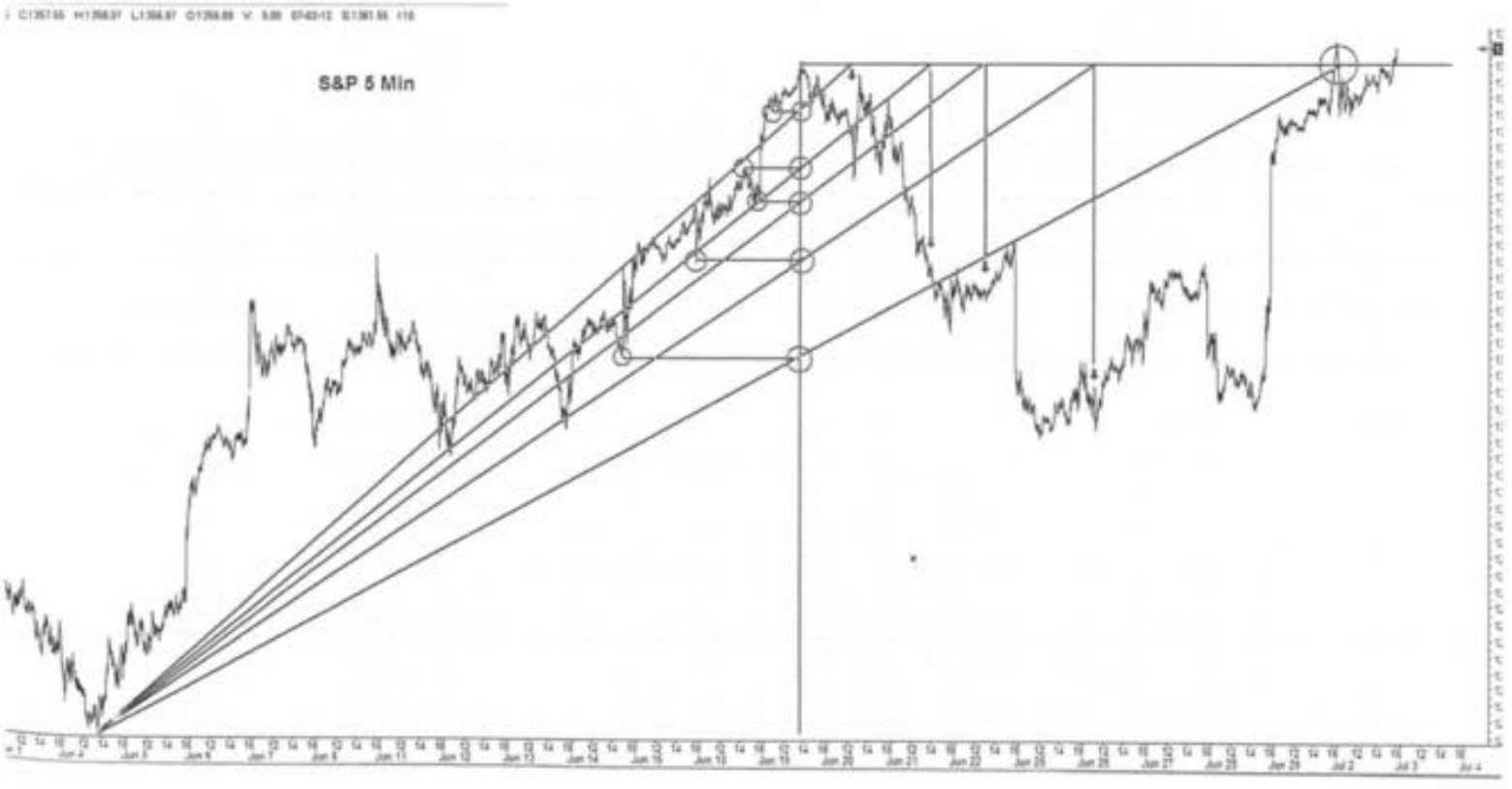
Here's another with McDonalds. Note that I used the 'first big top' as the axis so as not to confuse the chart too much, when the second top was made you would do the same analysis with that axis tree from the origin low. Note the 'main top' break (arrow) of the price on the right, was caused by a big top break on the left of the axis tree (left of node-arrow) and repeated a 'fractal pattern'. Follow the 'arrows' to see this repeat fractal.



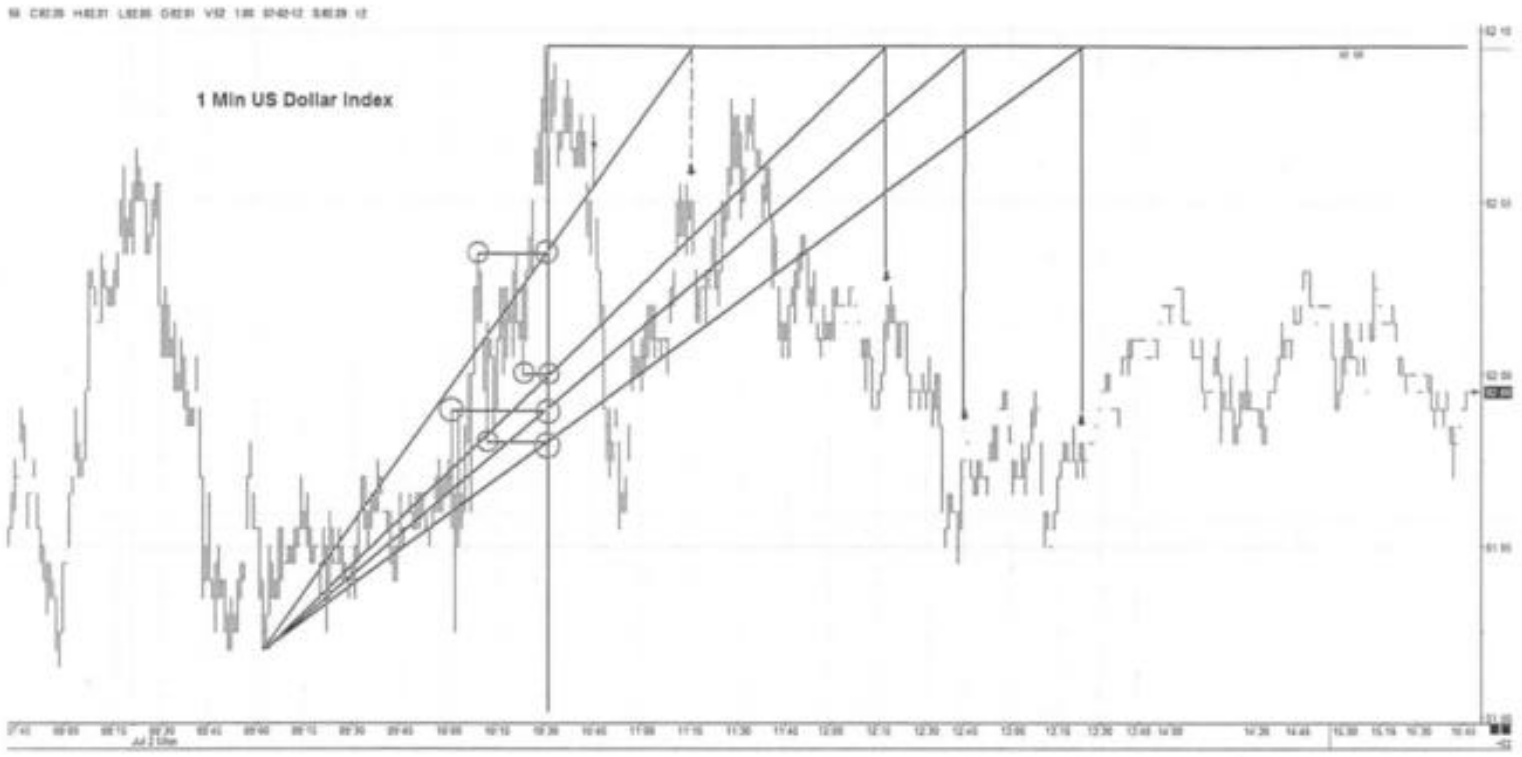
This method works on any time frame. Here's a 60 minute chart of the S&P cash index.



Here's a 5 Minute time frame:



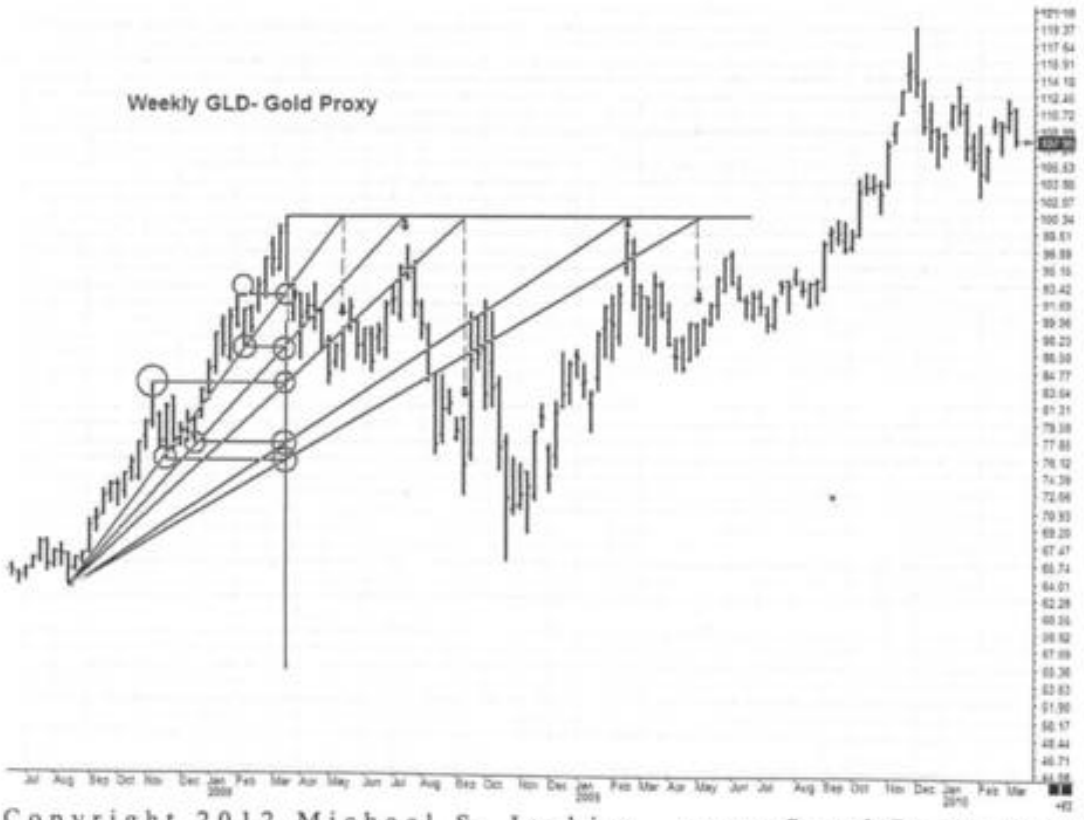
Even a 1 minute chart will generate these square outs! Below is the US Dollar Index 1 min.



Here's IBM as an example of a downside axis forecasting the bull side.

Here's a nice 1 minute E-mini chart below:

Longer term swings can be forecasted with weekly charts. Here is one from the GLD ETF gold proxy:

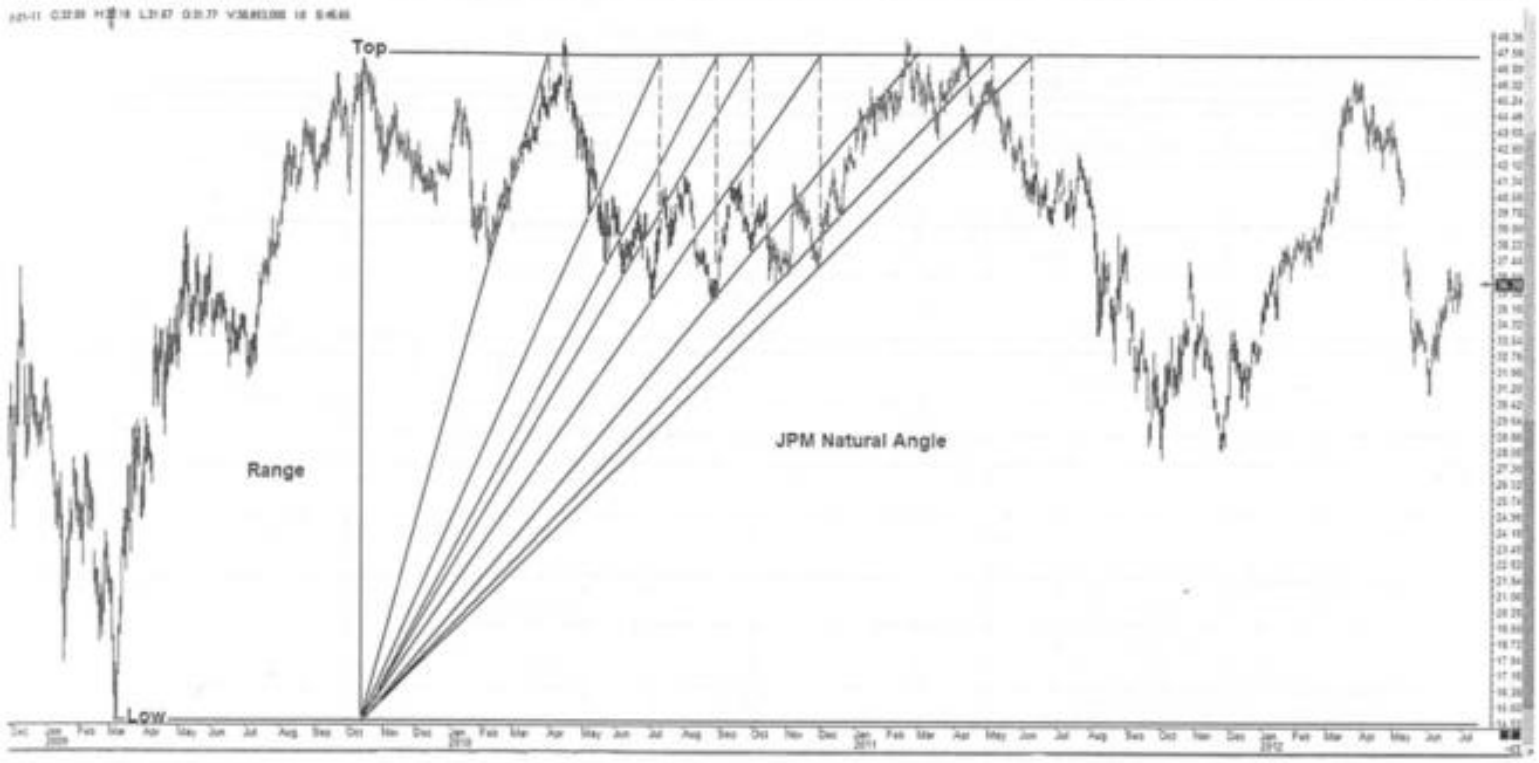


Natural Angle Trendlines

Another supplementary method, perhaps easier to apply than the nodal point angles is what I call 'Natural Angles' since these are lines that are drawn up from the origin low but under the top and they catch the charts own plunges. After each 'plunge' the angle will continue up to intersect the high and you will get a turn based on the charts own harmonics. Below is an example:

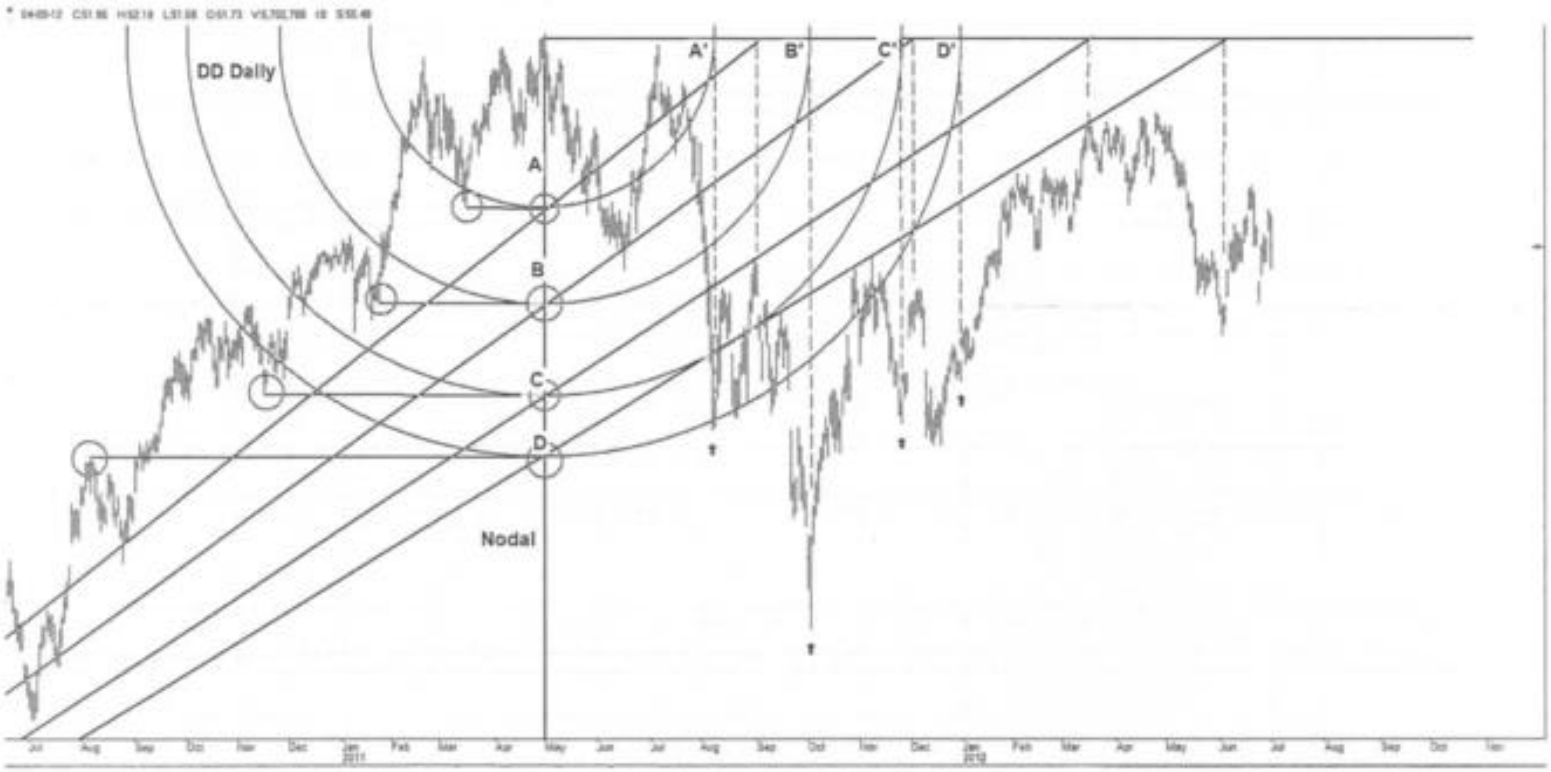
Each of the 'circled' points is the bottom of a plunging low after the top, so we draw an angle up from the base at the axis tree and under the top thru that point. When the angle intersects the top you have a time and price range square out. You see, since all charts are miss-scaled, the fact that a 'plunge' was caught by an angle of some unusual degree of slope doesn't mean it isn't the real slope operating, since by definition only a square out on a trendline will reverse a market and each of these reverse the downward plunge even if it is only for a short duration.

Below is another Natural Angle example using JP Morgan, and the exhibit after that shows the 'combined' two angle methods of the 'Nodal Point' angles, and the 'Natural Angles' demonstrated on DuPont. This natural angle technique *is not always valid* since it assumes the angle that 'caught' the plunge came from the low under the high location. In truth that plunge could have been caught by many different angles from other origins, but since it is so easy to apply it is often worth the extra minute to try it to look for the fit.

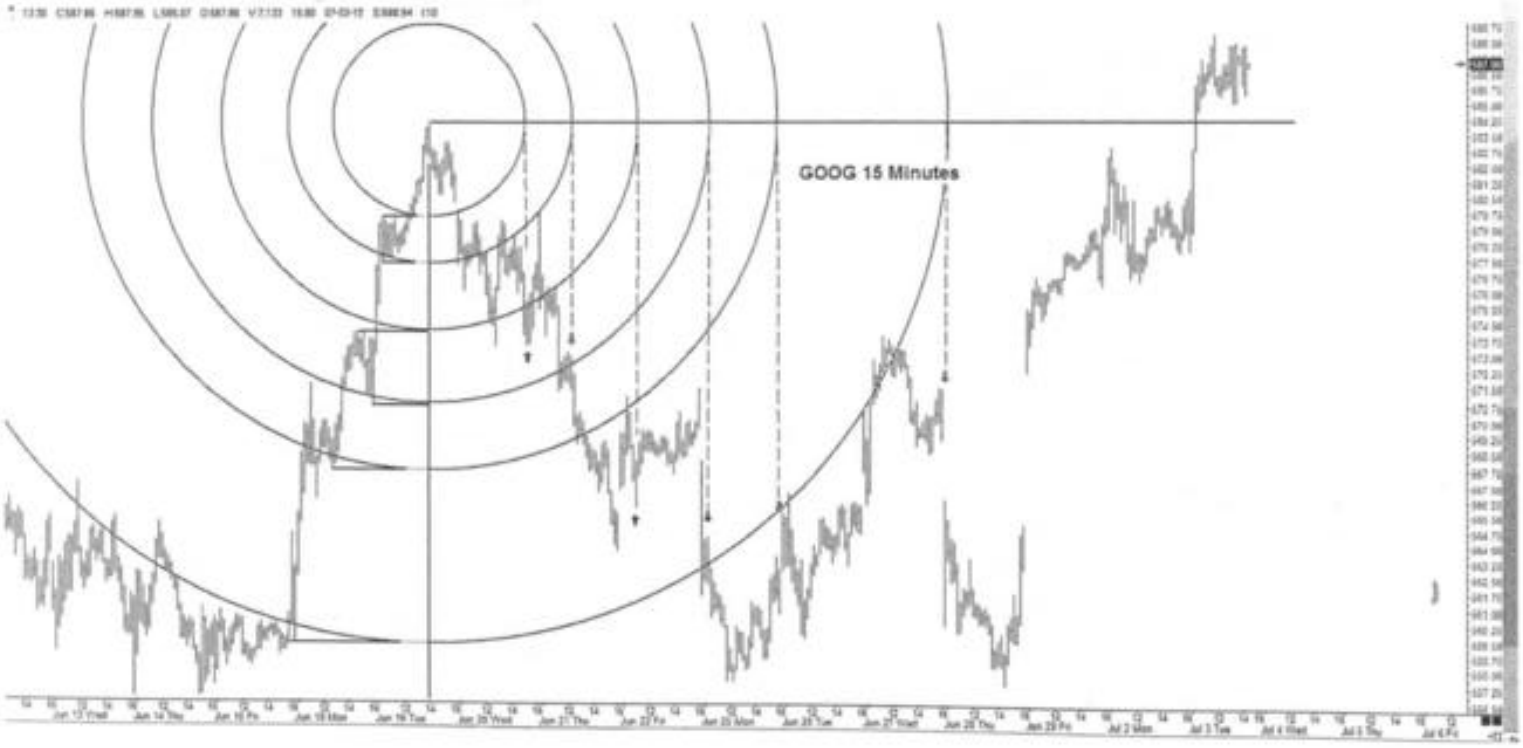


This DuPont chart has 90% of the information we will need to build our trading system but one final piece needs to be reviewed. If you remember we started the discussion of the square out with the theory that the *Price advance* had to be followed by a *Time decline* period or consolidation, EQUAL to the advance, and vice versa. If you look at the next chart of DD you will note that the circled 'nodes' *measured from the circled point to the top* represents the Price advance amount. Now we must balance the chart with the Time decline

or somehow turn those vertical circled segments 'sideways' to equal time. The best way to do this is of course with a circle whose radius is that measurement. In the following chart I have done this with each vertical node labeled A B C and D and the rotated circle with the price top as the center yields horizontal time durations of A' B' C' D'. These are all SPECTACULAR HITS ! (arrows). Note the *difference* between the arc and trendline hits.

