ELWAVE 7.1

PROGNOSIS SOFTWARE DEVELOPMENT

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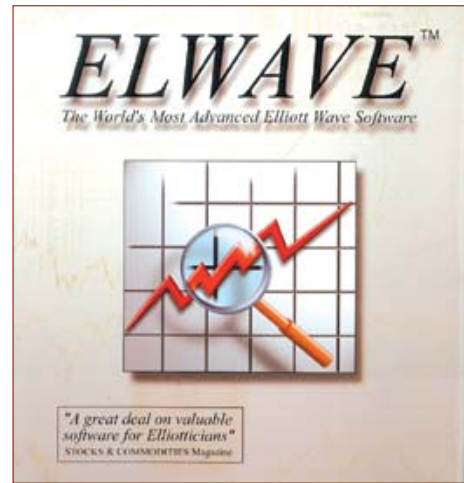**Product:** Elliott wave analysis and price projection software; end-of-day and real-time available.
Requirements: Windows 95 or higher, 16 MB RAM, 50–100 MB hard disk space, data in supported formats.
Price: Basic, $80; upgrade to intraday (requires basic), $400; automatic, $440 (requires basic); trading signals and target clusters, $300 (requires basic, automatic); Scanning standard (module), $475 (requires basic, automatic, trading signals); Scanning Professional (requires all), $325/three months, $450/six months, $780/12 months. UDS dataserver $20–40; Service contract standard $195/year, premium $295/year.

by David Penn

As someone who has been studying Elliott wave theory for the past few years, the first thing I wanted to know when I fired up the latest version of Prognosis Software Development's popular Elliott wave analysis software, ELWAVE 7.1, for this month's review was straightforward: how close were my wave counts for the Standard & Poor's 500, gold, and the US dollar/euro to those derived by the complex computer algorithms of ELWAVE 7.1?

Honestly, though, any of those who have been (and remain) critical of Elliott wave methodologies have built their case historically upon the absence of quantifiable evidence (that is, computer algorithms) to support the Elliott wave thesis as first developed by Ralph Nelson Elliott in the early decades of the 20th century. Elliott wave partisans and practitioners have countered with the notion that Elliott wave theory — sometimes referred to as the "wave principle" — is, while rigorous, more art than science. Further, the 1990s saw a number of computer software programs geared toward reproducing Elliott wave counts and wave projections for stocks and bonds, currencies, futures, and indexes — from software plug-ins and add-ons to complete Elliott wave–oriented systems such as ELWAVE 7.1.

So what are the best criteria for evaluating software like ELWAVE 7.1? Is it most important that the software produce wave counts and projections that are identical to those R.N. Elliott himself would have derived? Should 21st-century Elliott wave software incorporate any of the more recent innovations in Elliott wave thinking, such as observations into subdivisions, fractals, and Fibonacci study conducted by post–R.N. Elliotticians like Hamilton Bolton, Charles Collins, A.J. Frost, and Robert Prechter? And to what end are all these wave counts if they do not help investors and traders home in on those instances in the markets that resemble what Elliott wave–friendly Market Wizard Paul Tudor Jones once referred to as "premier market opportunism"?

BREAKING WAVES

This is what may make the task of building software like ELWAVE 7.1 more difficult than developing other sorts of charting and market analysis software. Not only will the trader or investor using ELWAVE 7.1 want charts of price action that are clear and easy to read, with indicators that are accurate and configurable, and product screening tools that screen out what is not wanted
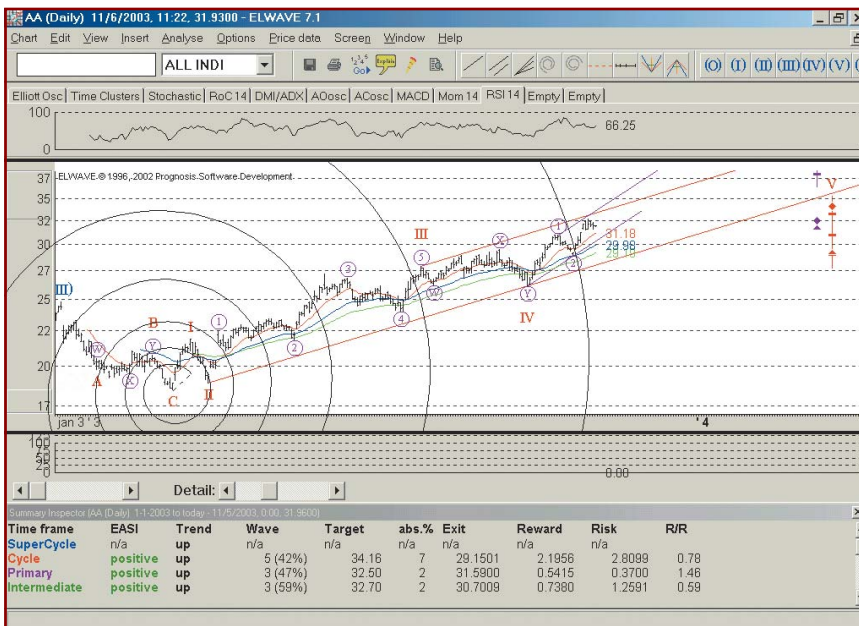
FIGURE 1: ELWAVE TOOLS. Spirals are among the line-drawing tools available in ELWAVE 7.1. Note also the Summary Inspector, which notes wave degree, trend direction, and wave type as well as likely targets and risk/reward.