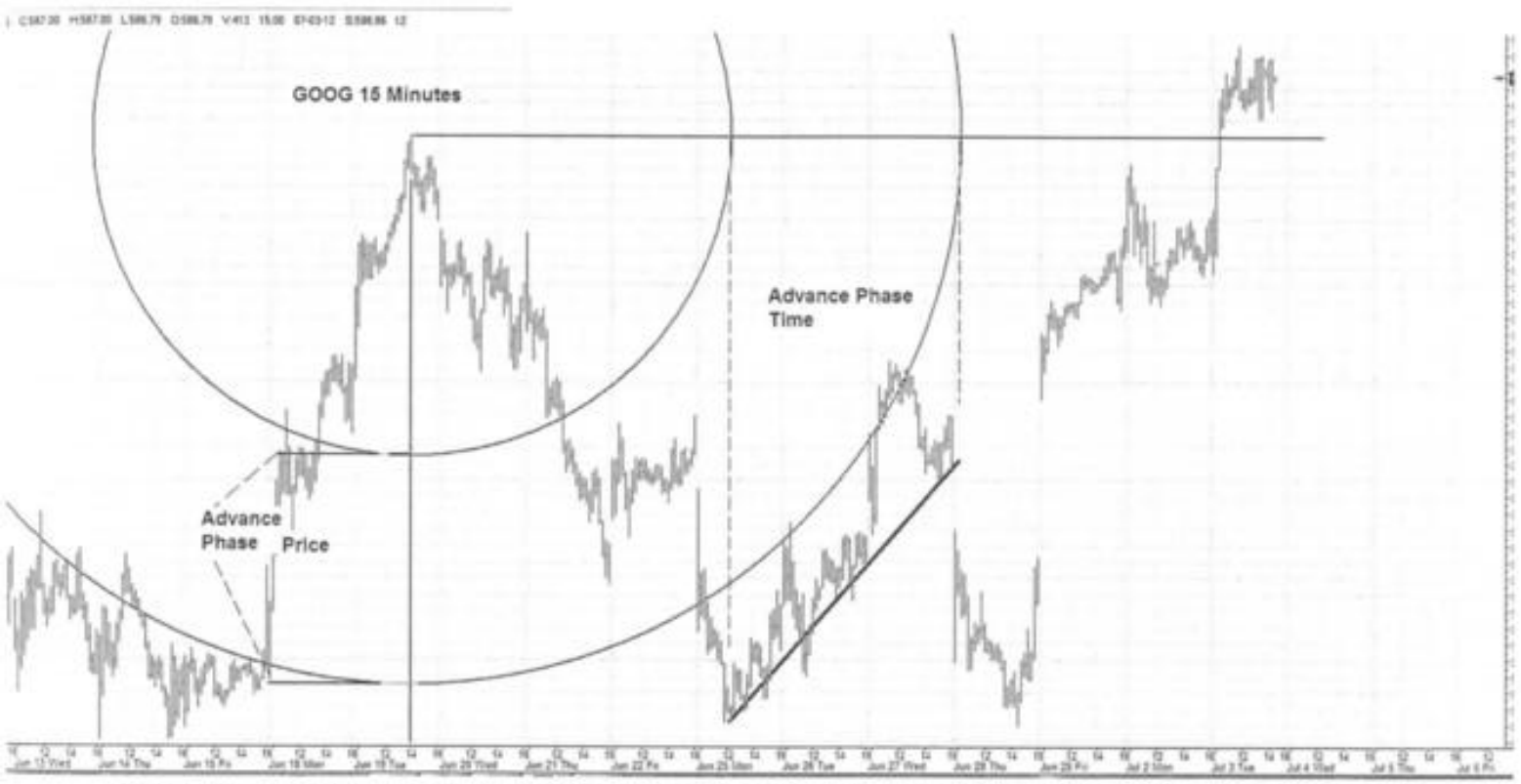


Since this is a little cluttered with both the A and A' balancing, and the nodal angles, let's view a few more charts up close:



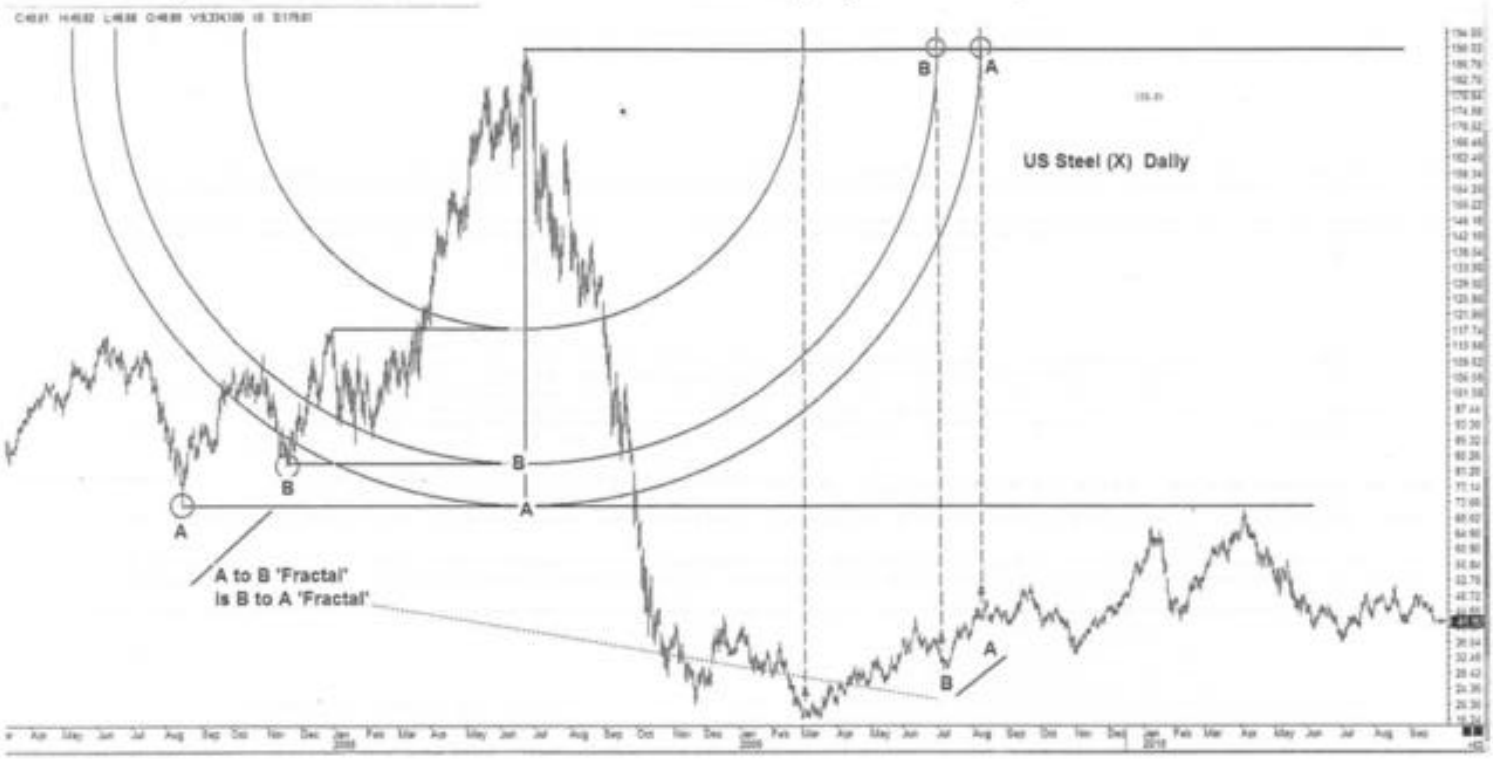
This a Google 15 minute chart and while not perfect in every hit, to define a big move in GOOG within 15 minutes is quite impressive since the stock often moves $5 to $20 and options can make you rich. If we wait for the Big Nodes to square out, we have great odds.

There is more information in this chart, however, that may help us with our trading decision and strategy. If we narrow in at the impulse 'legs' up, and isolate the price

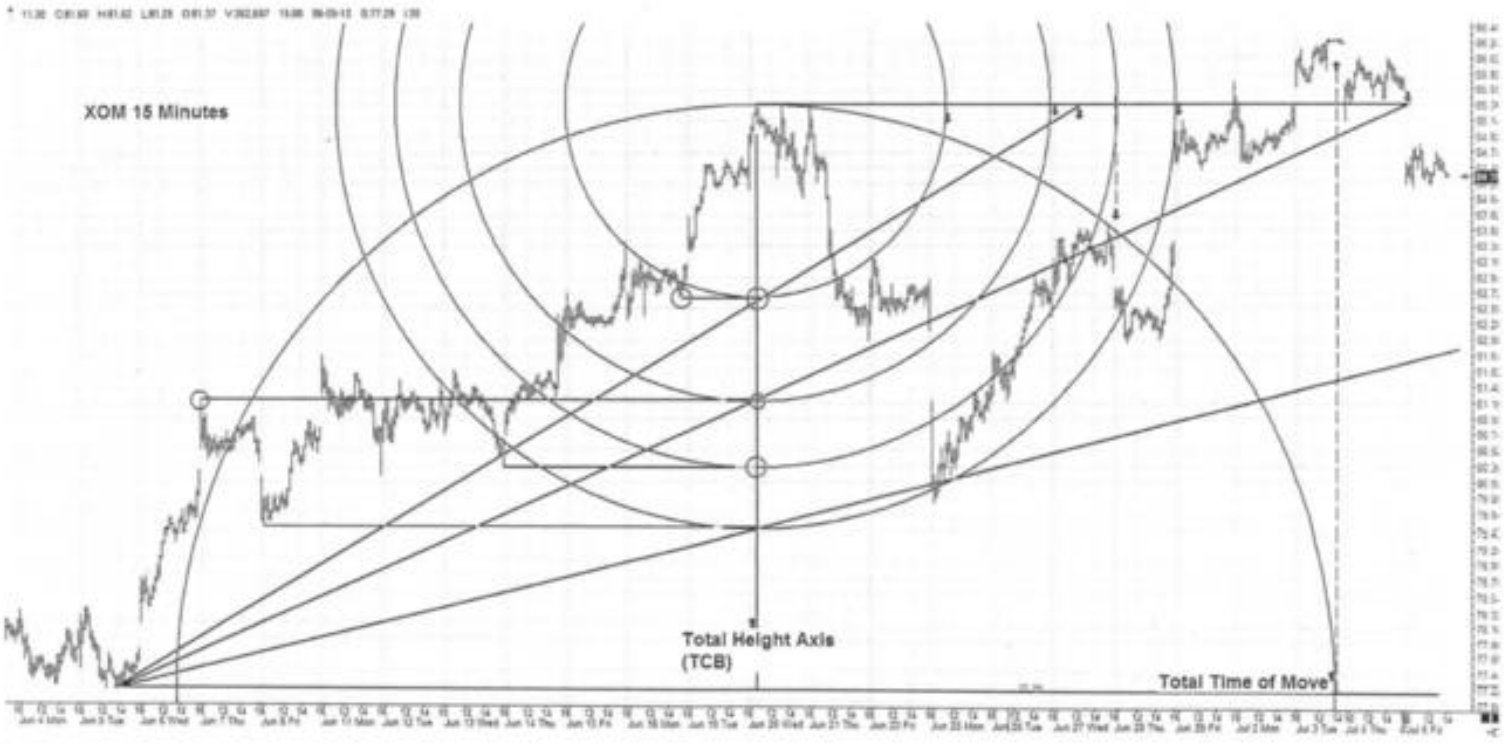


advances, we can possibly find the corresponding time duration of another advance on the mirror side of the tree axis. In this chart we see the 'Advance Phase of the **Price**' on the left, and where those price end point nodes created arcs, the arcs defined the '**Time** of the advance phase' on the right. This is a revolutionary idea in technical analysis and if we can identify these spots and limit our trades to them, we will get rich. Note also the 'mirror' foldback affect in that the 'low' price arc on the left, gave the 'high' time on the right, and the 'high' price on the left gave a 'low' time on the right i.e. backwards foldback.

This next chart of U.S. Steel also shows the possibility of finding 'foldbacks' or mirror images on either side of the axis tree to make projections. If you follow that B to A on the



right and go forward with it you will see the entire fractal up to the all time high repeat on a smaller scale in January and again April 2010. The small shake down correction on the right of A (on the right side) is the top after B on the left and then comes the big run up.



Here's a 15 minute Exxon Mobil chart and note the construction:

1) Find a low to high swing, or vice versa (a complete move, not just an everyday wiggle).

2) Mark the axis vertical down line.

3) Find the key horizontal node levels from the left side.

4) Start measuring the vertical nodal distances and turning them sideways with arcs.

5) Add trendlines thru the node to square out as trendlines intersect the high or low.

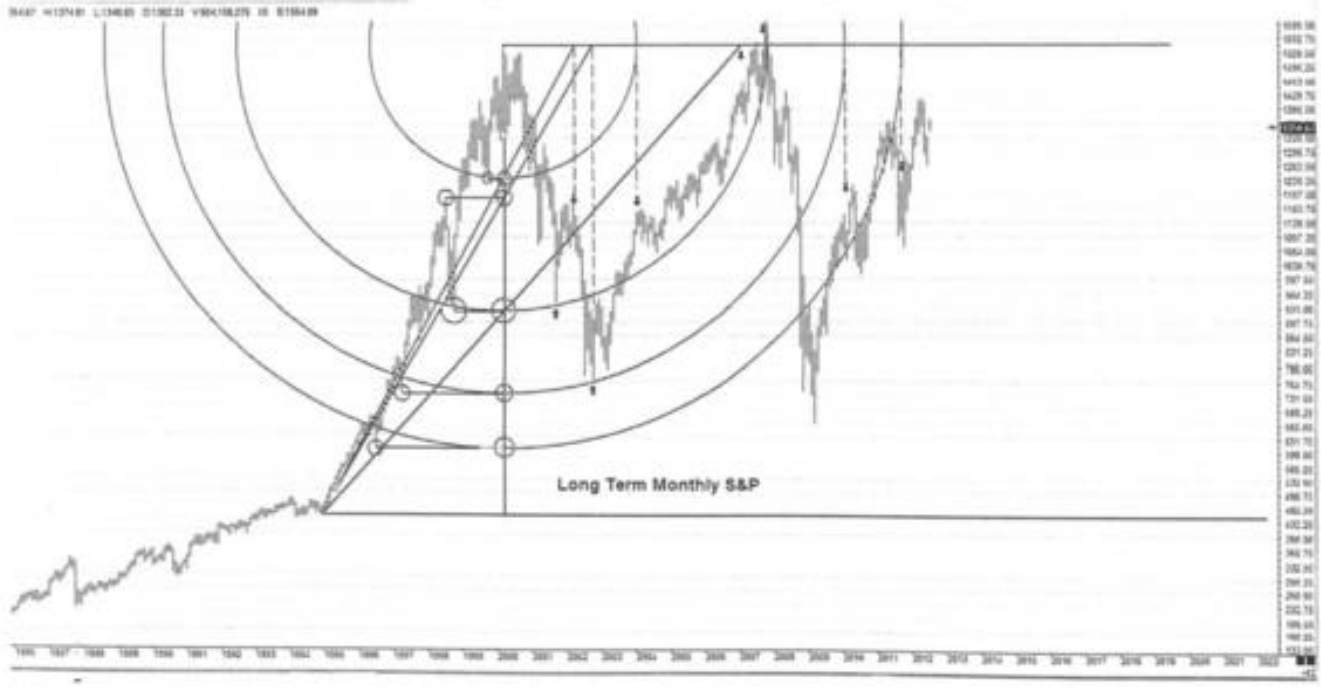
6) Look for fractal repeats where arcs culminate- trace them back to origins to find common points. For example the 'big' low on right was caught by an origin trendline angle *recreating* that origin swing leg up, on the left. The arc up from the first top price level after that origin low on the left (circled), points to a high on the right after about the same 'measured move' (vertical height).

7) It is important to note where the ENTIRE move is finished by squaring the total vertical range. This can also be found with a trendline from the low intersecting the 50% level of the axis tree and reaching the top, or with a large circle of the entire range centered at the axis tree. Once the entire structure is squared, either a primary down trend starts or you get a big correction like a typical A B C correction. In MOST cased a price rise on the left side of the top axis will give a decline or consolidation on the right side BUT in strong up trends you can get another top like above at the entire move square out.

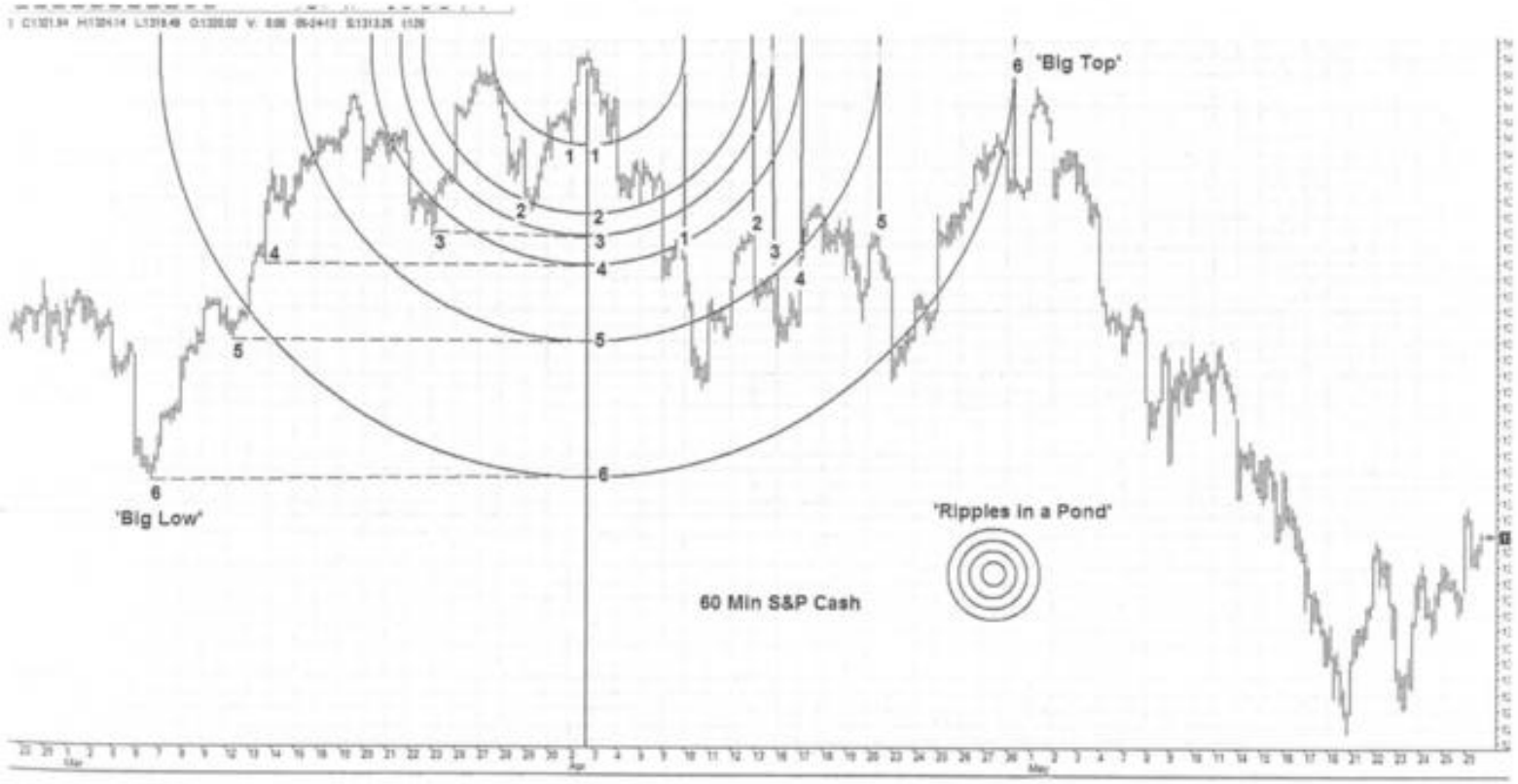
It is very important to always keep in mind that although in *theory* the circles and timing lines are perfect, the fact is often that the left side of an axis tree may be moving at a different speed than the right side, so then the two halves will not be equal. You will usually be able to see the fractal 'wiggles' on each side to mark your way and once you are 90% to the expected final square out time zone, you should start to look for signs of a reversal and not necessarily wait for the exact arc or trendline square out. After all, these arcs are just mechanical timers and when you trade you let the chart with a signal reversal bar tell you when its ready to reverse, usually sometime within your target zone.

This is an example of '2nd level' higher patterns that repeat from the initial node square outs. The circles have Time resistance at the 3 o'clock position, while they also have Price resistance at the 12 noon position. Just like there is a left and right 'axis tree' you can consider an 'above' and 'below' axis tree with the center of the circle the dividing line.

These methods work on all time frames so the key will be to set up several different time frames to watch for the big pivots on each. Start with the biggest time first and work down to the smaller frames. This next chart is a long term monthly S&P chart and you can see it caught most of the really big turns and the 2007 top was a perfect hit from the 1998 low arc.



This next chart below is an attempt to identify the mirror image patterns based on each consecutive node on the left and following it's square out circle on the right. Note that the 'left' side LOWS were used and they largely predicted right side HIGHS. Circles won't always work perfectly because time cycles expand and contract with different speeds so the right side may be stretched or contracted more than the left but sometimes you will get periods for several months where the left and right sides are fairly symmetrical and you can make good estimates of high or low foldbacks. Pay attention to the 'vertical distance' between the labels on the right side like the distance between '5' to '6' and see that it is very close to the vertical distance of '6' to '5' on the left. Don't count the rally high before '5' on the left as that is the drop out after '5' on the right, but what is important is the vertical distance from the same direction pivots like low to next low yielding high to next high.

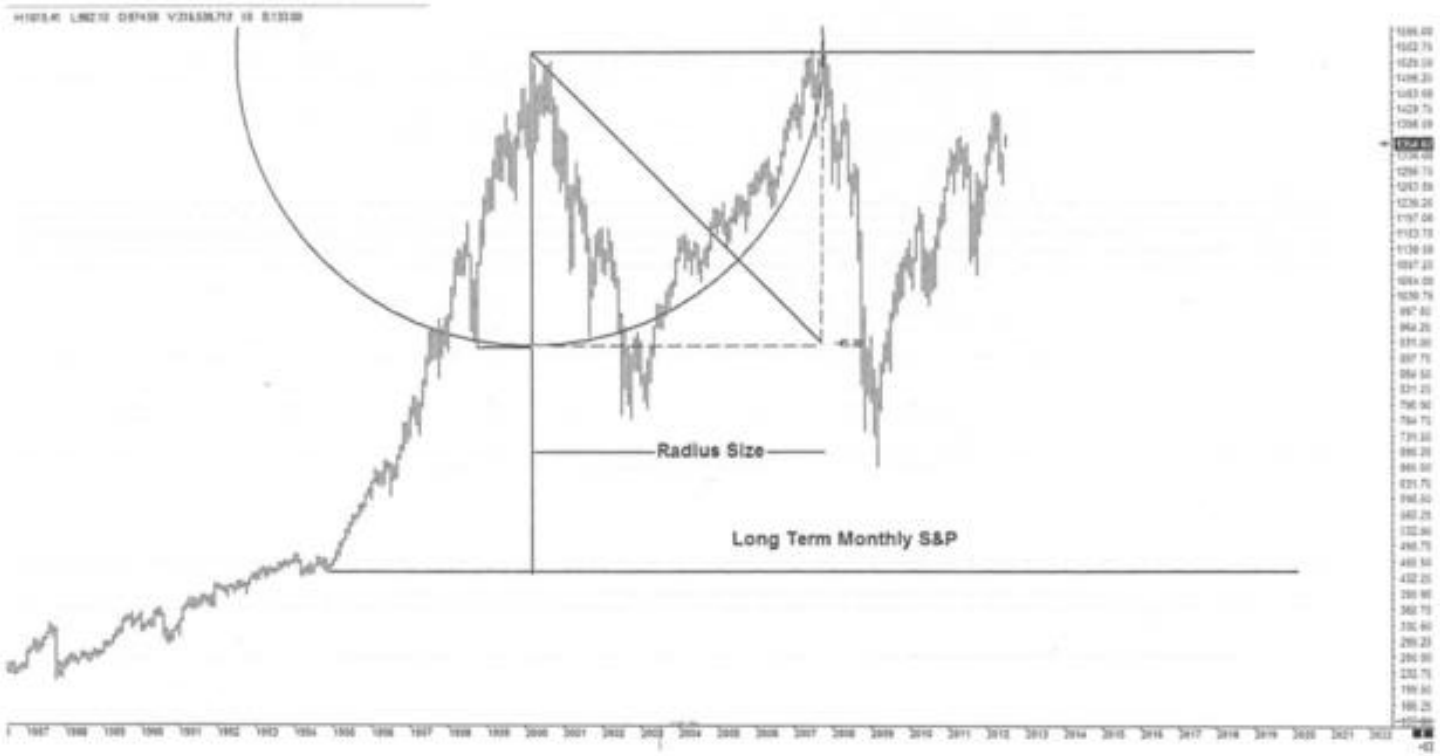


Remember, as a basic technical tenent we use the 'measured move' concept to see where a trend will exhaust itself so while these arcs and circles point to *ideal* time periods it is the measured move in the recent time period that is the driving force to cause the high or low. Once it looks like a measured move is about done and an arc is culminating, look for the signal reversal bar on a couple of small time frames to warn you of the turn.

Chapter 6

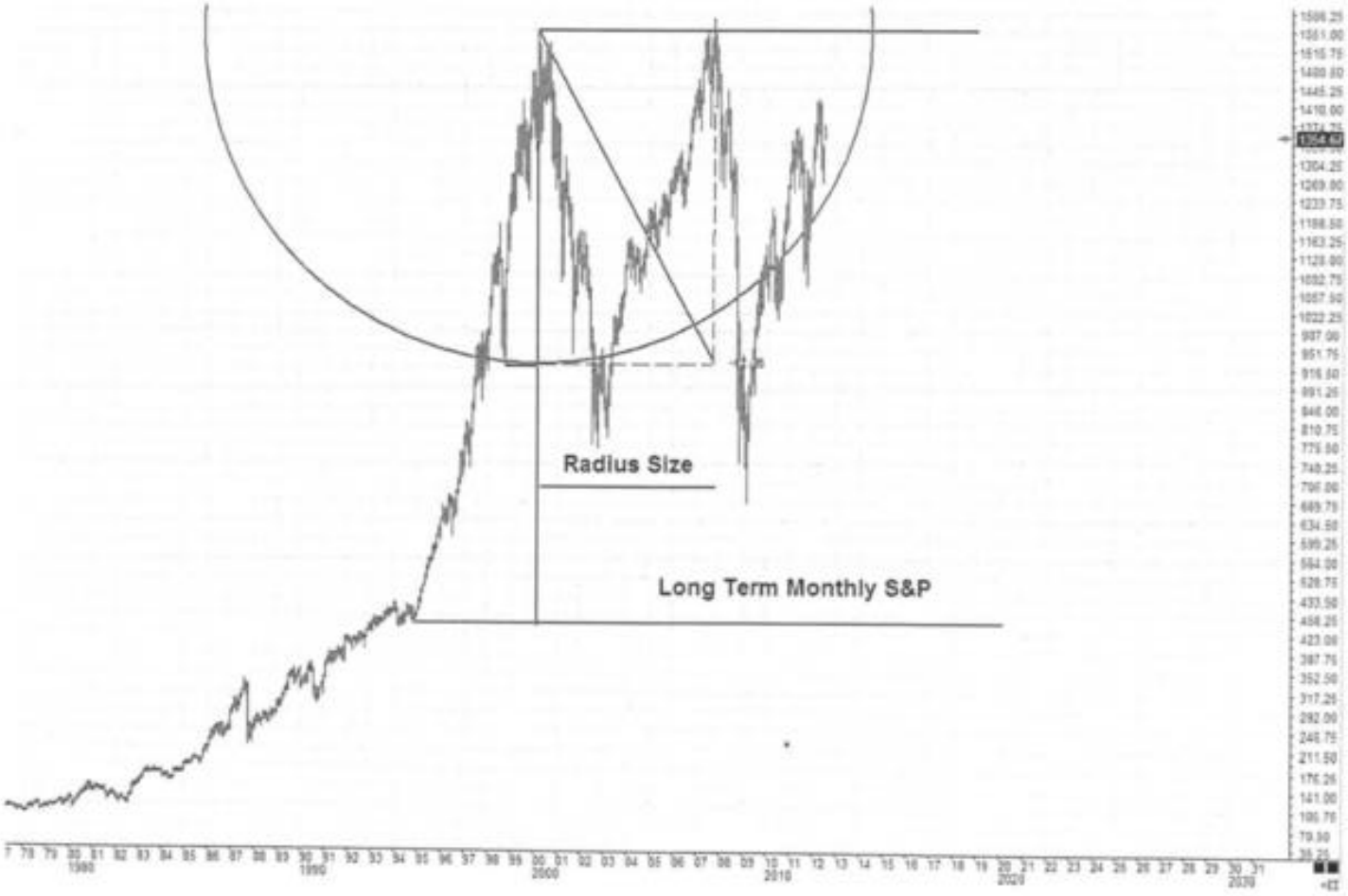
Scaling

Let's look again at one of the previous charts and see how a major emotional event like the Long Term Capital Panic causing the 1998 low created a nodal point under the next top that caught the next bull market high perfectly. This fact can often be used to help us 'square' our charts or make them properly scaled in time and price. After each book I have ever written I always get the same question and it is about scaling. Different computer systems and different size charts have different numbers of days or bars along the bottom and different price increments on the vertical scale. Trying to reproduce one of my examples in the book perfectly will be difficult for many depending on their computer and data. The method itself will always work because it will pick up harmonic patterns on the left and right sides of the vertical axis tree but the exact number or dates could be off like a 50% point on mine could end up as a 5/8th point on yours but it could still be a significant tradable turn. Let's examine what causes this and the possible solutions.



Here's the long term monthly S&P chart again with only that 1998 low node and arc drawn since it was a 'perfect' fit. Now the problem with computer graphics is that when a chart's dimensions change (usually by adding more bars at the right as time goes by), circles change their size. One thing that usually doesn't change, however, is *user* drawn lines or angles of specific degrees. In this chart I have drawn a 45 degree angle down from the top

and as explained earlier, when it intersects the bottom of the circle it will define the diagonal of a square and the sides of that square will be the same as the radius of this perfectly drawn circle. This radius size I have drawn just below the lows and labeled it 'Radius Size'. Now let's look at the exact same chart after I have adjusted my setting to expand it or shrink it a little. In this next first chart I have compressed the chart and now we see our perfect circle no longer hits the top of 2007 but we also note my user drawn 45 degree angle and radius size line has maintained the proper fit so they still calculate the 2007 top where it should be although the new arc does not. The chart below this one is an 'expanded' size chart and here we see the circle shrunk to hit before the 2007 top but again our user drawn lines still expand or shrink with the exact dimensions of the chart and still work. This is why if you try and replicate my examples in this book you will get varying results even though your hits will work for trading purposes in most cases. The key is finding a chart that works for you and trading that. There is no 'rule' that says you have to trade a particular chart that you can't scale properly or don't get good results with.

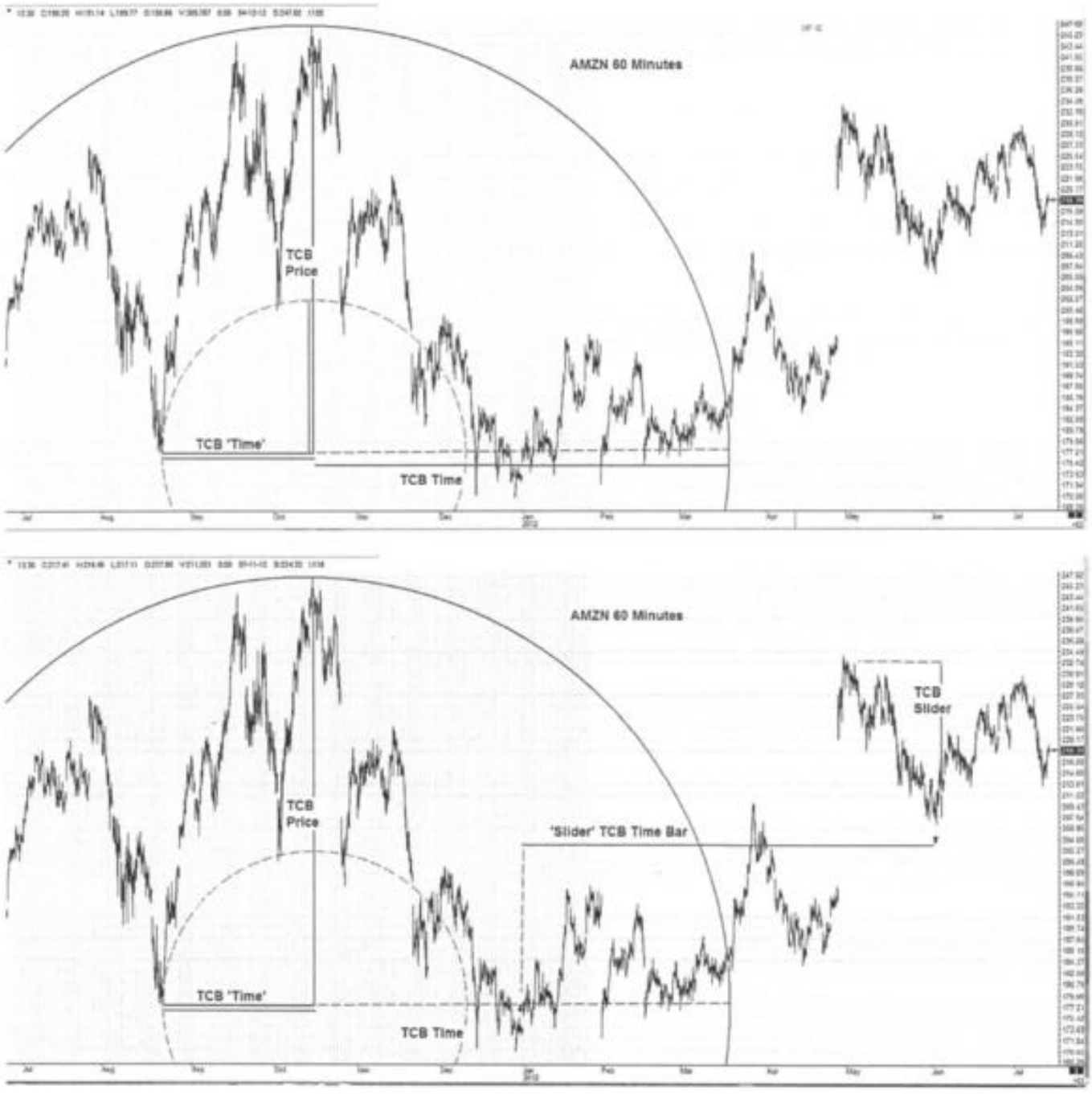


In Gann's day (he died in 1955) they of course didn't have computers and drew all their charts by hand but even then there was always the time and price scaling problem. Gann needed to experiment to find units like 8 grids to the inch and each grid might be a $1 or 12.5 cents or other units depending on the stock or commodity. He had a good thirty-six 'Square of Nine' type charts like a Square of 2, 4, 6, 8, 12, 24, 36, 52, 72, 144 and many others and they were used to try and find the time and price units that would make these circles and square constructions balance out the price and time. In the above charts the first circle did a good job of finding the 2007 top, BUT, our theory if it is to be useful should give us the same results all the time, and the advance phase from October 1998 to March 2000 should give us the *declining* phase in time and that would be the October 2002 or March 2003 LOW, not the 2007 high. This next chart is the same one greatly expanded with bar spacing so our arc now calculates to the expected low and we will then test to see if other highs and lows fit this new scaling. Remember on these long term monthly and weekly charts, while you may not be able to use them until the first big swing is done, after that they could work reliably for years!

Now (below) with this bar space setting we see that all the lows going up to the top, result in mirror image lows on the right hand side of the top as they should and we are then better prepared to forecast BOTH a date of the turn and whether it's a high or a low. Once you find this setting you try and stick with it. Sometimes it just won't be possible but if you can get within a bar or two, at least that small miss-spacing will usually be consistent going forward.

Earlier I said that while a computer will 'redraw' your chart pattern into a different scale, I often 'draw over' my circle radius or TCB lines and when the chart rescaled, your hand

drawn lines will remain the same. You can then take these hand drawn lines and slide them around your new chart and often get back to the original scale that worked. This next chart shows two duplicate lines drawn in, one small one that is the vertical TCB of the time component converted to price, and a large one of the full TCB time duration defined by the radius of the large circle.



This bottom chart shows the main large radius line removed to a different location to move the time cycle in the data to a different location and you can see it worked at the two end points where cycle turns manifested. I have also moved the small vertical TCB over to a

new location to measure a standard 'measured move'. This way you can often keep you cycles moving forward on a rescaled chart to use them again.

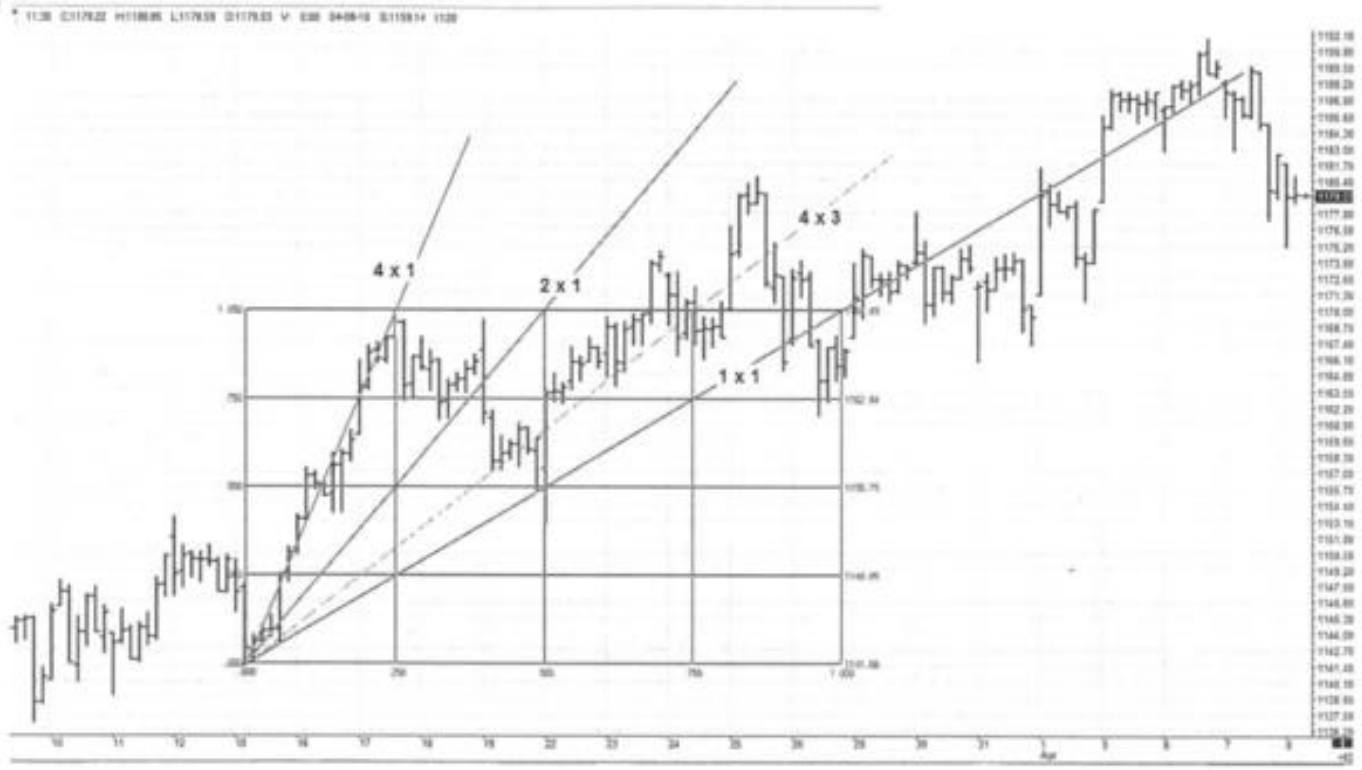
When using small time frames like 1 minute or 5 minutes you will have a very hard time getting circles to work regularly simply because the vertical price difference is not great during a five minute bar and the number of bars can be substantial before you get a major move complete. In other words, you can have a 30 bar time count but only a 3 point price

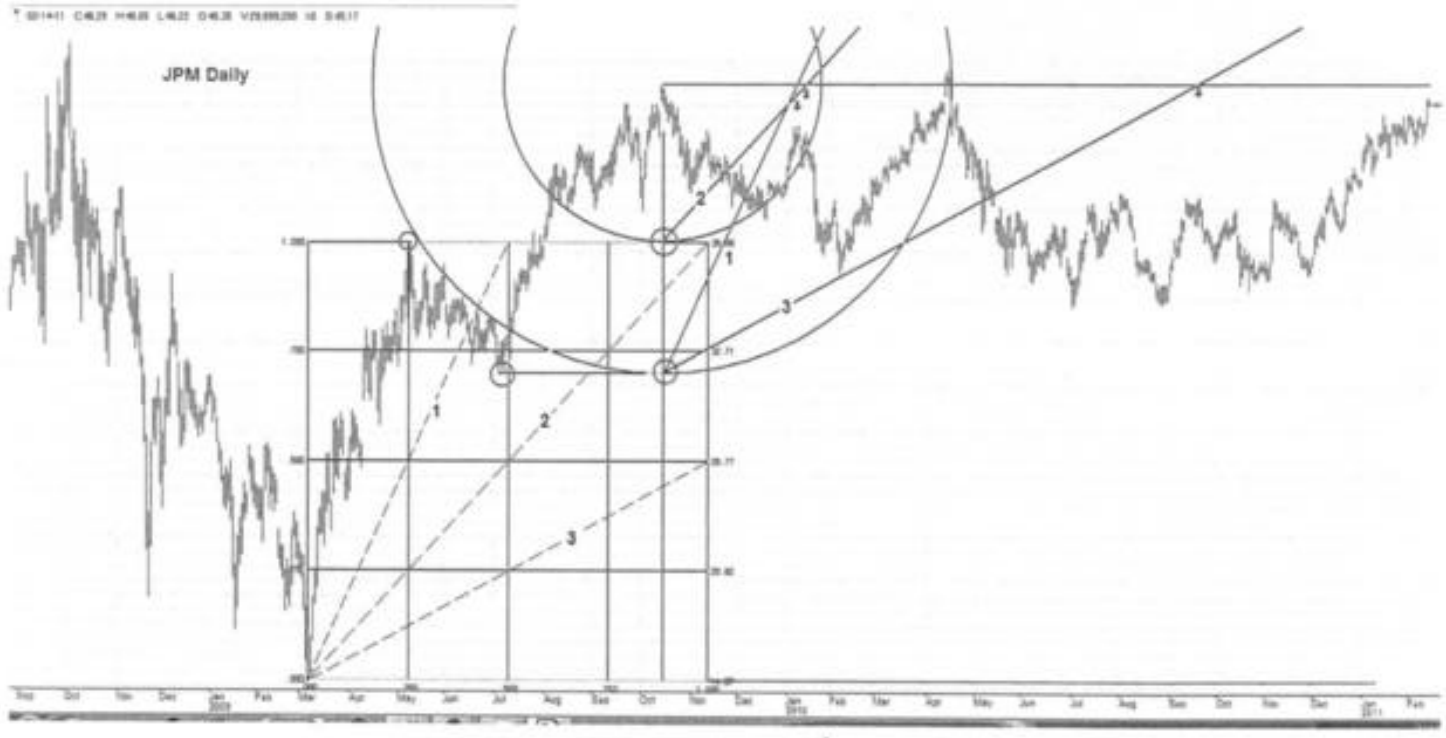
move so using a circle with a 3 bar radius trying to square a 30 bar horizontal is impossible. The first thing to do is always square the range manually with the 'bar count'. In this next chart we do that with a 14 S&P point advance leading to a 14 bar decline to complete that first phase which is usually followed by several more on the five minute interval. Here the big arc circle shows some shape characteristics but no real end point dramatic reversal. I prefer to use circles since they are perfect 1 x 1, 45 degree units in all directions and are very simple to apply, but scaling problems may be insurmountable in some cases so after expanding and compressing your charts if you still can't get a circle to work you can always use angles. What we are looking for after all is a timing line of so many units of time and price to square out our range. The 1 x 1 is a perfect 'ratio' but as we have discussed various angles have other ratios that can work as well. The standard 'Gann Fan' tool on most computer software can often be a good substitute. If you don't have one of those you can just draw the angles from a little box like on the next exhibit and transfer parallel angles from that to the nodal point of the chart. On this chart of Caterpillar you can see how this

works. First note that the 45 degree diagonal angle from the square does tie in with the circle arc so we know the 'harmonics' are correct. After transferring the other angles to the node we see that all of them gave market turns. This method also suffers from some scaling issues but this example works because the 'Circle' came out with the 45 degree angle so they

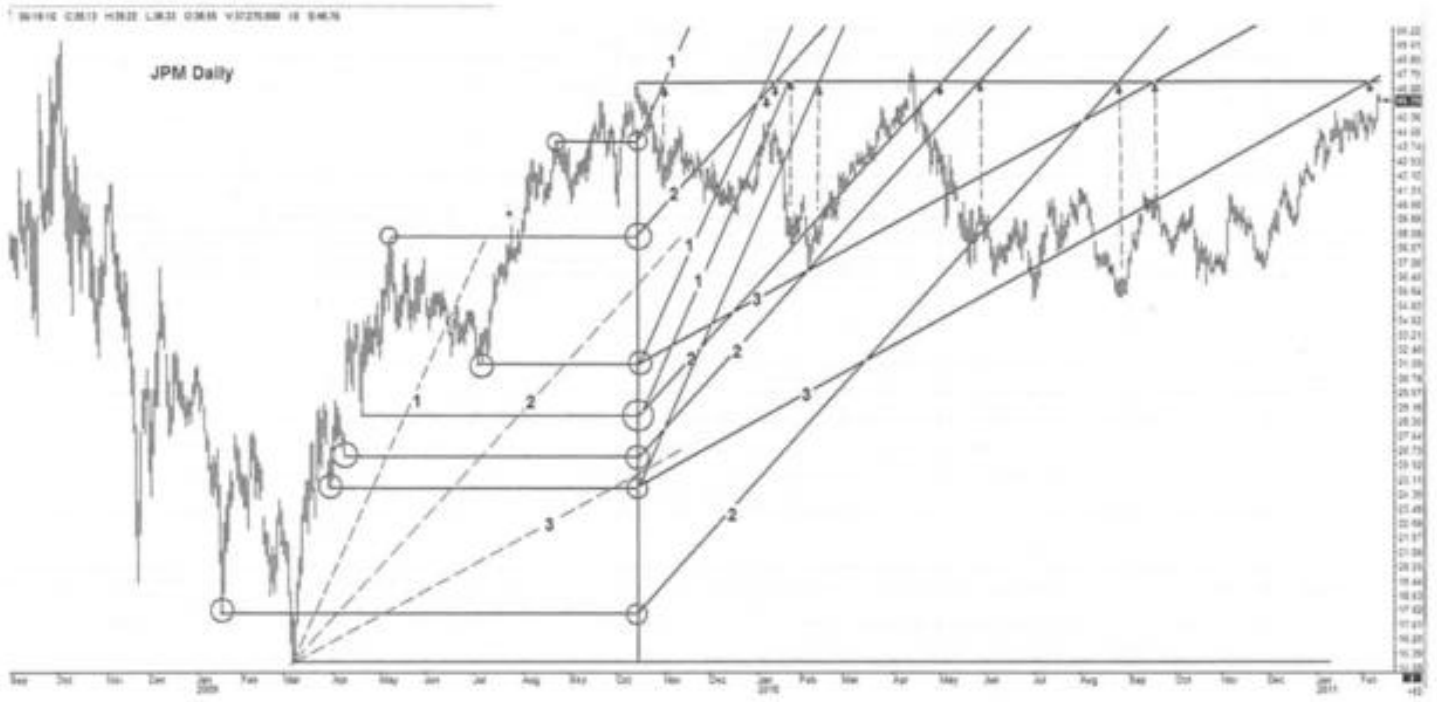
are set to circle harmonics but if the circle is off, so may be the angles.

On my website I have shown a method I use frequently to adjust a miss-scaled chart to its actual offset angles. In this method I use a 'distorted box' that is distorted to the same scale as the chart and take harmonic angles from this box. To do this I assume the first leg up is the strongest and is represented by a Gann 4 x 1 angle (not always true but will work 90% of the time). I draw a 'box' around this first 4 x 1 high and subdivide the box into quarters and then lay in the lines as shown in this next chart. Now we can see that the 4 x 1 top has a decline until the 2 x 1 time period but rests on support of the 50% of the square at that point. The 'diagonal' of this distorted square is still a 'relative' 45 angle in terms of our time and price relationships and you can see the angles work well. We then take parallels to these angles and move them around our charts and place them at lows and highs to see the natural slopes. In our trading system we will put these angles at our nodal points to square out the top price line.





On this JP Morgan chart above I have put on a 'box' on the first top (circled) making that my 4 x 1 angle and then transferred angles '1' '2' and '3' to the nodal points under the axis tree and they did create tops where they intersected the top line. Now you just keep track of these angle slopes and move them around to each node as shown below with the same chart but I have taken out the 'box' but left the 'dotted' box angle remnants to be transferred to the nodal points, and you can see each of these hit.