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and screen in what is. Not only that, ELWAVE 7.1 must also produce all this in the context of the fairly strict price action mapping of Elliott wave theory. ELWAVE 7.1 may be as good as anything else on the market in terms of solid chart analysis and analysis tools (indicators, oscillators, and studies). But if it doesn't get its Elliott waves right, who's going to bother?

Fortunately, the developers of ELWAVE 7.1 start off right from the source, basing its wave-creating algorithms on the collective wisdom of decades of Elliotticians. Moreover, ELWAVE 7.1 divides its assessment of Elliott wave patterning into both "classic" and "modern" versions, the latter consisting of what ELWAVE calls "more patterns, which we have found after more than 10 years of research and experience, which definitions are more profitable in our view." Combined with the software's ability to let traders and investors manually enter their own wave counts, this is certainly a plus for users of the software. Those users can benefit equally from the original Elliott wave theory, contemporary innovations, and new understandings of some of the wave theory's variations and exceptions, as well as their own insight, instinct, and study into which wave counts, ultimately, "look right."

There are two main features of ELWAVE 7.1: the automatic Elliott wave labeling function and a feature that allows the trader, investor, market timer, or analyst to scan the universe of tradables for specific Elliott wave conditions that identify profitable trading opportunities. Used together, ELWAVE 7.1 is a powerful platform both for veteran Elliotticians looking to apply the theory to more stocks and commodities than the average individual could possibly keep track of, as well as for those just starting out who need consistent and reliable ways to develop sound wave counts upon which to base their investing and trading decisions.

THE ELLIOTT ENGINE
Operating ELWAVE 7.1 in its most fundamental aspect is straightforward. Initially, new users will need to direct
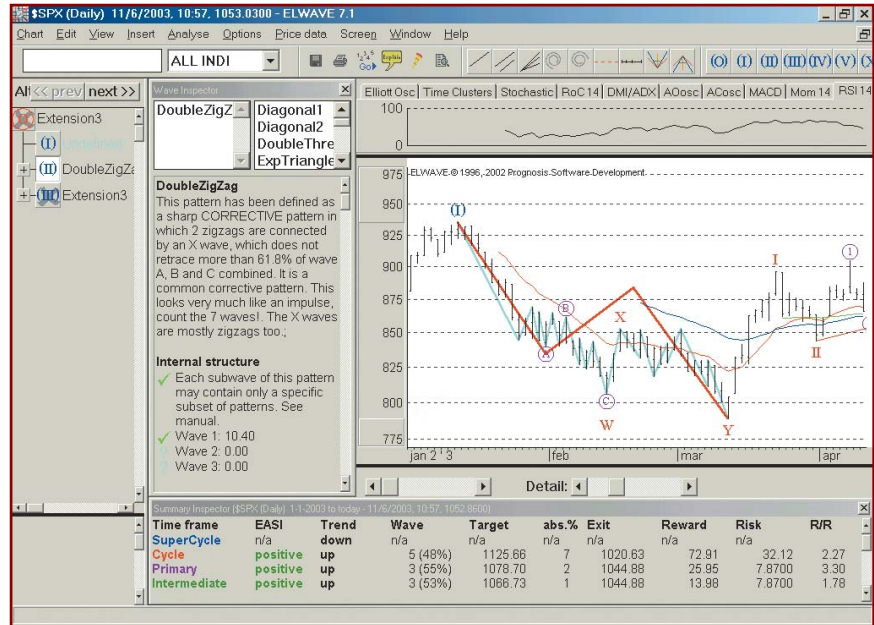
FIGURE 2: A WAVE TREE. The tree helps traders understand the relationship between waves of equal, greater, and lesser degree, a reminder of the fractal nature of the wave principle. The Wave Inspector provides detailed information on wave types and internal structure.

ELWAVE to their data source, and ELWAVE 7.1 accepts an array of data formats, including ASCII, MetaStock, TC2000, FutureSource, and eSignal. But once ELWAVE has tapped into the data source of choice, all a trader need do is enter the tradable's symbol in the symbol toolbar and press Enter. The tradable's chart will appear and ELWAVE

will begin analyzing the price action to determine likely wave counts.