Now some of you may be starting to think that this can get complicated or take a lot of time to apply. Actually it's much simpler than shown as we just apply my 'backwards' angle approach. All we have to do to know if a big turn is due today or tomorrow is draw the horizontal top line and take an angle starting at the origin low and run it up to the top over today's date. Then you look at the vertical axis tree line down from the last top and see if that angle coming up is at any node point. If not, you move the line left or right to find where you are and where the next turn will be.

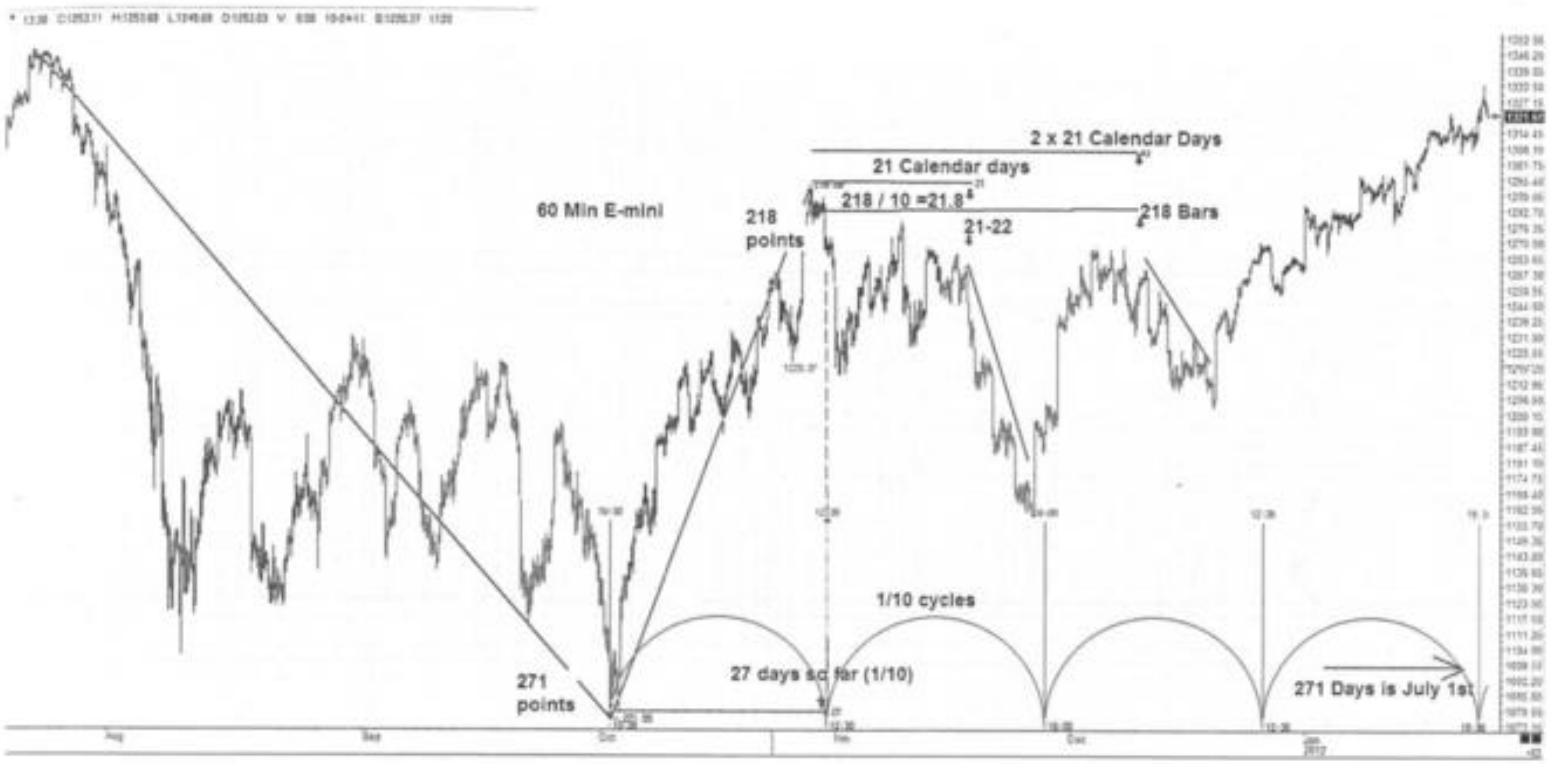
Most of the time you will just quickly drop a vertical line below the last top or above the

last low and look for major nodes from the left side. Then play with a trendline from the origin point to today's date and see if that trendline intersects the vertical axis tree line and if not move the trendline left or right until you get a nice fit. That will give you a projection of the next turn and now you would look for 'measured moves' up or down and support and resistance to enter a counter trade near the projection date. You would also hunt for foldback patterns to make discovery of the reversal point easier to identify. You can also put on the more exact arcs to square the node distances, and especially the square the price with bars method, but for the first quick scan I would start with the above.

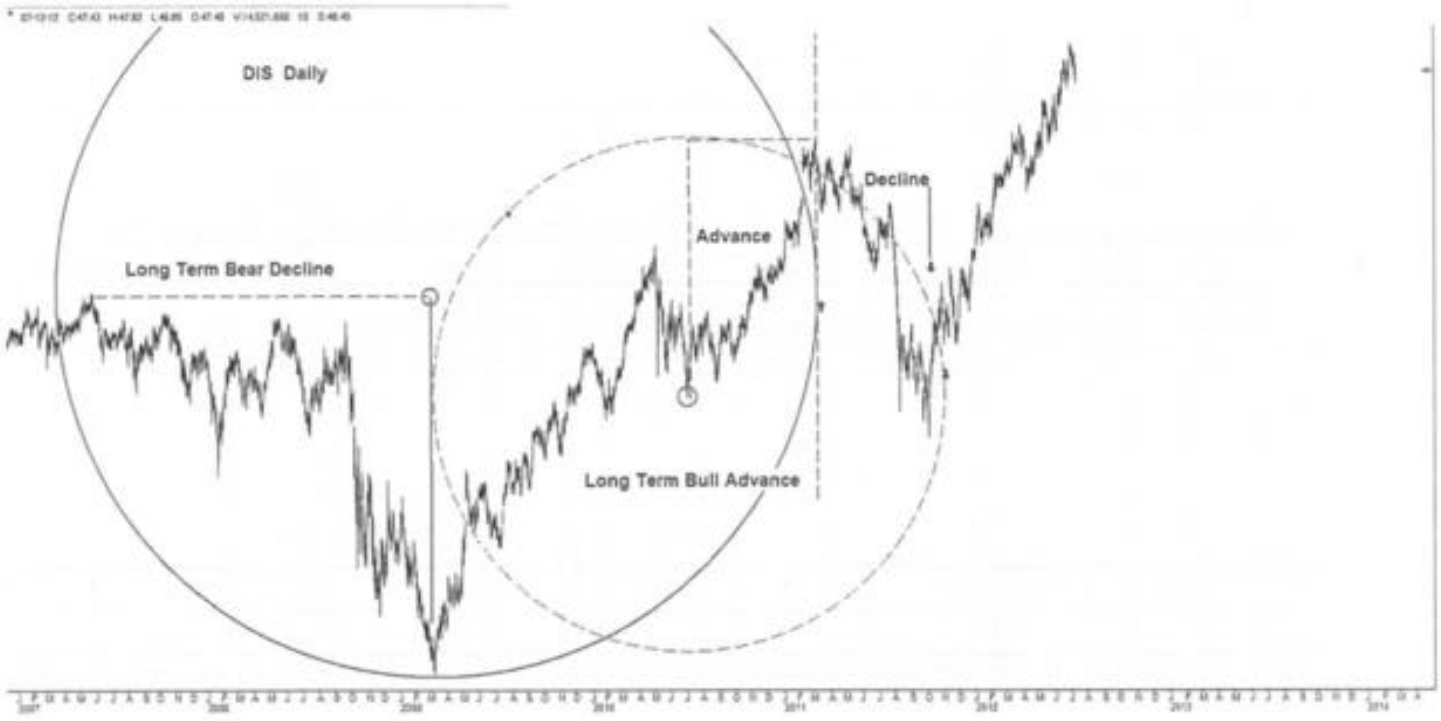
One additional subject we should cover when talking about scaling is the relative time frame and numerology of the square out numbers. Since time cycles 'translate' into numbers, there is no 'decimal point' and you can move the digits around and even 'chop off' the leading number like 1.732 could be '732' or 2.618 could be '618'. When squaring out a number of days or bars we can divide by 10 or 100 (move the decimal point one or two places) and get smaller square outs along the way. This next hourly chart shows this.

Here we see a big up move of 218 S&P points requiring a square out of 218 hours, days, weeks, etc., OR 21.8 units or 2180 for minutes or something small. In this example at 21-22 calendar days (21.8) there was a top and a decline and also at 218 bars a top and decline.

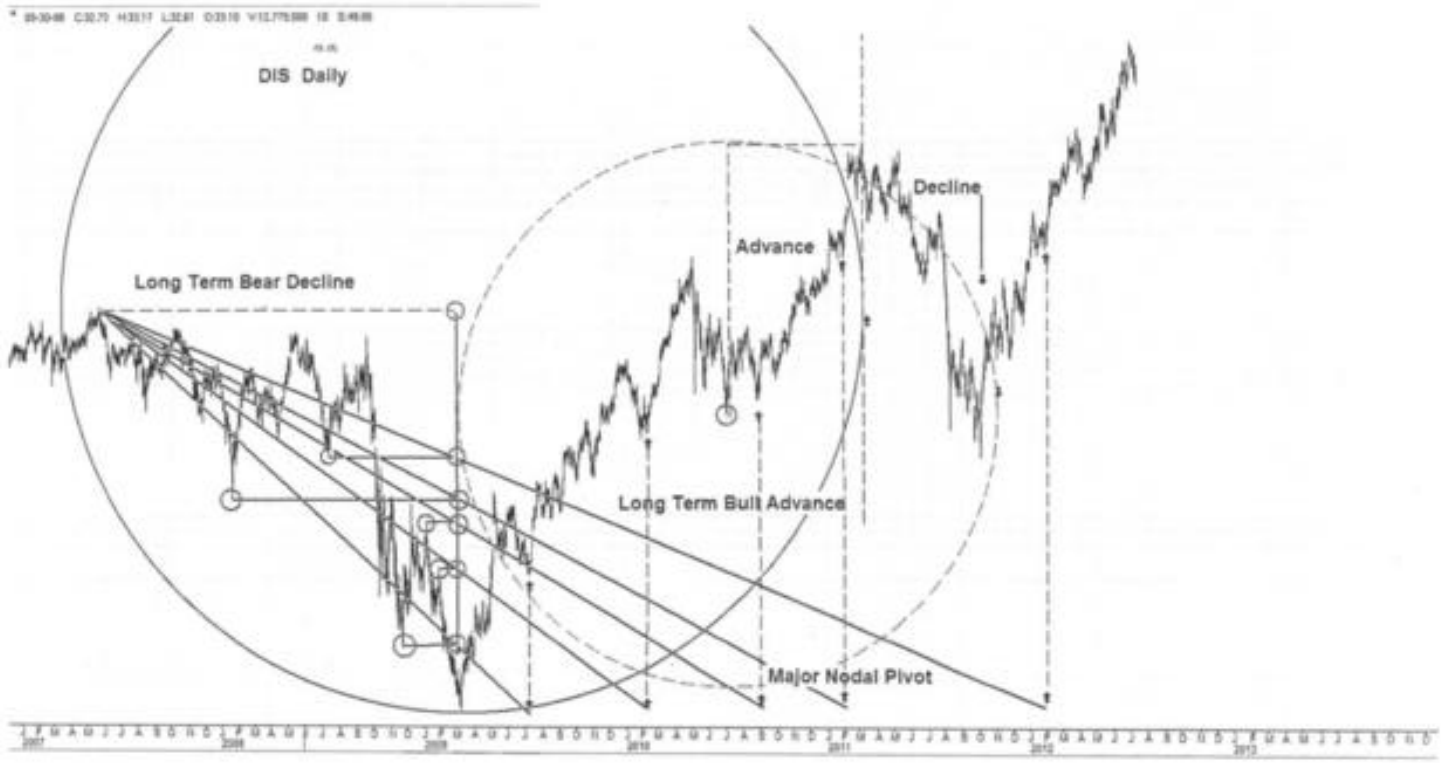
These were 'new trends' at that square out point so the square out worked but why did it violate our principal that if they go UP 218, they must go sideways or DOWN for 218 ? In a way they didn't as you could count from the top a big 5 wave pattern out to the 218 bar decline and that could qualify as a consolidation but often you need to look to the next larger time frame for answers. This next chart explains why, and why we need to keep track of the larger time frame moves.

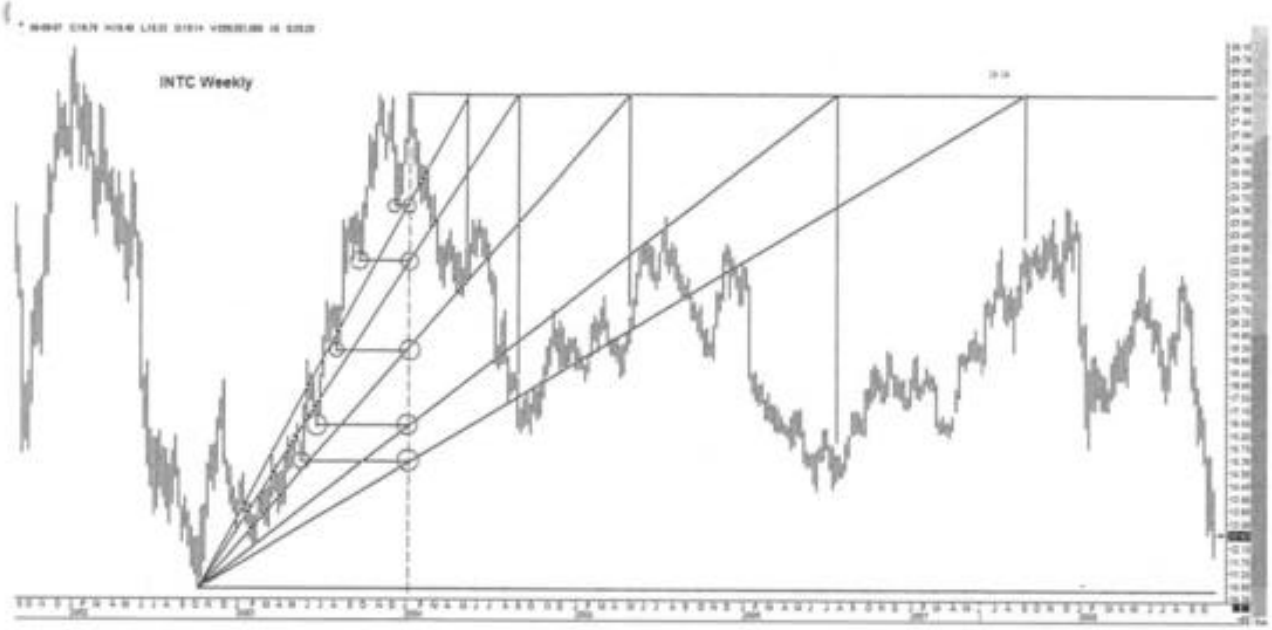


Now we see a much larger decline that ended the bear market plunge and started a new bullish impulse wave up. In theory, the 271 point decline will require a 271 day advance to at least July 1st of the next year and since this is based on the last bear market direction time frame, the up move should be correspondingly big. If such a big advance is required, there will be little room for a big decline after our first advance shown on that previous example. What we'll see is a series of small tops and dips that will make up the 218 bars or days of the impulse top consolidation, while the primary advance of 271 days or bars exerts upward pressure and usually give rise to the typical 5 wave advance of ever higher highs until the entire move squares out. We can see here that the 1/10th or 27 calendar day harmonic gives small periodic turns within the 'whole 271' up move expected. The lesson here is that you always start with the largest time frame like monthly or weekly to find what the 'main' legs are and then look to the sub leg cycles found in smaller time frames like daily, 60 minute and smaller. The 'full' square outs of the full point count in days, or weeks give the main up / down trends, and the smaller circular arcs and harmonic angles from nodal points break down these bigger swings. By the way, on this above chart there is a bigger up move still possible since the chart shows the July to October decline of 271 points but the final top was May 2nd and the total drop was 296 making the advance at least out to July 26th 2012 with a possible topping phase for a week or so after that. This next chart of Disney shows a 'big picture' bear leg down and forecasted bull leg up using our TCB or circle method.



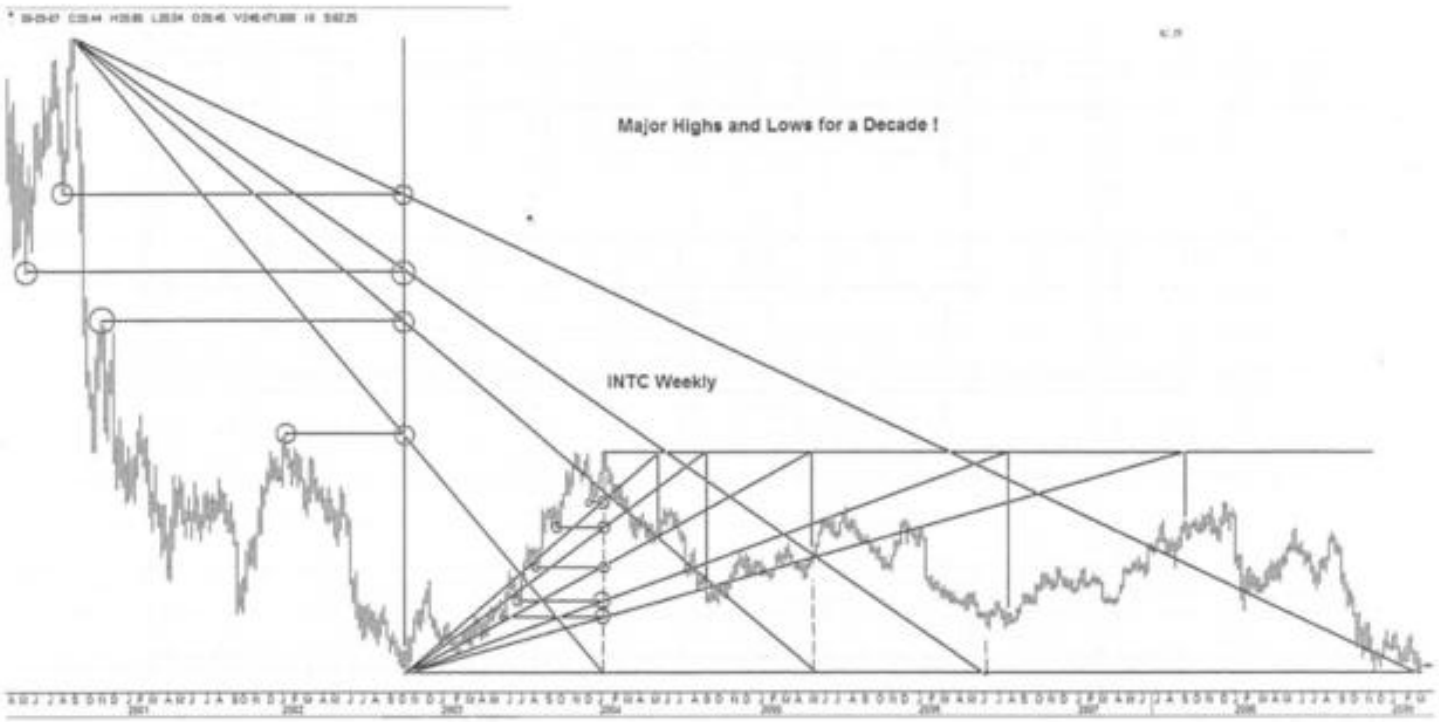
Below is the same Disney chart with our nodal angle system added to the primary square outs above. Other pivots could be added with the 'arc' method of squaring the node points.





Getting 'perspective' is the most important thing and many of you will rush off to make futures trades on 15 minute charts and overlook this method's most powerful feature. Since the TREND will always bail you out of a bad trade, knowing what the trend is, is the most important thing. Very Long term charts can greatly help in this regards. This chart of Intel gives a sense of where the big pivots fall but they are not 'perfect'. If we back up even more to get a longer term view we can see the big swings much more clearly. The next chart is the same weekly INTC chart but backed up to show a 10 year history. We see that if we can use the all time high to the bear market low, we can get many swings in the future that will last for months to possibly years. The last low at the far right of this chart was the final low and so far has advanced at least two and a half years.

You should always try to start at the highest high or lowest low in history, or perhaps 10 years, if the historic extreme is 50 years ago or something very distant. This way you can get a feel for the long duration bull or bear moves. Many of those very long term moves will break up into 'waves' like 5 waves that comprise the long term trend. You can plot the smaller long term trends on perhaps a weekly or daily chart if the very long term historic extreme is on a monthly chart.



Here's the very long term INTC and AAPL charts that at least identify approximately where intermediate moves of six months or more could be starting. Note on the long term INTC chart above how 'clear' the left side nodal points are when looked at on a long term chart. The resultant timing angles going to the baseline give us a much better feel for what the long term up or down legs will look like and when they are expected.

When looking at very long term charts it best to 'keep it simple'. Just look for the basic principle of 'as much as they go down, they must go sideways or up'. Sometimes this is easily drawn with rectangles of price and time periods.

I like the visual of the rectangles but they are just the vertical axis tree top with a 45 degree angle going down as shown here with the declining angle from the price drop square to the baseline. The same result could be drawn with a circle. By the way, note the above S&P Daily, and how after the first (circled) top and second projected top (circled), the same fractal developed.

Chapter 7

Final Concepts

We will now put together all these ideas to try and get a comprehensive view of the chart. We always start with our simple PRINCIPLE that the PRICE vertical distance must be offset by the horizontal TIME interval. Once that occurs a change in trend is indicated.

Here we have an hourly S&P chart and the 'big' leg down at the left to the final bottom is 148 POINTS. Since this was a decline we now need a rally or consolidation of the same amount of time before the market can go down again. On the right side after the low we see a top was made at 148 'bars' after the low. This may or may not be a final top since the time element is variable and 'bars' may not be as strong as calendar days. The numbers on the right with a 'D' after them are the calendar day time counts and the numbers without the 'D' are trading bars. Note that each circled number on the left creates a node that is replicated on the right with that *numbered price drop amount to the low* range, being squared out in hours or calendar days. Note the approximate distances of the foldback wings like the distance from the 25 to 69 on the left being almost the same as the 25 to 69 on the right, and the 'foldback' of the 25 to 78 on the left being the same distance as the 25 D to 148 on the right. If you can locate one of these pivots you can often be warned as to a future turn as to time AND potential price. (Again-numbers on left of axis tree are vertical *price distances* to the low, on right, they are *time* in bars or days).

The chart below potentially **solves** our 'scaling' problem with simple trigonometry.

This is the same chart as above but now I have started with the '52' price distance to the low on the left (look at the 'big' squared 52) creating a triangle starting at the node point of 52, and going down to connect with a baseline point that is 52 bars out in time. That triangle hypotenuse is *the correct time and price angle* for this chart. It is just a coincidence here that the angle is also about 52.4 degrees but since this is the correct angle for this chart, we can now draw other 52.4 degree angles (or parallels to this first one) and start them at the other nodes and you can see when they hit the bottom line you get perfect square outs. Now if you look closely you will see the big high on the left from its node point down to the 148 end point catches the top but there is a small discrepancy between the 52.4 angle and the horizontal 148 bar count. The bar count is usually more accurate and the angle usually off, due to imprecision in drawing the angle, but there is also a slight difference between 'bars' and *weekend* time gaps that show up in the angles as a slight deviation from the true slope. I only mention this because in most cases you will want to calculate the first true angle and then just make a quick dozen duplicates of that angle to move around the chart and square the ranges, rather than take the time to calculate the actual bars for every turn. After you have the angle predicting a turn in your current time zone, THEN you can go back and recheck the exact bars or calendar days to get more precision, but in the early analysis you will just want to quickly scope out the future expectations. Looking again at this chart we

can easily see that the correct angles down from all the nodes exactly give us all our trading turns very quickly and easily.

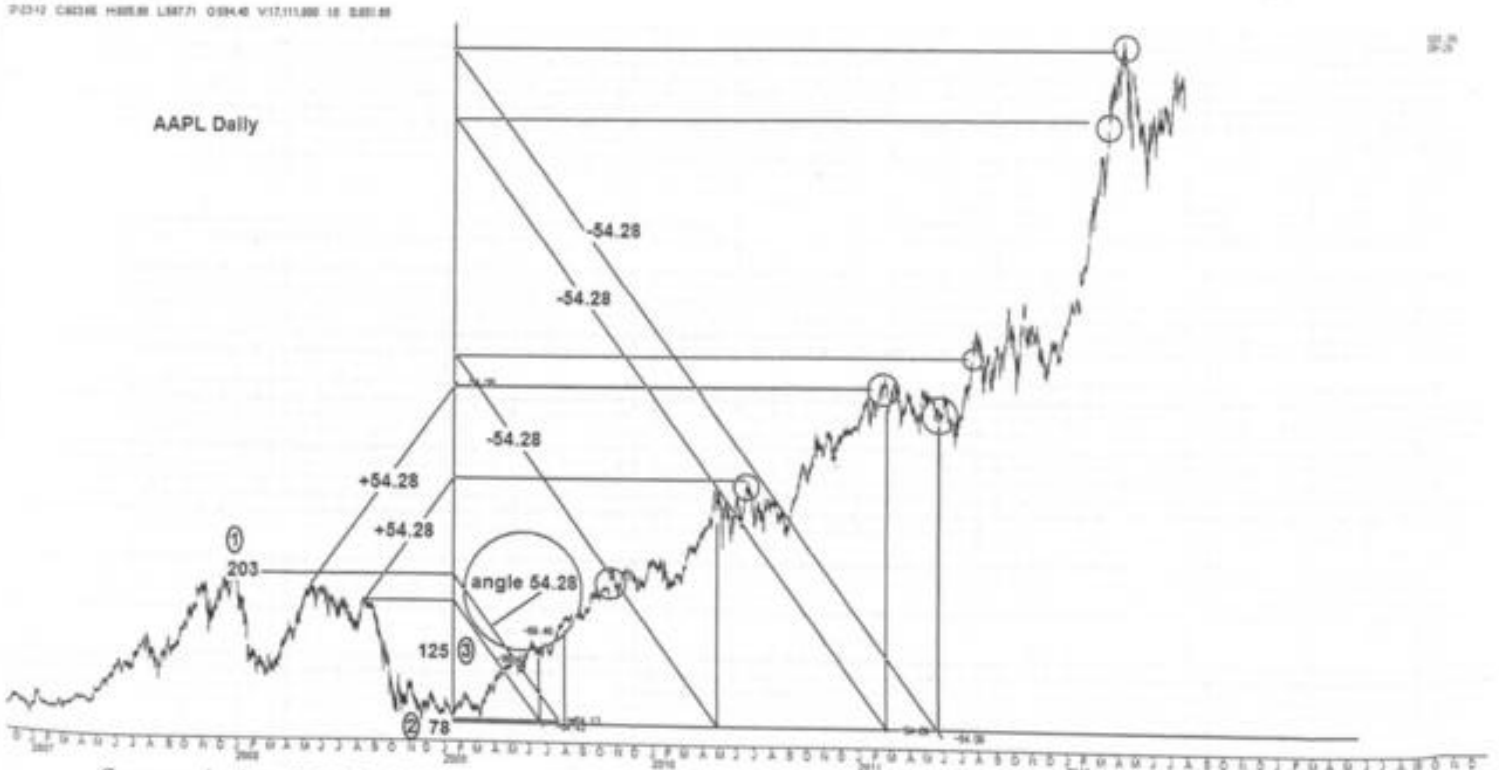
Here's an example of the S&P daily over the past bear market trend since 2007 and we see this method gives us very good predictions for where all the BIG moves will be.

I used the *last leg down* here to make the time and price triangle that matches the scale on this chart and that angle was 41.89 degrees. The parallels to that are started from the next nodal points up to get later square outs. Note if you start with the 'last leg down' prior to the final low, that angle will always come out first, so then you can methodically look for all the next higher distances on the left of the axis to find the next square out in time. I think you must honestly conclude from looking at this chart that this method is one of the greatest advances in all of technical analysis and truly accounts for all market movement from a geometric charting perspective. You have made a wise investment in buying this book. But we are not done yet.

You may be inclined to quickly do an analysis like this one on this next chart and just use time and price angles from their top origins rather than the proper 'nodal point' origins. These do work and can give a few extra turns but our principle of vertical price and horizontal time is violated. While this will give a few good hits very quickly I urge you to take the time to set up the axis tree above or below the pivot so the vertical price distances can be squared perfectly with the time period.

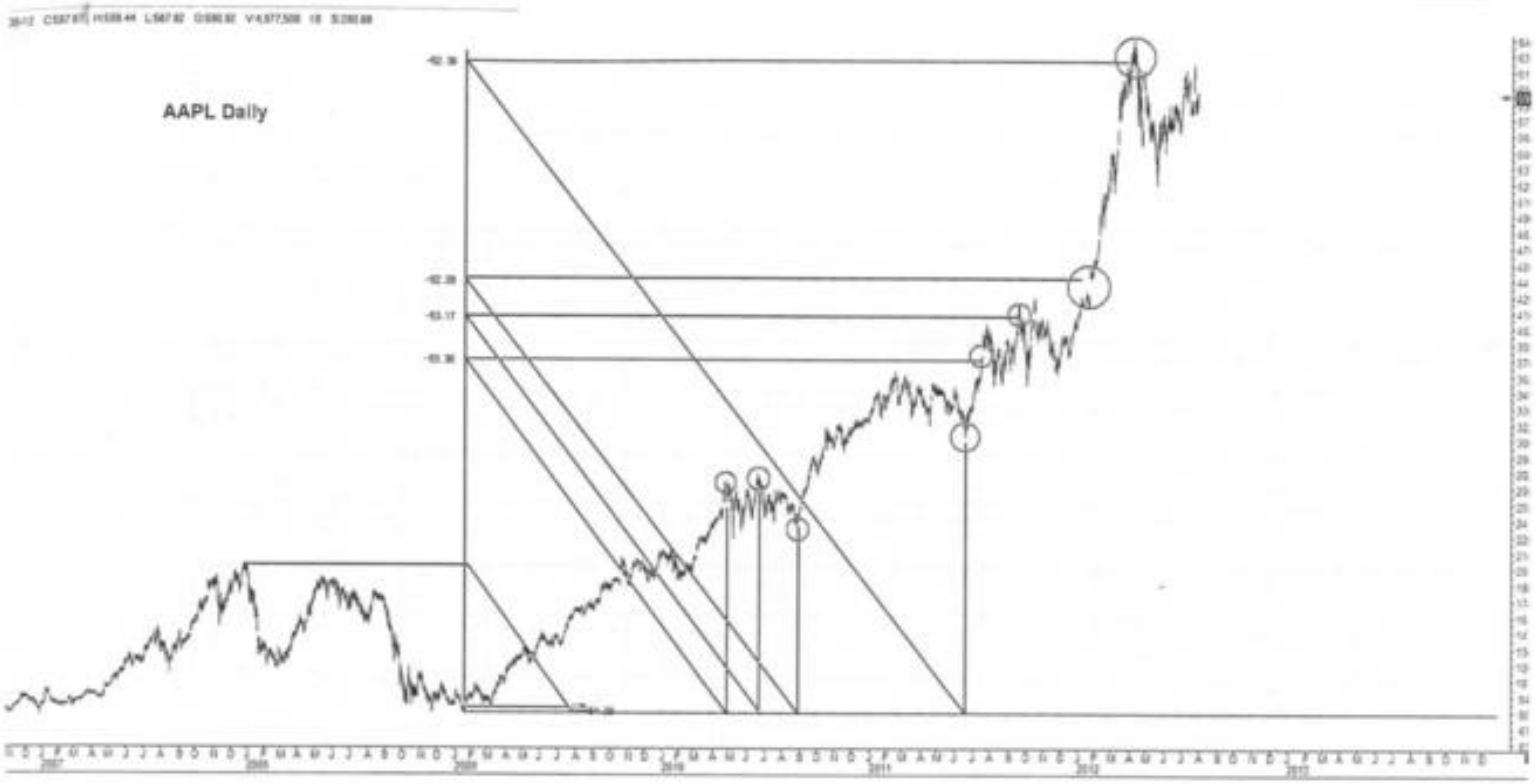
In this case I have used the 'square out angle' but made it from the triangle starting at the high price and extending to the high price bar count on the right of the axis tree and NOT coming down from the node on the axis tree. This can work at times as seen here but the technically correct measure is the angle from the nodal point as seen in the prior exhibit.

I mentioned previously that there is more and once we have the correct square out angle we can now use that angle not only to get our future *time* turns but also future *price* turns.

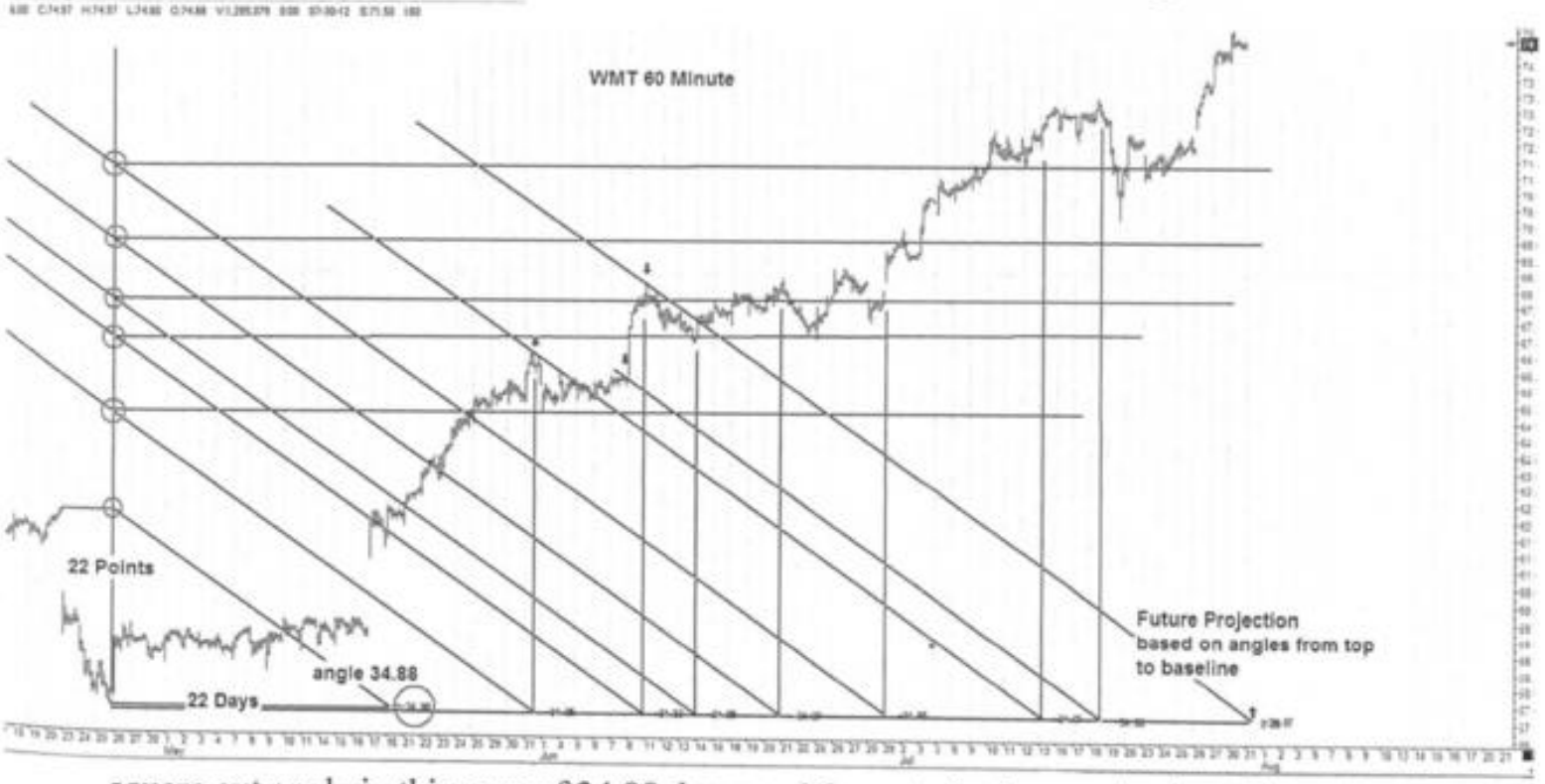


This above chart of Apple shows the initial key triangle that constructs the square out angle (54.28) being from circled point '1' (203) to circled low '2' (78) and circled range '3' (125 - the node drop from 203 to 78). Once we have that key angle we make parallels to it and can move them around to see where they square out lows on the baseline and traveling back up to the axis tree, see intersections in *price* that give future resistance areas. We can also take the same angle going up to the right as shown to the left of the axis tree and square out future high prices from past highs. Note the circled parts of the price pattern on the chart which shows where these key square out angles hit the axis tree or baseline and can be moved back and forth across the baseline or price highs and lows to show potential future cycles and prices. Note how ALL the key pivots in this charts history are accounted for, except for a few small 'wiggles' which I left out so as not to confuse the chart with too many lines but you can see where they came from by putting the angles in yourself. Once you have drawn the first key square out angle, usually from the last leg down into the final low, you can then duplicate that angle and after every high, extend it backwards to intersect the axis tree and then look right for a future price. Also a chart high can be extended down to the baseline with this key angle to get another square out, or new highs can be horizontally extended left to the axis tree and the key angle placed there to look for a low at the baseline. Most of all REMEMBER that there will always be TWO of these key angles. One to square out the price drop and time in BARS and another completely different angle in perhaps calendar days or another time unit you chose. In most of these above chart I have just shown the trading bar square out angle.

The chart below is the same AAPL chart emphasizing the technique of dropping a line straight down from each high or low and extending it backwards with the key square out angle to the point it intersects the last major axis tree. Then the horizontal price will be the future resistance from those past highs and lows. By doing this you will get a 'feel' for the fractal developing and can usually tell if a climax is near or a new leg up. These fractal points will follow the same pattern or they will follow it exactly backwards. Note the recent 'final top' came from a 'final low' which started the next leg up. Follow the first three vertical dropped lines from the circled highs and see how they reflect horizontally from the axis nodes to the three circled points in the future that have a similar fractal. Note that the third one was the big run up and the horizontal was the huge gap up run. This type of analysis can point to 'big' option trade possibilities.

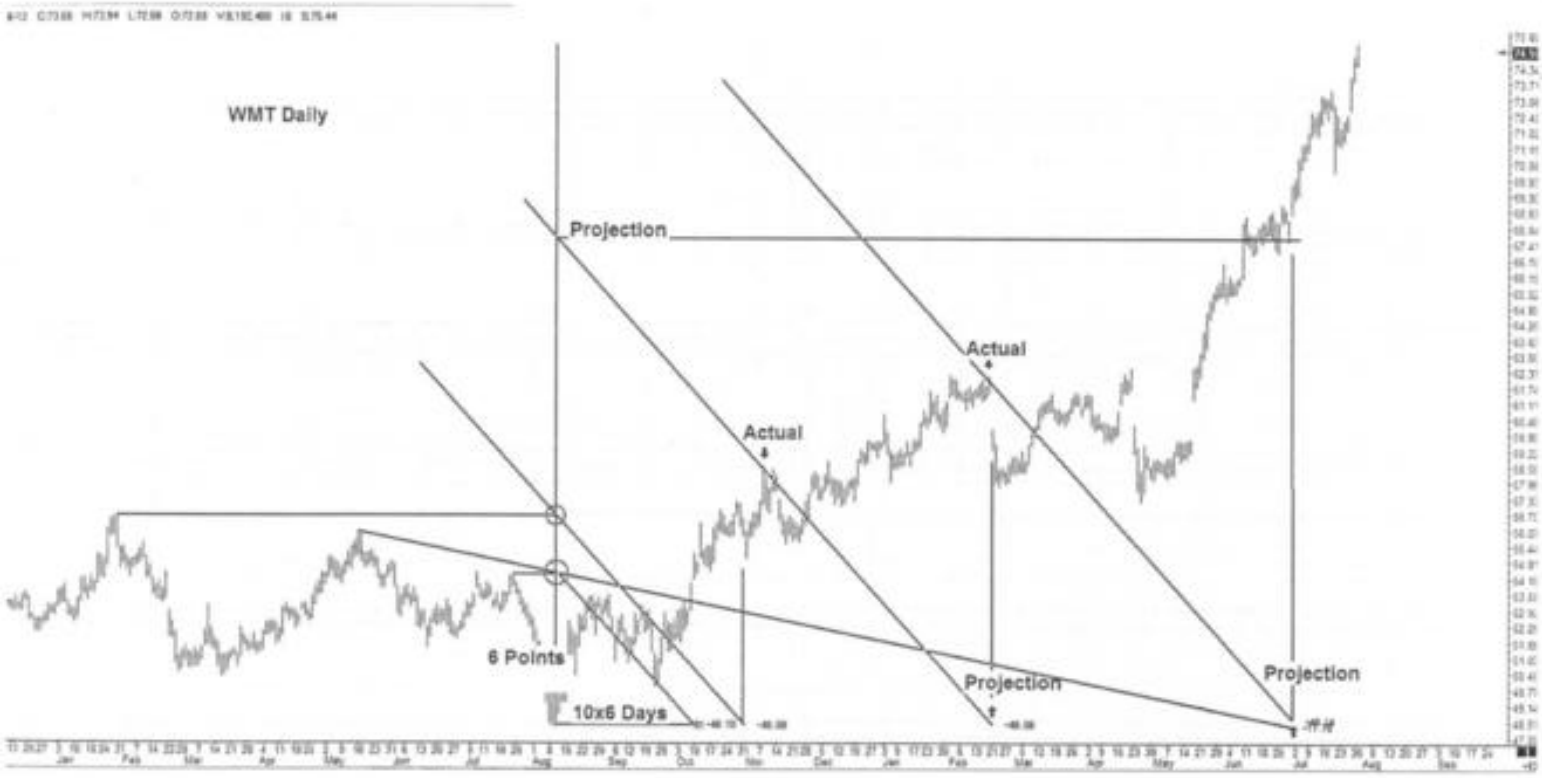


Below is a 60 minute chart of WMT which is difficult to analyze because it just goes up with few time cycle harmonics. Even so, it can be made sense of once you take the first



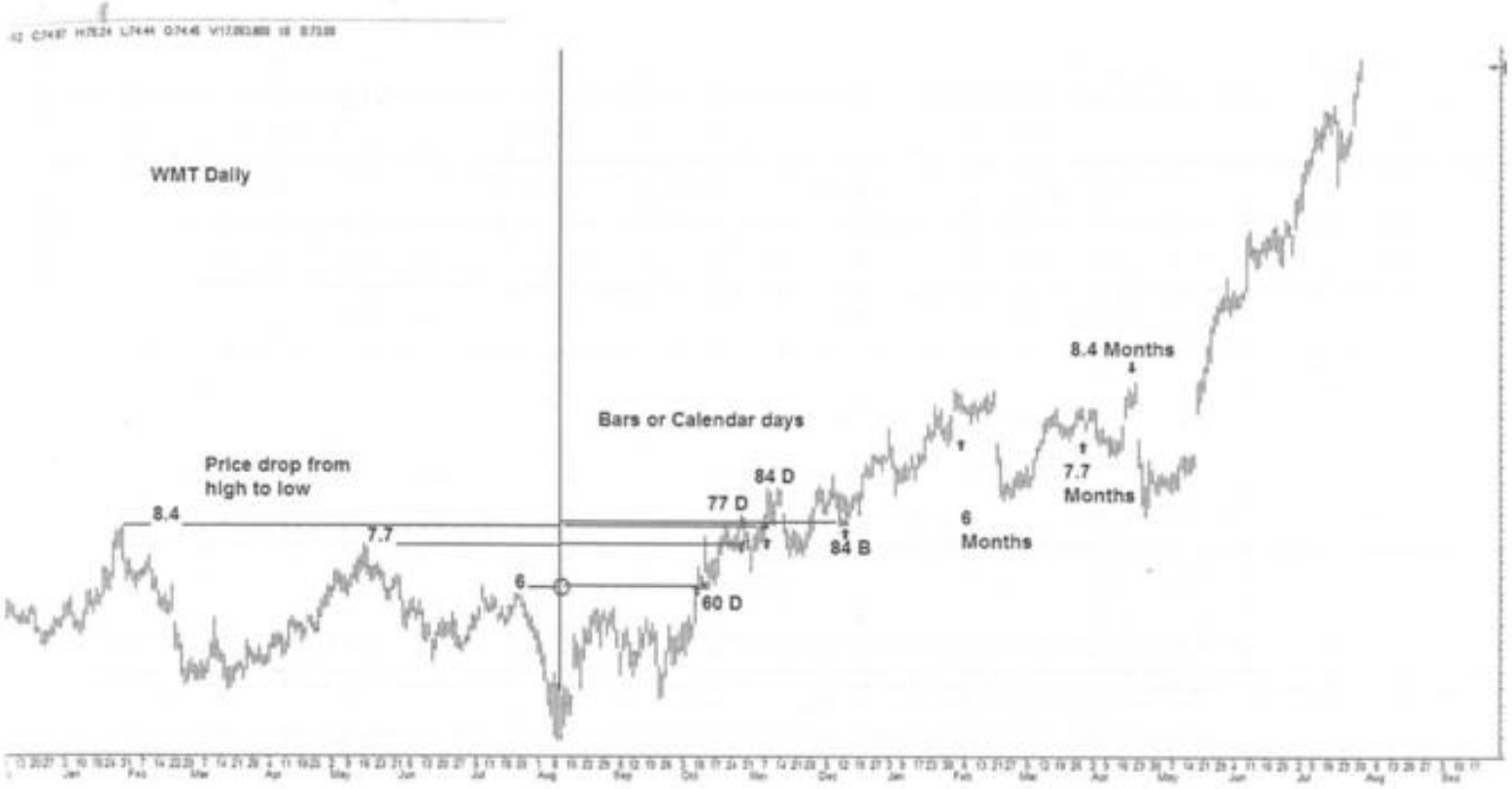
square out angle in this case of 34.88 degrees. Many stocks have point drops like this one of only 22, so 22 bars does not work and you must try 22 days or 220 bars or days. Once you find an angle that works, then you can go back and forth over the highs and lows to see if

the angle accurately projects future turns and can be used. Most of the 'horizontal' projections are support and resistance levels so you use them to go long or short above or below them. If you have a strong trending market like this you may find you will get a better perspective by backing up to a larger time frame to see the big turns every several weeks to months.



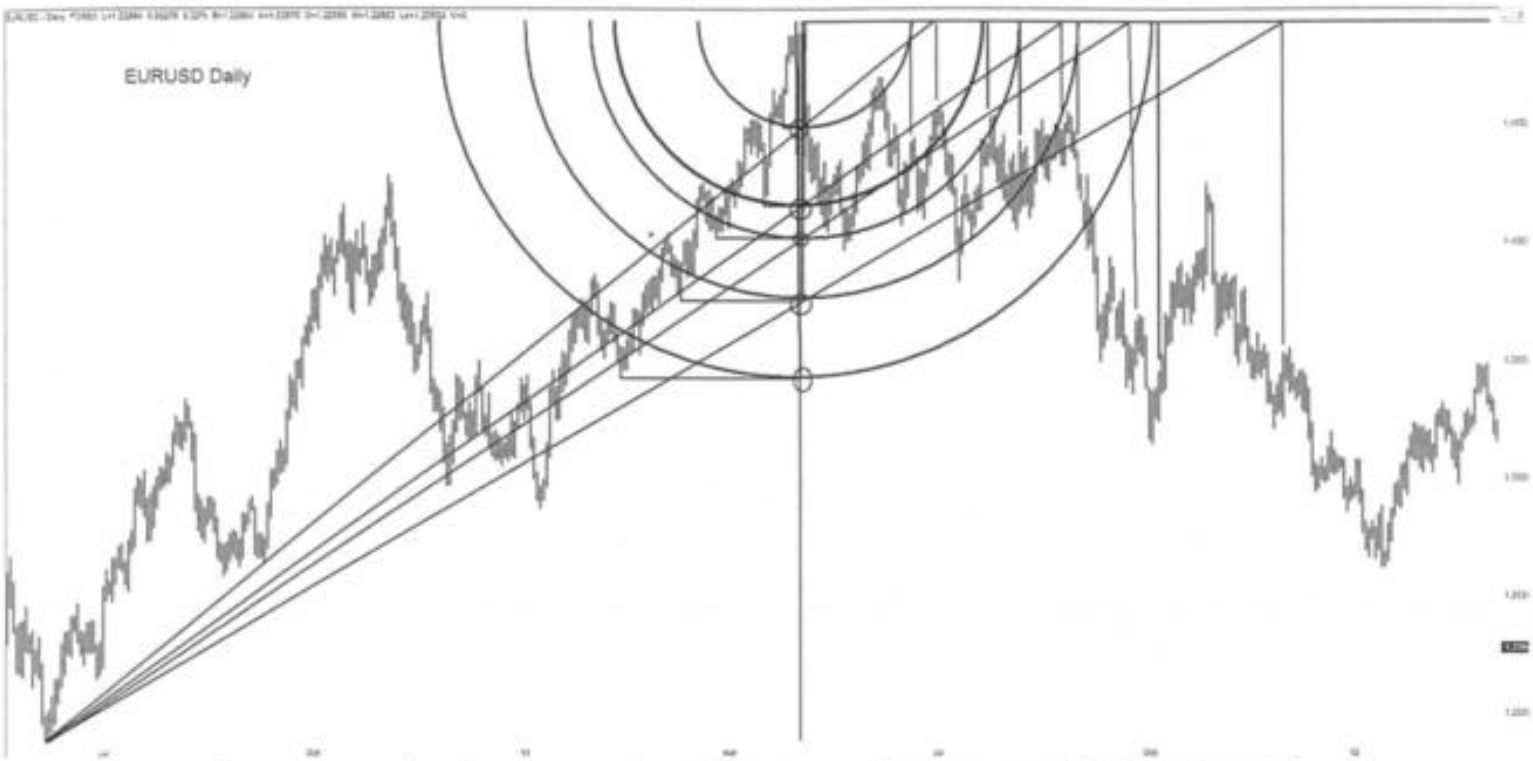
In this WMT case, even the daily chart is strongly trending with few major trend reversals. The price drops were minimum and we see the small $6 last leg down to the low needs to be squared out with 10 x 6 days to get an angle that projects adequately. The highs labeled 'actual' means the projection timing line was started from that observed top to get the projected next big turn as the angle hits the baseline. The last huge up leg at right was both an 'actual' projection from the last top down, and our trendline nodal system coming from the second top on the left. Both projections coinciding at the same point gave a big straight up move. Often you will find multiple projections like that when you find the right cycle harmonic and they will all come out together at the really big turns.

In addition to the above techniques let's not forget the 'basic' building block of 'square the range' or the price drop equal to the time duration. This next WMT chart shows that type of analysis and this is really where you usually want to start when examining a chart.



Start with calculating the 'vertical' price drop from each past high to the final low (the 8.4 is $56.72 high - 48.32 low), and then on the other side of the axis dividing line, square the price with a time unit of bars or days or decimal shifted numbers. In this case with small price number drops we see that 6, 7.7 and 8.4 MONTHS as a time was also working proving the initial observation in the opening paragraphs of this book that the price spins out cycles in minutes, hours, days, weeks, and months, but here we have net changes or *ranges* also spinning them out. We also see here the decimal point shift conversion for time. Wal-Mart is not the best example to use here but I chose it because you will run into many steep trending charts with few 'wiggles' and you need to know how to start to find the time cycle harmonics. Traders would usually stick to active movers like GOOG or AAPL or IBM and such and their relatively big price fluctuations spinning out many more reversals that are easier to square without a lot of decimal shifts.

Many of you will undoubtedly be forex traders and the 'small' prices i.e. 1.20 Euro (to the Dollar) are hard to translate at times. I usually start with the graphics to see if I can do it without the translation and this next chart shows our usual nodal method with trendlines and arcs and it does give good results.



Currencies are notoriously choppy since they are easily leveraged 100 to 1 and there's a sucker born every minute trying to trade on margin. The big long term trends are easily spotted on weeklies and monthlies with parallel channels but the hourly and daily fluctuations can make you a lot of money IF you trade from a cycles viewpoint and plot out where to expect your signal reversal bar to enter the trade for one to three days. The above chart is a little 'compressed' to get the low at left in to show you the whole picture but you can expand yours and do it more accurately. Remember it is not necessarily the complete accuracy of the chart that we are looking for but the left / right fractals, and measured moves, and our timing lines and arcs are only meant to get us to discover a signal reversal bar within a bar or two of the projection.

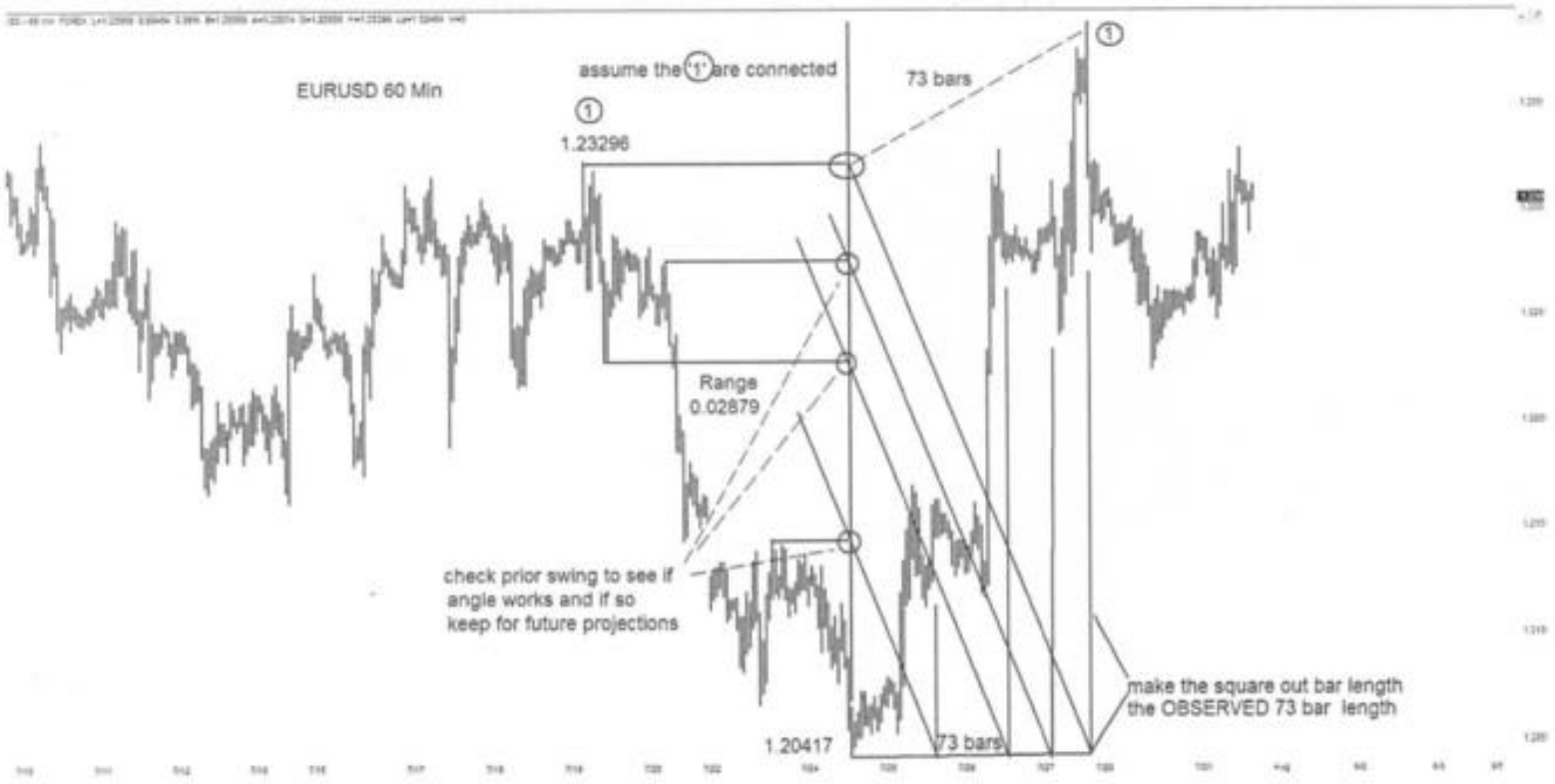
Below is a typical scalping use of this system on a 60 minute Euro Dollar chart. On a 60 minute chart you don't need more than a couple weeks of data to get big turns every two to three days and here we just used a last dramatic drop to a low and you had two days to look at the chart and do some quick angles to nail that first huge up move and then the top. If you stick to the 'big' pivots and not the everyday minor wiggles, you will get better trades that might develop into swing trades you can carry with a trailing stop.

Now I've added our arcs as full circles to get the 3 o'clock square outs and the 12 o'clock support / resistance. Each circle is centered on the nodes. Remember these represent 'as

much as they go down they must go up'. The first two 3 o'clock positions projected high areas, but remember this is within the framework of a bigger rally as the arc centered at the last top (not shown,-origin point for angles, node) will not top until the right of the chart

near August 3rd. After that, we must be on the lookout for a decline or an 'A' 'B' 'C' type correction before another up leg.

Sometimes it seems impossible to get a square out 'translation' and then I usually resort to assuming the mirror image points.on the left and right sides are connected and I would try an obvious right side peak connected with a left side one and get the angle to use by reverse engineering it. In this next chart of the EURUSD I spotted the '1' labeled peaks as looking like mirror images of each other. IF they are indeed connected, then an angle coming down from the node and hitting the baseline at the right side point '1' under the '1' on the right would be the square out angle no matter what its degree. I try that for a fit and then take parallels to test on prior minor swings to see if they all work and here they mostly do, so I keep that angle for future use.



Chapter 8

Step by Step Review

Let's first review the basic concepts. The primary principle is the equality of price movement and time balancing. If a price goes up or down, the time duration of the correction must equal that advance or decline. We call this balancing 'squaring' and we can square a high, square a low, or in most of the cases and the title of this book, we square the range between a high and low swing. Every drop in price must be offset with a rally or sideways phase to work off the shock of the drop. Every price rally phase must be offset with a time phase to digest the rally. The perfect representation of this is the circle with the four cardinal points: north, south, east, and west spokes emanating from the center with the vertical ones representing price, and the horizontal, time. This would be all we ever need except for the fact that we SCALE our charts in other than one to one correspondences. It is impossible to plot a one dollar to one time unit graph so it's usually $1 to two weeks or something that has no particular balance other than the computers algorithm for drawing the chart. The basic time units to balance price are chart 'bars' or calendar days, weeks, months and years, with smaller units like 60 minutes and 15 minutes working many times, and for limited time periods 1 minute time units. I usually always start with a 'manual' count of the dollar amount of the price drop and the number of bars or calendar days it is from both the origin high or low as well as the vertical axis tree fulcrum. In this book I emphasized my discovery of the axis tree count for squaring while the typical Gann methods use the left side high or low and count from there the number of bars or days to square out. Note that they are just counting bars equal to a price while I am counting the 'vertical' price drop or advance for the range. In addition I convert my 'nodal points' to sensitive angle alignments so angles going thru these nodes from an origin will square out a high or low with the *unique slope* of that particular angle which would be almost impossible to discover thru normal translation schemes. Since the total vector forces of combined time and price manifest in a circle we can use the trigonometric functions of the Sin and Tan to represent time or price and treat the price as an angle and the Sin or Tan times that angle as a time duration. If a chart can't be scaled easily the Sin and Tan distances will usually give you the turns.

I usually have two strategies I start with and it depends on the time I have. In the 'heat of battle' where you have to make a snap decision to buy or sell the futures and must have an analysis done in 30 seconds, I usually just drop a vertical axis line from the last top or last bottom and go to the prior pivot and draw a trendline to the baseline or top line at today's time bar. My eyes then look to see where on the vertical axis line that trendline intersects

and if it is near a horizontal node for a square out. If not, I move the trendline left or right to fine the nearest hit and assume the current trend will last until then. Here's what it looks like:

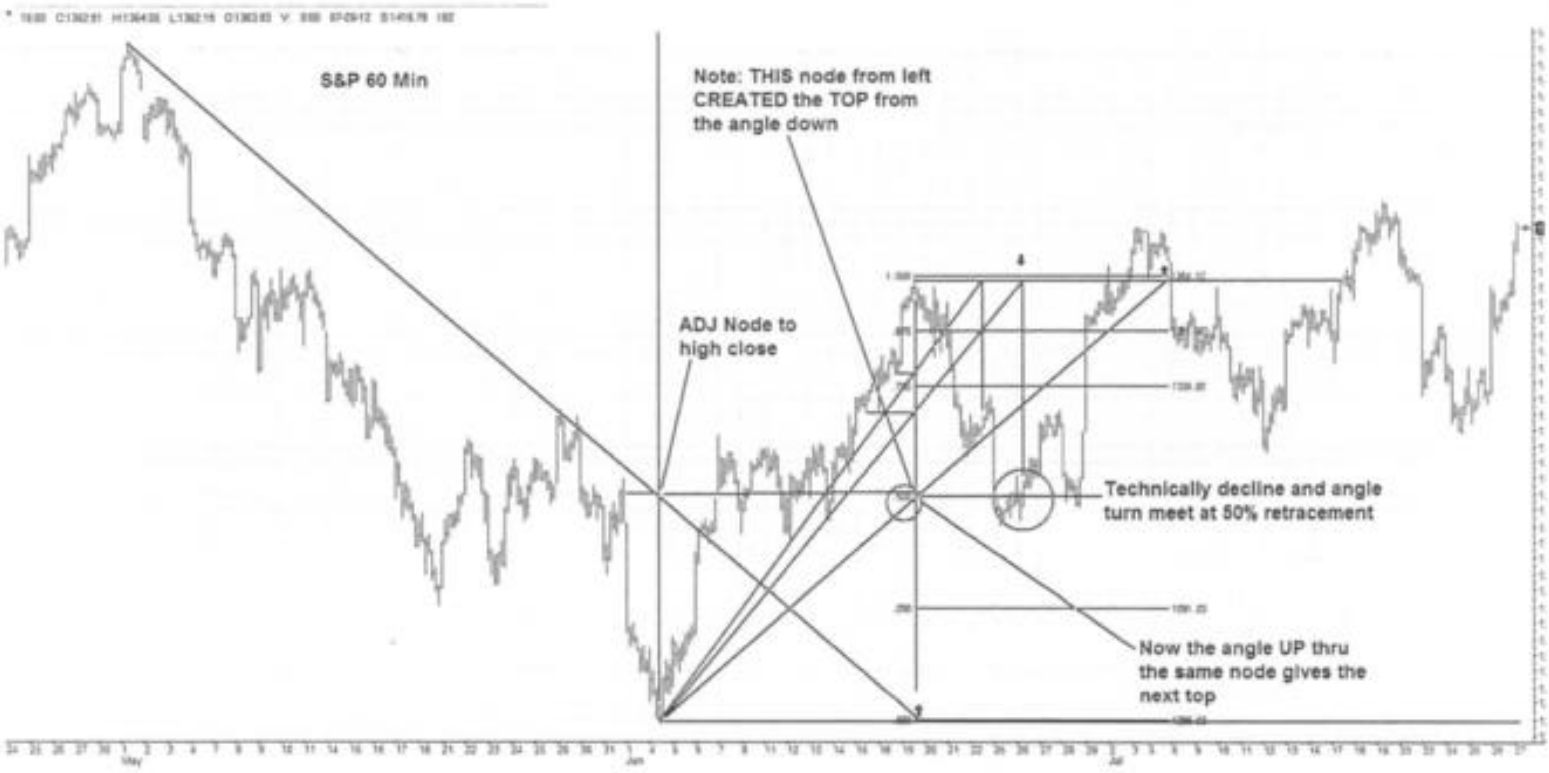
Note the initial angle to 'today' doesn't hit a node so it must be adjusted. I then try to add an arc or circle (TCB) to see my geometric N.S.E.W. vectors of price drop and time duration:

I draw the circle centered on the axis tree at the LAST SWING HIGH and measure down to the low. The right side of the circle will then be the max time of the advance again confirming that the existing trend will last a bit longer. The circle also tells me from where its top is located the next upside objective should they go higher. Each higher swing on the left of the axis is then compared with circles to see greater swing advance potentials UNTIL the entire high to low max circle is achieved. Below we see our 'max' circle with 'TCB Potential top area' on the right, but remember this is a GEOMETRIC circle and will be 'off',

based on scaling issues but it does give us a quick approximation. I will then go to the more 'accurate' price drop on the left side of a total drop of 148 points squaring out in 148 bars near July 5th for a perfect top BUT the 148 calendar day count is all the way out to October 30th so a potential Election day rally might be possible if no major swing low is violated. When you have two potential tops like that (148 bars and calendar days) it can often mean you will be dealing with a multi-wave pattern like the standard 5 wave Elliott Wave pattern so look for swings that maintain higher bottoms and use each leg for a new range square to get the potential terminal point of the next swing.

Now we look at the correction down from our first calculated top and after the fact and observing the pattern we can now see that the node we used (dotted line angle above) was off just a bit. If we look closely now, we will note a 'perfect' hit of the top if we use the

CLOSE rather than the high of the swing bar of the node creator. You see this on the next chart although on my large originals I can see it clearly but this book's exhibit is a bit small but trust me the horizontal line thru the node now goes thru the high close bar and the angle down thru that is a perfect hit at the baseline. We can now quickly put on a few angles up thru the nodes created by the last few swings just before this new top and expect one may be our correction low. If we put on a 50% retracement line which is normal for a bull pullback we see the prices rest on that support level at the same time our 2nd angle hits the top for a turn. We also may note a curiosity in that the same nodal point that was used for the big down can be used again to get the next top. This won't always work but does many times so always watch the most important horizontal nodal points.

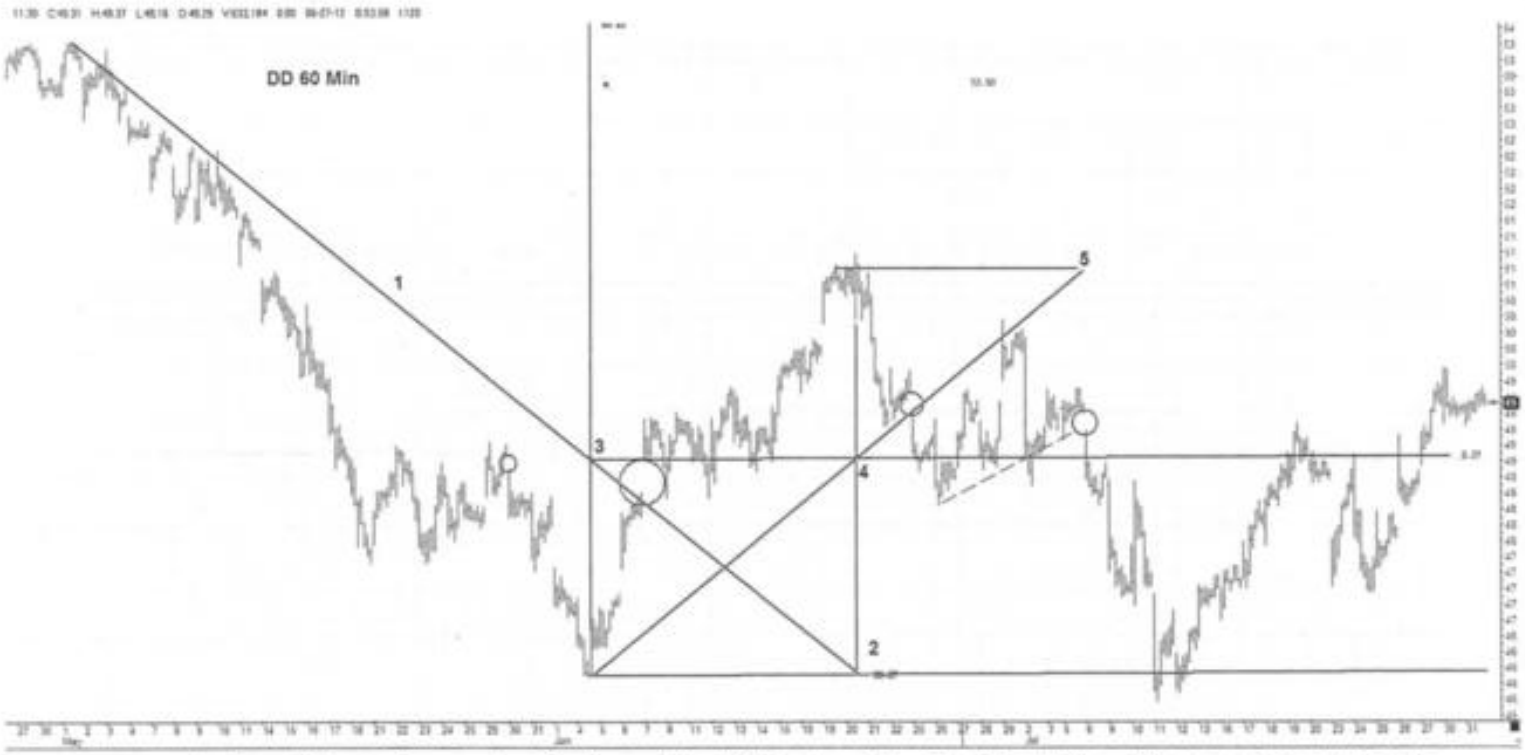


We can follow thru with our subsequent angles up from the major low and thru the nodal points and try and 'map' out our future path (below, next chart). Note that the larger turns are tied in with the more important support and resistance points creating nodes on the axis line. As a trader you want to look at those time periods and see if a 'measured move' has been completed as well as normal support or resistance calculations and watch for a signal reversal bar to develop to make your trade. Remember you should never just buy or sell on these predicted turns unless you are trading options. Normally you would still read the tape but you have much higher odds of success in taking a buy or sell that is generated during one of these cycle turning point bars.

Of course the simplest way to get great turns is the range node square out (below) with the key time and price angle based on a triangle from the last swing down to the first top up. Once you have that angle degree you just make parallels to it and move them to the various

nodes. Remember you can move these backwards and down from future peaks too.

A prior exhibit showed that often the node that creates a major high can sometimes create another top starting at the next turn. In this next chart of DD we see an angle '1' that

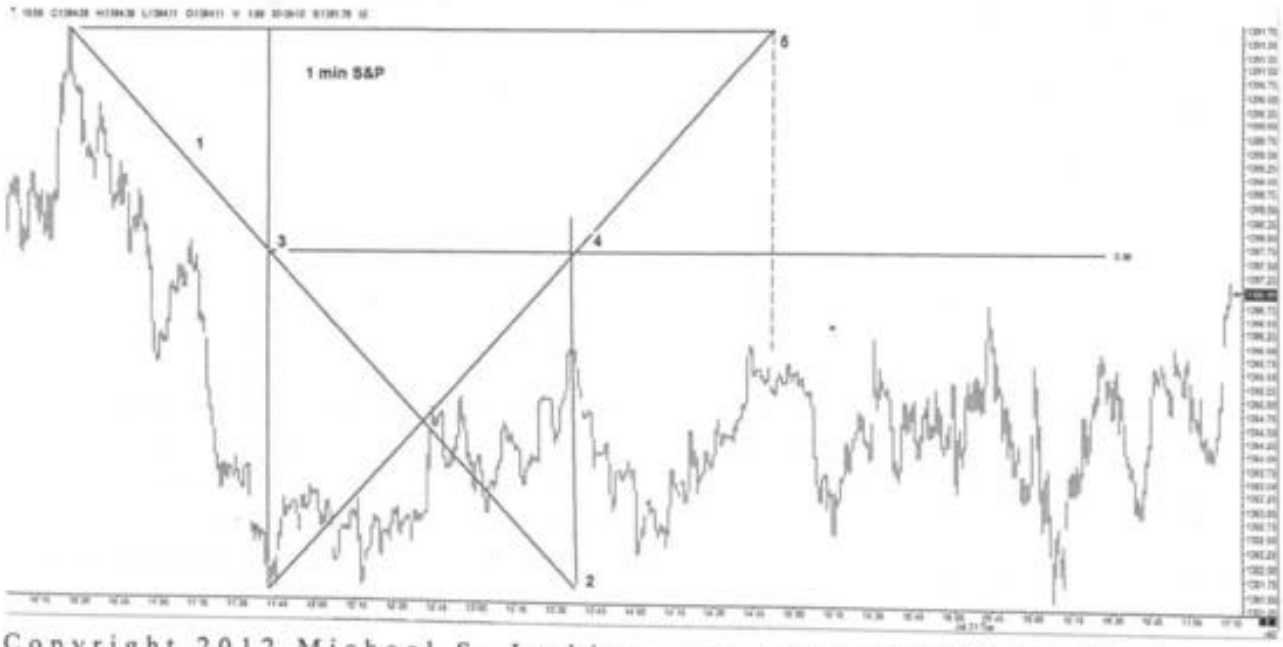


connects the high and goes to the baseline '2' just under the first big rally top. Since that is reality, it *must mean* that the axis tree intersection was a good node at '3' (and we see a 'gap' just to the left). We can now use an angle up from the low thru the '4' node created from the '3' level at the '2' axis tree. That angle goes up to the top line and we get another top albeit lower but prices collapse at that point leaving a gap where the uptrend breaks.

Above is a daily S&P chart showing two consecutive high to low uses of this technique. In studying the chart remember points '2' are set by you under the first top so you can discover point '3' the real node. Point '5' is the projected target top we are looking for.

Finally a spectacular 5 minute S&P chart showing the forecast of a major top (5) to within minutes, seven days ahead of time!

Here's a 'modified' 1 minute chart which has point '4' above the top so the timing angle must go to the original top line but none the less projects another top at point '5'.



These last charts are all 'square the range' charts but the angle that squares the range is reverse engineered from observed chart fluctuations. This last 1 minute chart actually has point '3' at a node so even though I constructed it from the observed point '2' top it demonstrates the principle of the nodal axis tree point based on prior swings. Whether or not you can see it yet, ALL the discussions in this book have been about the equality of price and time. Every method squared a prior swing whether by arc or circle, a Tan degree, an offset node angle, a ratio timing line, or these reverse engineered angles. The reason they all look different at times is solely due to the various scaling graphics. Do not lose faith if at first your software doesn't square these ranges perfectly. It will take a bit of experimentation to get the right time frame for the stock or commodity or forex that you trade and you may have to try three or four of these methods on the same chart to find the one that fits your scale. Trade the ones that work all the time and don't try and force trades on charts that don't fit. Those of you who are lazy and only want to program these methods and puch buttons to get rich will be dissappointed. You will have to go back to the primative methods Gann had to use in his day of price differences and time bars, or days. These always work but you will miss all the many ratio angle square outs the geometric drawings present. From my viewpoint the only thing is making money and I'm happy to do 5 minutes of work by hand to make a good living. Computer 'Flash' trading for pennies a share is an illusion. The 'big' money is made either swing trading for three days to three weeks, or using options at the precise turns that this book predicts. In the next chapter I will try and present the most common blueprints for squaring the range and I'm sure you will find one or several that suit your needs. Once you build a daily habit of analyszing your charts this way you will find many more opportunities. Just remember not to forget your typical trading rules about signal reversal bar entry and exits, measured moves, and support and resistance. These should tie in with the chart predicted turn dates to be good trades. Always let the chart tell you when to trade. You can predict the top but don't guess- go to a smaller time frame like 5 or 15 minutes during that window of opportunity and look for the signal reversal bar and higher bottoms or lower tops to confirm that your prediction has been realized, and only then pull the trigger.

Chapter 9

Examples

The following pages show the various techniques of squaring a range explained in this book and give hints on how to find others. Most of these are presented with a strategy of waiting for a BIG turn, or complete square, and then trading as opposed to scalping every single day in the same stock even if possible on a 1 minute chart. S&P futures traders will find at least 2 to 5 trades a day using 5 to 15 minute charts with the 60 minute ones giving the major swing moves. As you look at these remember that a square out like 500 price by 500 days can also be broken up into 1/4th or 1/3rds and 1/2's so you can tunnel down into the smaller trades and calculate the ranges squared every 6-7 days on stocks like AAPL or GOOG if you like, for day trading purposes.

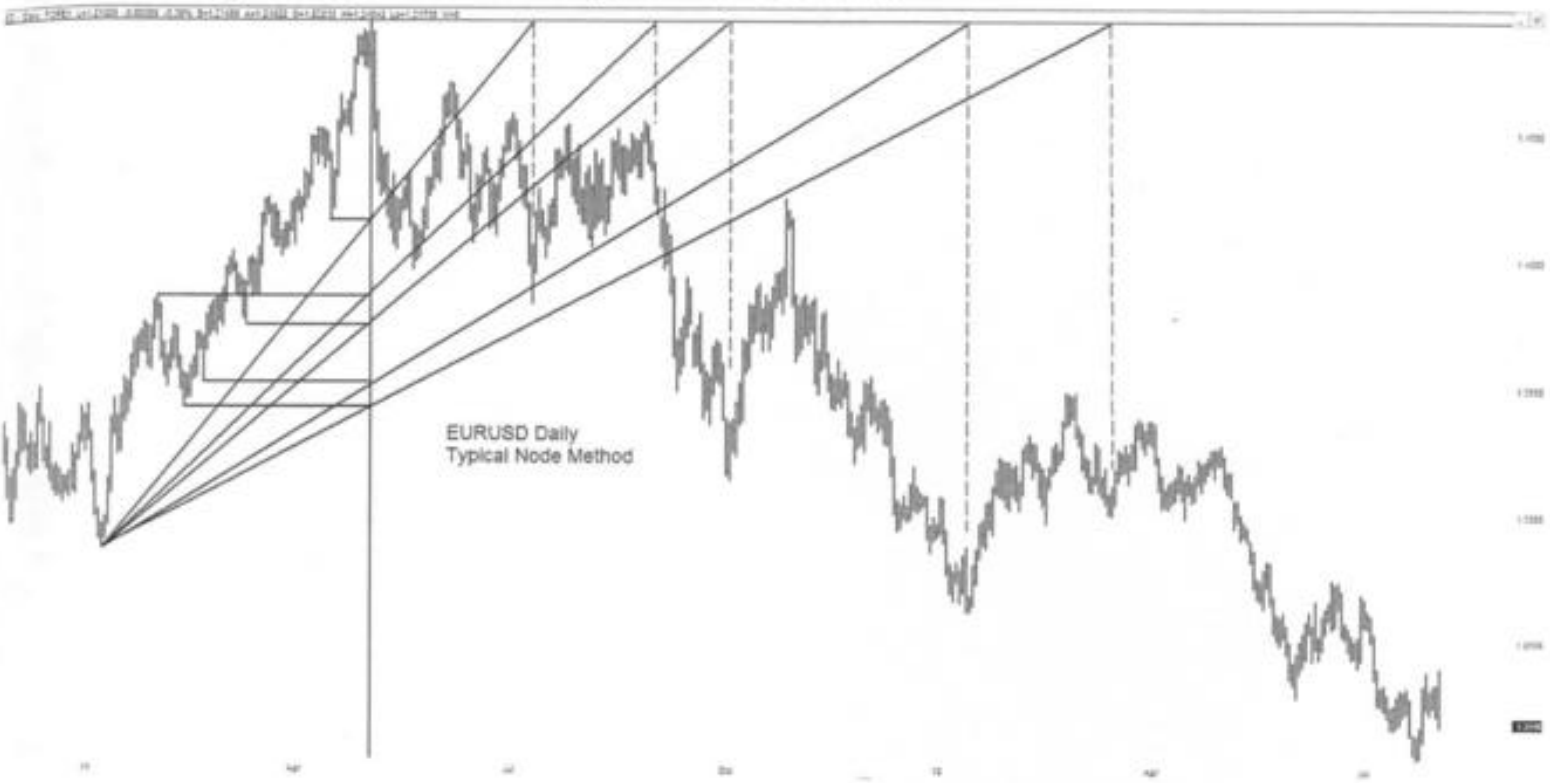
Simple Price and Time Equality:

On big cap trading names like GOOG always do the major swings before droping down to the small 1-2 week ones. Note that these show HUGE ($50 to $100) reversal moves at the end of these time markers usually within a bar or two so if you wait for the signal reversal bar technical buy signal and enter into a swing trade for 3 days to 3 weeks with a trailing stop, you will do well.

Here's a blow up of the GOOG to show some smaller swings of 7 to 20 bars. Note the '57' and '106' both coincided with the low of the year! Also note at top right that the 182 points up could not be seen on the chart (too far right) so I used the 1/4th harmonic and that gave a precise top.

This EURO Dollar chart shows the difficulty of simple 1 to 1 price and time. The range was

0.02851 so I had to move the decimal around like 28 or 285 or some numerology like putting a '1' in front for 128. Each of these worked but note on this 60 minute chart that the big trend was continuously down so it's not advisable to try and fit square outs to this small a time frame that is rather *linear*. What you have to do is look at the bigger time frame like the Daily and try and find the highs and lows on that.

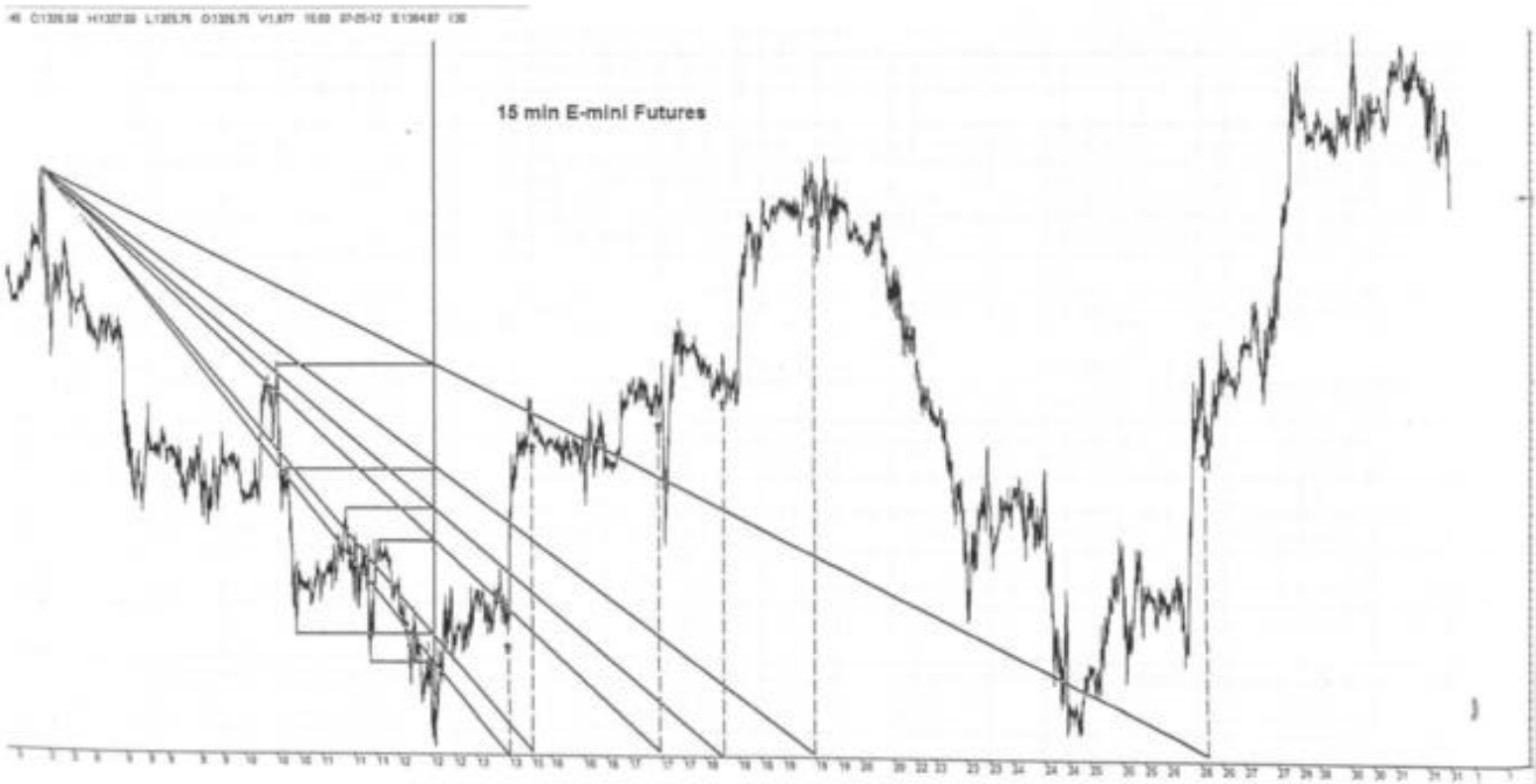


Here's the daily and I switched to the 'nodal' angle system for a quick analysis to see if I could find some good swing trades. Note that the nice 'sharp spike' node points gave clear buy or sell signals on the right side of the axis tree.

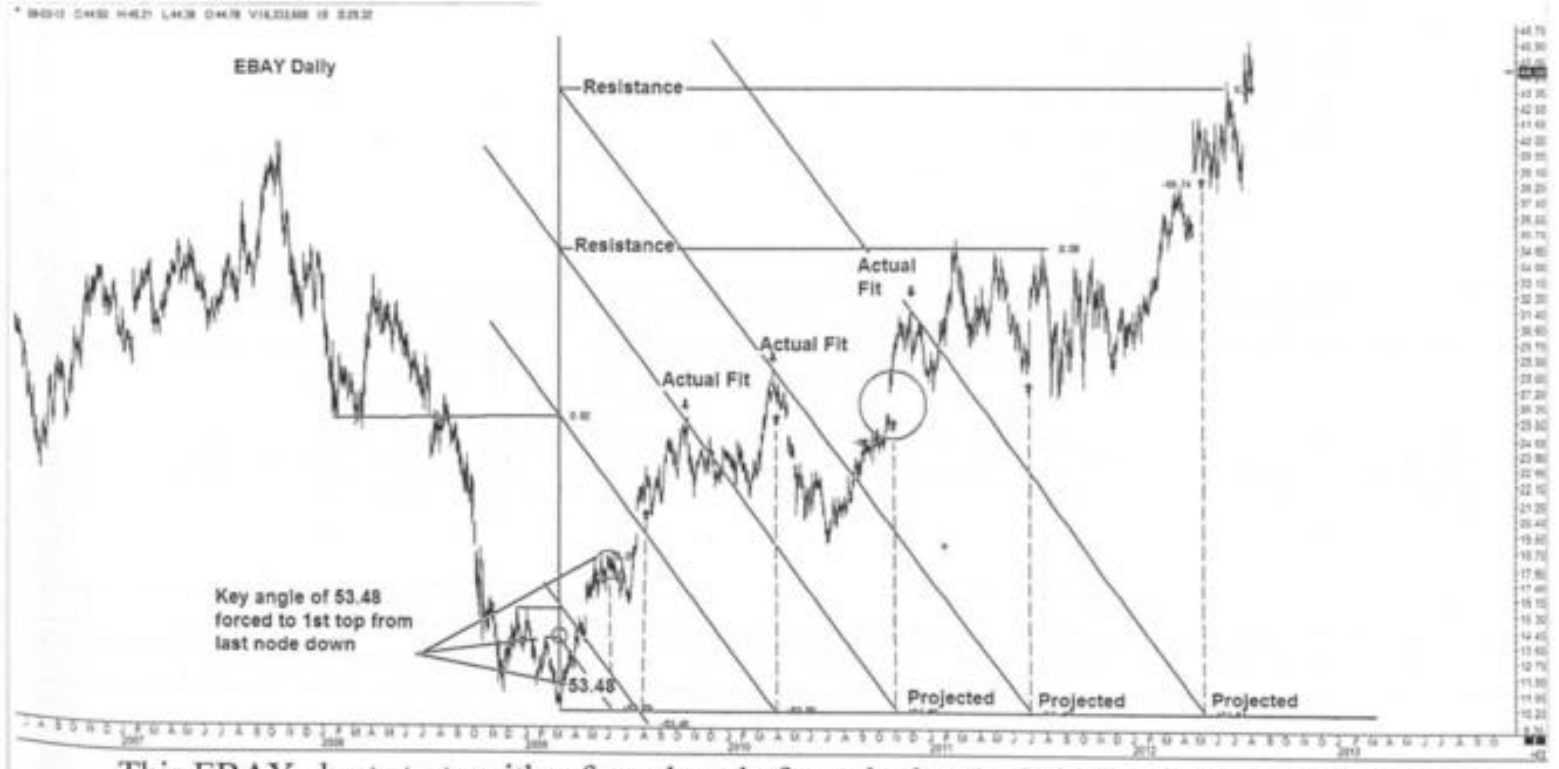
Nodes, Arcs and Key Triangles:

Even on small time frames the node angles work well. When you are trading 1 minute, or 5 or 15 minute charts its rare that you can square out 10 points in 10 bars so most of the time the square outs will be ratio lines or these speical nodal points that create unique timing lines. The 15 minute chart below on the E-mini is typical and the 'obvious' node points on the axis tree do point to significant turns on the right side. Usually you would see what the trend is, going into these turns and if it was a straight line affair of 15-20 bars or so you would expect a reversal and look for a signal reversal bar to enter a trade with a stop at the extreme for the last 3-4 bars.

Below is another 15 minute futures chart and the decline on the left of about 6 days was able to forecast some 12 days into the future with very good results. Note that going into the 'turns' you can often have a good idea of what that turn will be.



Here's a very busy daily chart of CSCO showing both the upleg at left projecting the downleg turns, and the downleg projecting the next upleg and beyond. The main lesson to learn is that the 'nodes' or support and resistance reversal points on the left of any axis are reflected thru the axis by angle trendlines to points on the right side.

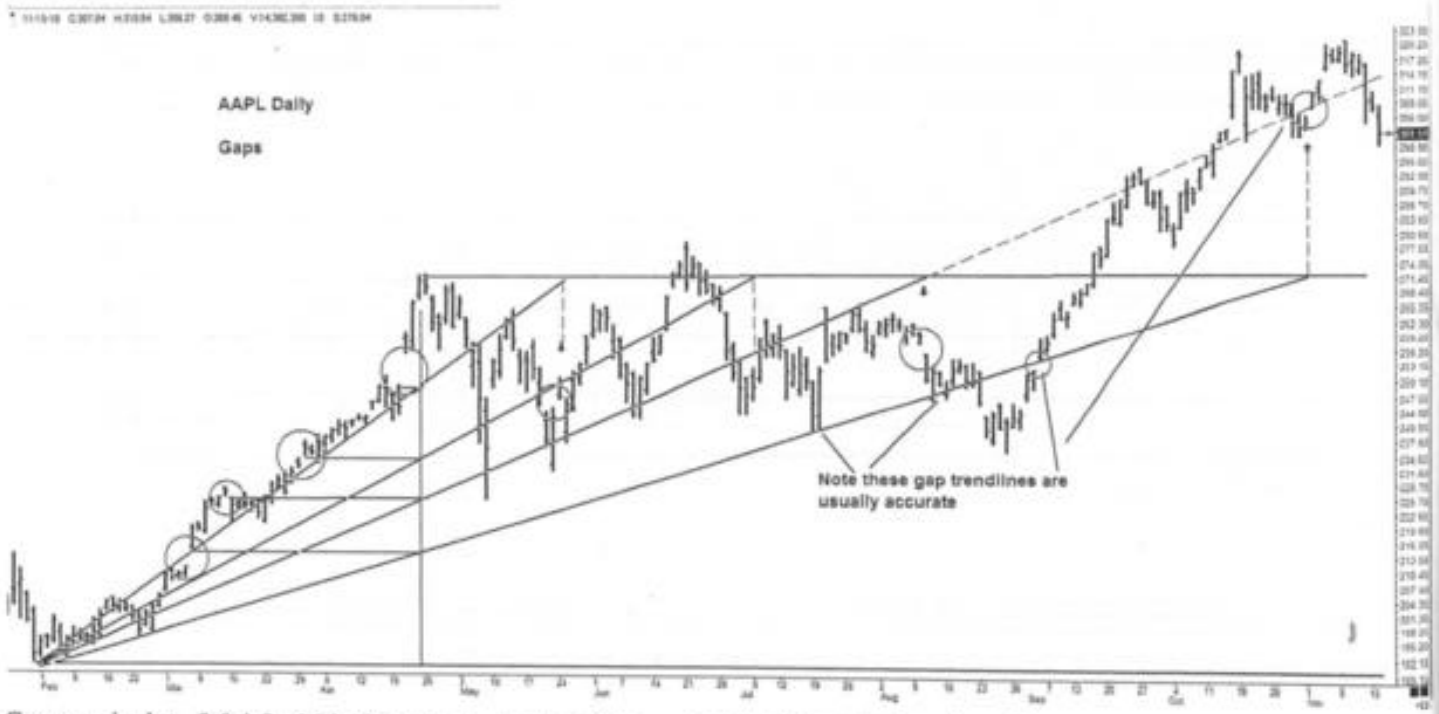


This EBAY chart starts with a forced angle from the last node before the low to the baseline below the first top. We get that angle of 53.48 and make parallels. We slide these to the

'Actual Fit' locations and at the baseline we get turns above, and going back up to the left at the intersection of the axis tree we find resistance.

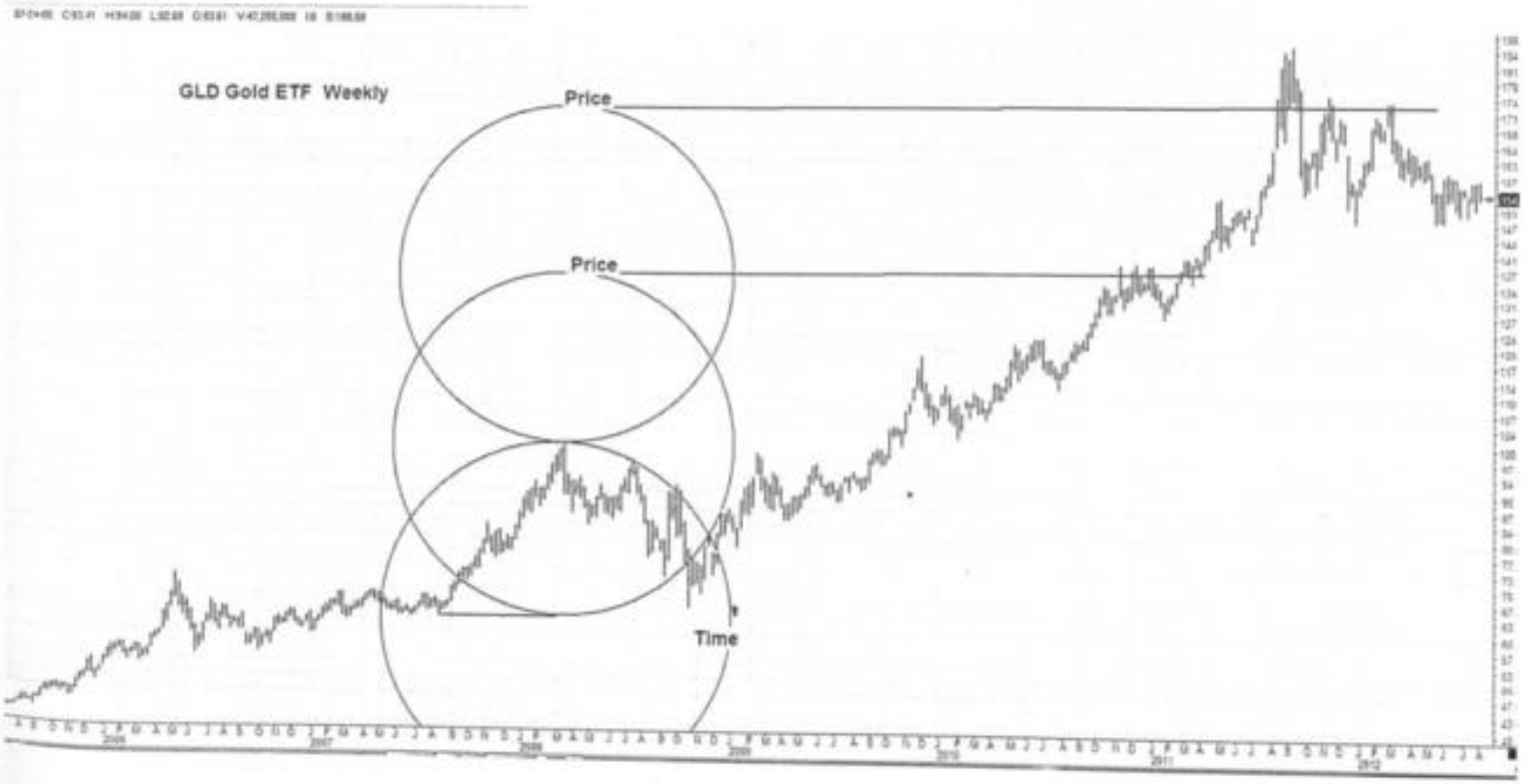
Gaps:

'Gaps' in prices from one day to the next represent supply / demand imbalances and often unexpected news. They are very emotional and leave 'scars' in the pattern that vibrate strongly. Here we see each gap on the left recreates a gap on the right *proving* the validity

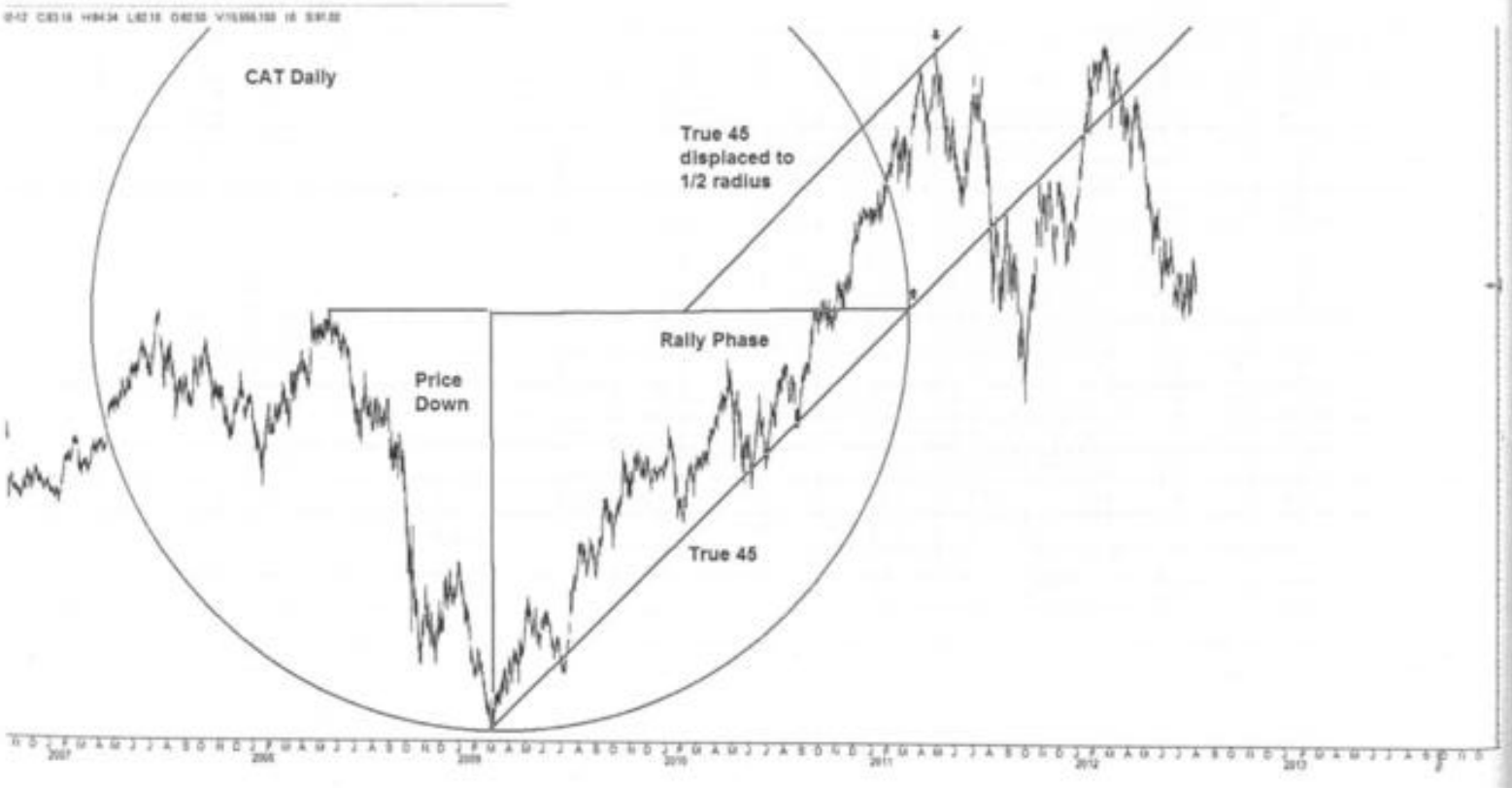


of my method. Gaps are often found within a bar or two of exhaustion moves so this could be factored into your trading plans. Trendlines coming from gaps are usually strong.

Arc and Circle TCB's



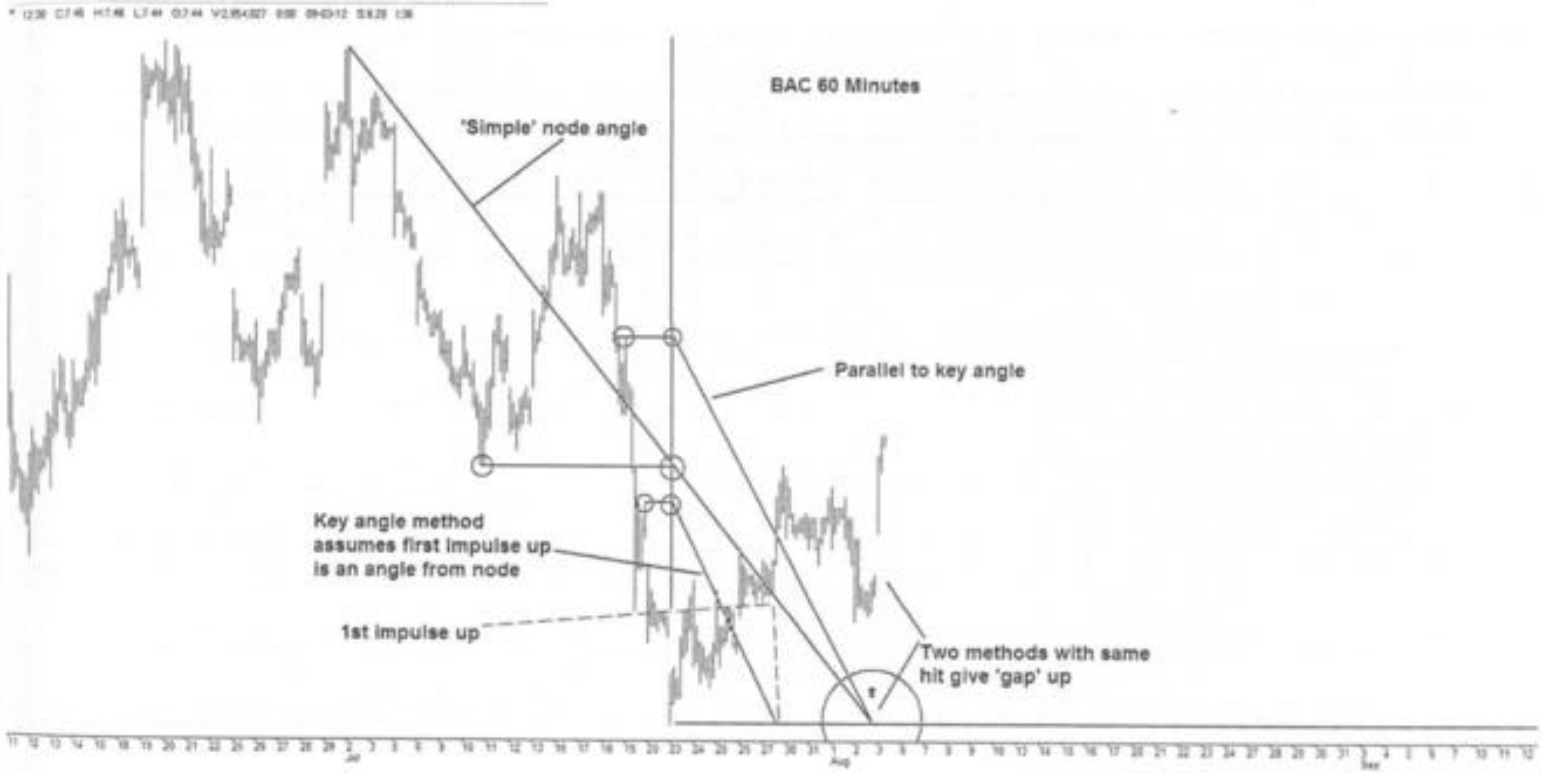
Above we see rise and fall phases on 15 min E-mini's defined by circular vectors with the 3 o'clock position usually a low, but if broken will fall to the 6 o'clock support. Below is a big



CAT TCB circle showing the bear price decline equal to the bull phase and the use of the circle cardinal points to draw a true 45 degree angle that defines the slope of the move.

What you should be learning here is to always look for the balancing price versus time phases. Many traders overlook this and are too fast to 'get back in' after a big price run, and don't let the counter phase run its course. After every high to low, or low to high swing you must wait for the sideways consolidation or new trend to emerge with a vector equal in time to the price change vector.

Key Angle Balancing Trendlines



Above is an example of a 60 minute BAC chart where I have combined two techniques to show you the power of multiple harmonic hits and their effects on a stock. Here the top generates a 'simple' trendline down thru a strong nodal pivot but that baseline hit coincides with a 'key angle' method where I made the assumption that the node of the last leg down created an angle the caused an impulse up and the parallel to that key angle at a higher nodal point gave the same hit and the stock gapped up.

Many day traders focus on too small a time frame like 1, 5 or 15 minute charts. These are good for entry and exit but frequently show 'power drives' that are straight line affairs with few fluctuations and not many nodal pivots to draw angles from. This next 5 min E-mini shows this delemma. Even so, we can still get valuable information about the nature of upcoming turns and support and resistance. You would usually start with a 'key' angle or

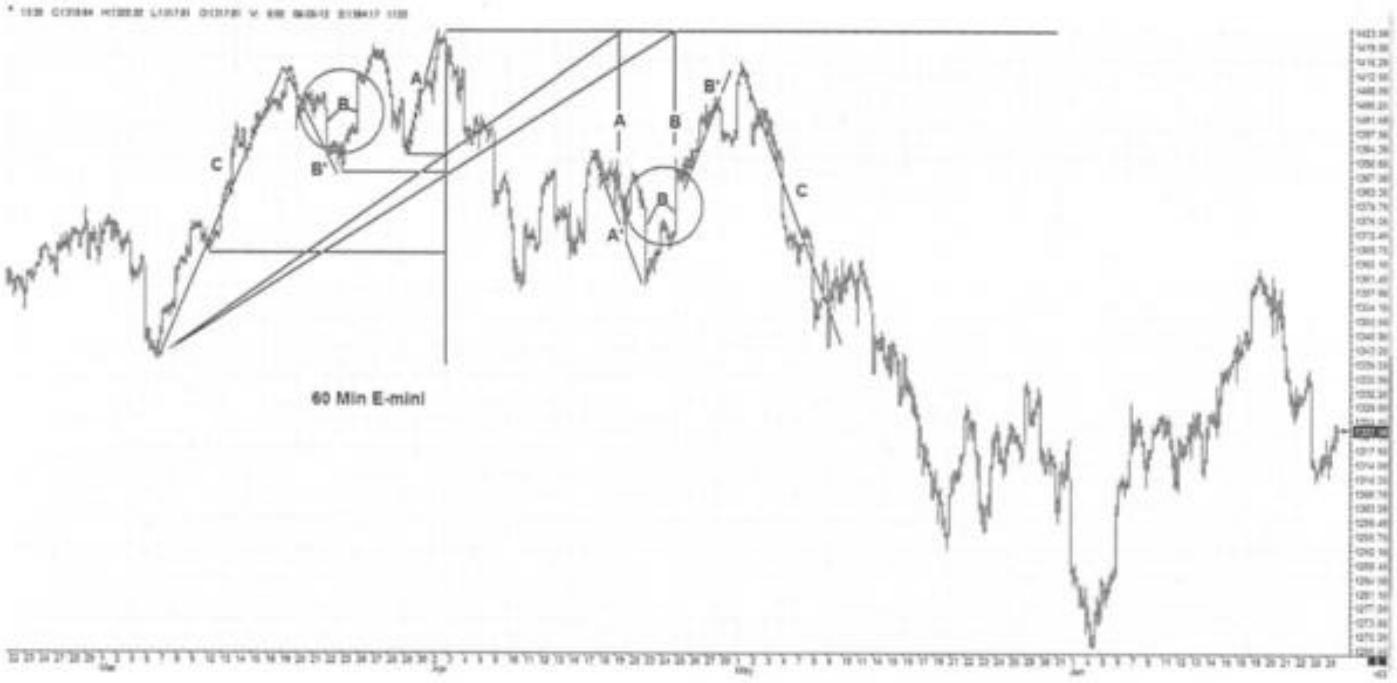
what I call a 'forced angle' since you draw a trendline from the top to the baseline under a good reversal. This should create a theoretical node and the specific angle should be good for the entire chart so parallels can be moved around to find reversals and support and resistance. Note on this chart that the support and resistance is probably BETTER than any you would normally calculate with retracements or square roots etc. On this chart I used a

forced angle from the high instead of a nodal point like on some other exhibits because of the lack of quality nodes and the very short term nature of the chart not likely to have a lot of turns from minor nodes every few minutes.

Mirror Image Foldbacks

In the final analysis the greastest skill you can ever attain in chart reading is to discover mirror image patterns that will show you direction and magnitude of each turn. Sometimes these patterns will be compressed or expanded on one side from the other and you may now be able to grasp why. You see the angle of the trendline from the node to the baseline creates a plane at a slant to the left side and that slant will twist the pattern. Since these are called 'mirror image' it implies you identify them by sight. The trendlines that connect the left and right sides of the axis tree will help you identify the places they could show up IF if really is an image repeat. Don't expect the anlges to connect directly to the exact spots on both the left and right sides since the angle can be steep and the foldbacks often have

multiple foldbacks with very small foldbacks in the middle of a larger one. The key will be to try and find 'shapes' or measured moves of the same vector distance near each angle hit.



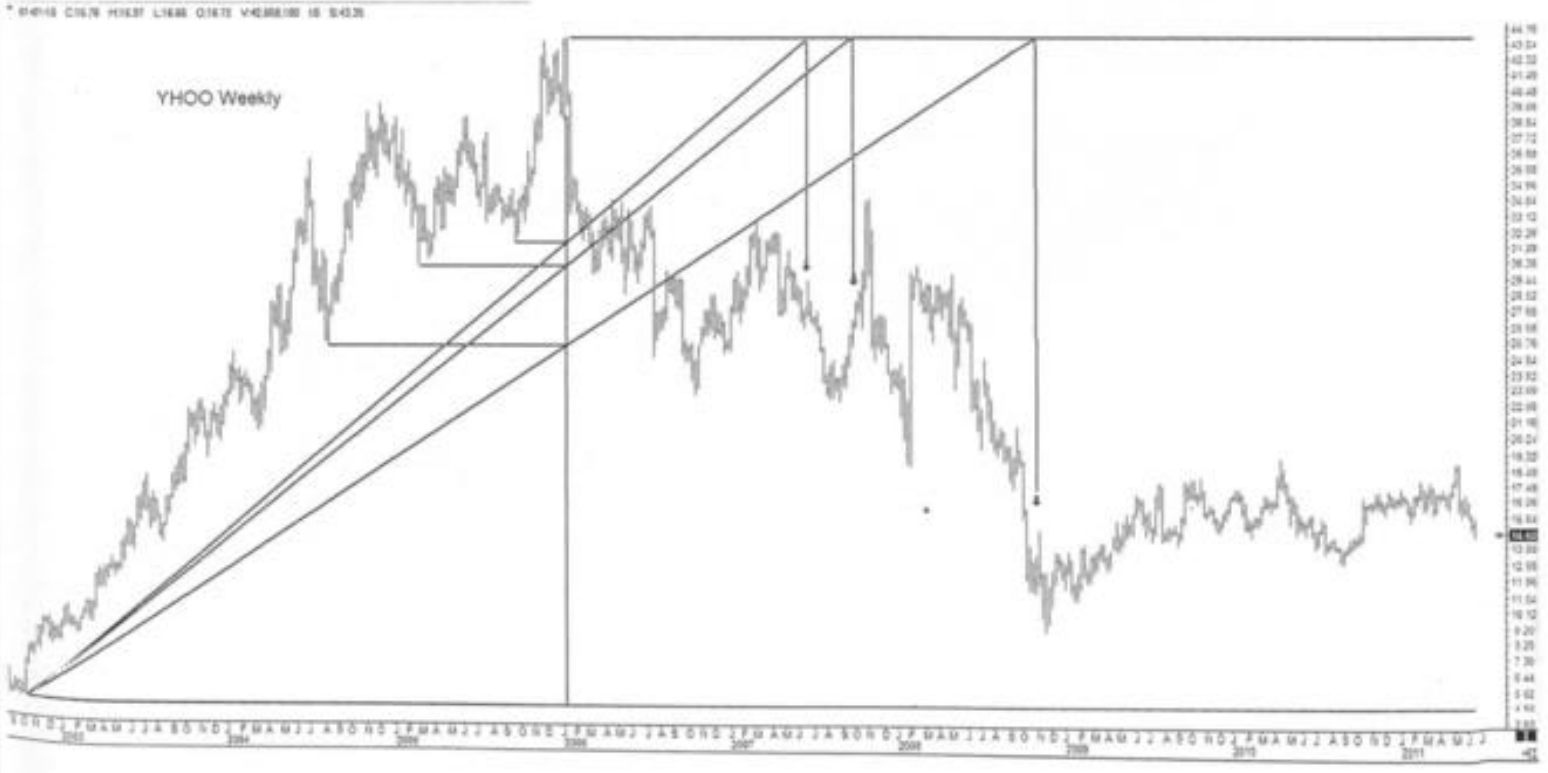
Here we have a 60 minute chart of the E-mini which is not a perfect foldbback but it can demonstrate a few points. If we start with the highest nodal point before the high, then the angle coming up thru there points to point 'A' on the right side and that point should have something to do with the pattern found near A on the left that generated the node. Sometimes its the node point but many times its the end of that swing that shows up on the right. Here I have use a measured move line labeled A on the left and A' on the right and the swings are similar. The next nodal point on the axis tree down creates point 'B' on the right and here we see a characteristic pattern of two very steep big bars in the same direction (up) on both the left and right. Somewhere on the right we should find the B' measured move distance but this is where is gets a bit subjective as the B' measured move starts at the top of the pattern and not the bottom as the left side did. In any event once we start to see an elongated decline we can assume it will amount to at least the C distance on the left. In the case on the right it eventually went much lower but at the measured move point that required a rally on the left side we had a struggling consolidation trying to go up but failing and having a second duplicate leg C down. Many times you will not be able to trade these pivots but they are still valuable in that once you identify the point B on each side you have a rough idea of the amount of time before the big top (axis line peak) ocurrs. The same can be said for trading C on the downside as it will be a major break worth a short.

Many foldbacks are obvious like this 'accordion' pattern on the left which has a foldback in the middle of the accordion. I have use in the exhibit, however, an axis tree at the October low which also is a foldbck spot but not as easy to see. While this exhibit doesn't use my traditional node projections if serves to point out the methods you should be using to find these patterns. Since we have a dramatic price drop into the October low, we expect the time phase to be long since the price drop point count was 270 to 296 days so we expect at least a nine month rally from the October low. Usually for foldback 'wings' will have similar measured moves so we can measure our progress to the next top by taking the distance from the high to the low and placing it at the next bottom on the right which seems to be the symmetrical one. I did use a nodal pivot of the high to measue backwards and forwards with the same angle to see approximately where the right side low should be and it came out almost perfectly. The top on the left had a second lower top and on the right a second top of the same rally amount.

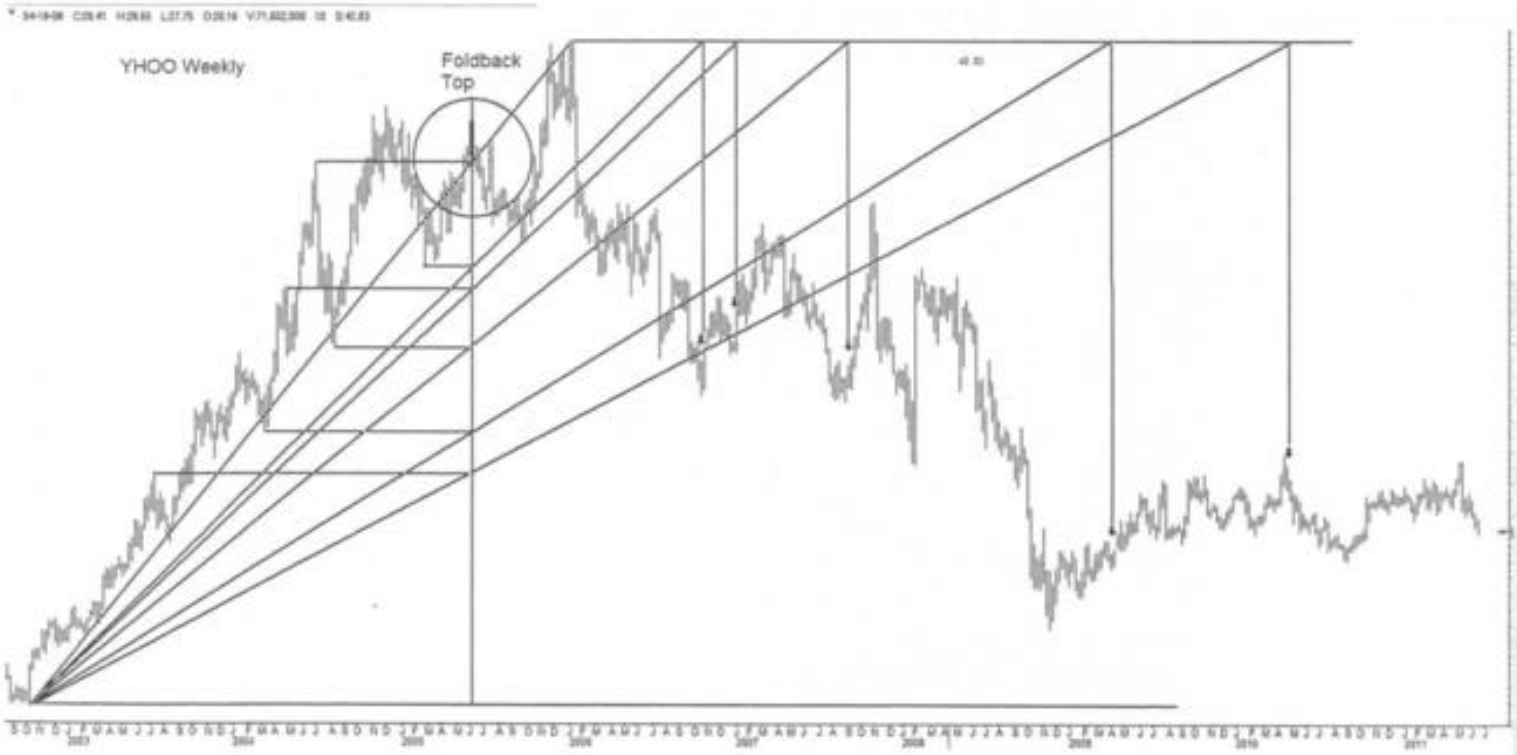
This next chart of GS (Goldman Sachs) while not a mirror image does have some characteristics we can use to estimate where we are in the pattern. To follow this first look at 'A', the last big node going into the low which exactly predicted the main top on the right directly above point A. We now use my TCB time method to get a price correction. To do this we center the circle at the baseline intersection A and and trace the radius of the circle straight up. We take that vertical distance A and move it up to the top and we see the bottom of that correction length is the correction or very close. Also note the correction low is very close to the A circle 3 o'clock position. We can now look at the next big node up, B, and do

the same analysis.This give us the next bigger correction length and you can see the vertical B hung from the top now projects the next low 'B' close to the circle 3'o'clock position although that climax arc point was the next exact high.

Finally let's look at a 'close but no cigar' example: Why are the 'hits' just missing?



You will often find charts like this above YHOO that have nice clear nodal points and yet the projected turns seem off from the major turns by a few bars (on a weekly chart- that's far too much time). Remember, the whole principle of this method is a 'projected angle' from the low up thru the node and then squaring the top. The slope of that unique angle will greatly affect the horizontal time point of the top's intersection. First let me say, there is nothing wrong in 'fudging' the angle if it will make you money. If you can't find a node for an angle try making up an angle and taking parallels. But in this case and the reason it is under this section on mirror image foldbacks is that the final top for YHOO was a triple top foldback with the foldback point being the middle top slightly lower than the 'last' top. If the pattern is folding about THIS foldback point then we should try making that the vertical axis tree line.



Now we see much more symmetry and almost precise hits by using our axis tree as the lower top and the angle from the low actually catches and creates the final last top from a node on the lower top. Notice closely how moving that vertical axis line slightly left or right will change the slopes of the angles from the origin low and thereby change the target hits. Playing around with an angle or two when you first set up your chart will greatly help you find a 'fit' that will work for months to years into the future (note here that some hits were a good 5 years into the future).

The method demonstrated in this book accounts for all market activity even if difficult to spot on first glance. The price rise elements of a stocks pattern MUST be recreated in a time element and the relationship between the vertical price movement and horizontal time duration can be equalized with angles which will adjust to the mis-scaling of most charts. This method will allow anyone with just basic chart reading skills and a simple trendline and chart to catch many of the significant turns for any stock or market on any time frame. All one needs to do additionally is use some common sense with a good dose of patience to wait for the turn and watch for the signal reversal bar to signify the technical change in direction. I would advise you use this in conjunction with your normal trading habits and practices like using measured moves, calculating support and resistance and retracements but then combining that with the cyclic turns indicated with these angles. Often these angles and the spacing between them will allow you to stay in swing trades for a longer duration knowing where they are likely to end and tracking them backwards to their origins and possible price objectives. There is now no excuse not to make money in the market except for greed or laziness. If you take a little time to read and re-read this book and develop a sensible strategy, you will become successful.

Josh 1:8: Do not let this Book of the Law depart from your mouth; meditate on it day and night, so that you may be careful to do everything written in it. Then you will be prosperous and successful.