Once a wave count has been plotted, a "Summary Inspector" window will appear below the chart. The Summary Inspector consists of a table that provides information about wave degree (called "time frame" here) as well as an indicator called "EASI" (which stands

FIGURE 3: LOOK OUT BELOW, COCOA! The Target Zones function of ELWAVE 7.1 presents a graphic dispersion of likely price targets, as well as zones of potential support and resistance.

for "Elliott Advanced Signals Indicator"), which gives a positive, neutral, or negative reading for each time frame. As ELWAVE's documentation notes, if two or more consecutive time frames feature the same EASI reading, then it is likely a profitable trading opportunity is in the making. This observation can be supplemented with the "Trend" category, which notes whether the trend in a given time frame is up or down.

The Summary Inspector also includes information on the specific wave in which prices are currently moving (the "Wave" category), a target price where the stock or commodity is most likely headed based on the wave noted in the previous column, and an absolute percentage ("ABS%") category that tells how far in percentage terms the current price is from the expected target price.

Such information is particularly helpful in concert with some of the succeeding categories such as "Exit," which provides a target beyond which the current wave count can no longer be considered valid; "Reward," which is determined by subtracting the target price from the current price; "Risk," which is determined by subtracting the current price from the Exit price; and "R/R," a risk/reward calculation based on information from the previous two categories.

Because much of Elliott wave analysis is about making price projections, ELWAVE 7.1 has a "Target Zones" function that allows traders to see both the most likely path for price action to follow, as well as likely places where price action might find support or resistance en route. These Target Zones are based on Fibonacci time and price projection theory and can be reconfigured to include alternative wave counts as well as update automatically. Colors can also be changed from the default yellow and red.

For those who want to add nuance to their Elliott wave analysis with traditional technical indicators, ELWAVE 7.1 provides a basic set of indicators, including simple, displaced, and exponential moving averages; momentum, rate of change, relative strength index (RSI), moving average convergence/divergence (MACD), stochastics, directional movement index/average direc-
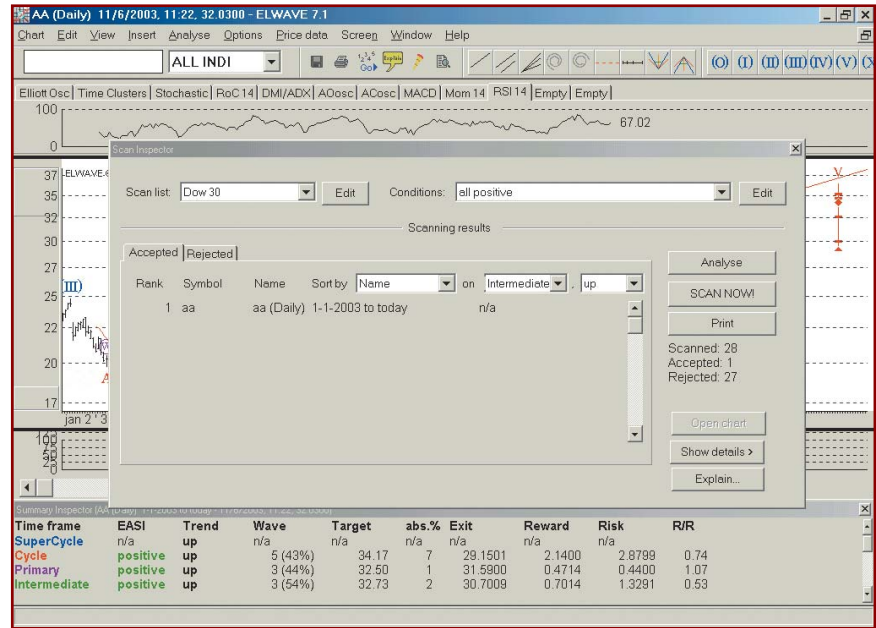
FIGURE 4: AND THE SURVEY SAYS… ALCOA! ELWAVE 7.1's Scan Inspector reveals cyclical Alcoa as the most positive stock in the Dow Jones 30 based on its Elliott wave pattern.

tional movement index (DMI/ADX), Bollinger Bands, Keltner channels, time clusters, and volume.

ELWAVE includes an indicator called the Elliott oscillator. This indicator, apparently developed in the late 1980s by Tom Joseph of Advanced GET note, is particularly helpful in determining wave counts, primarily by noting where a third wave (generally the longest, strongest wave in Elliott wave theory) exists. The oscillator itself consists of a five-period moving average, less a 35-period moving average of the high plus the low, all divided by two.

ELWAVE 7.1 also features a host of drawing tools that can be useful to the Elliott wave trader or investor. These tools include trendlines, trend channels, speed lines, clockwise and counterclockwise spirals, trigger lines, Fibonacci time rulers, and Gann fans. Included is a separate toolbar for all of these drawing tools, as well as a toolbar with Elliott wave degree labels (roman numerals,

circled numbers and letters, and so on) from supercycle degree all the way down to the subminuette degree. In fact, ELWAVE — as part of its "modern" interpretation of the wave theory — actually adds seven smaller wave degrees below subminuette: micro, submicro, and an additional set of four even smaller, numbered sublevels.

SCANNING FOR WAVES

The other main function of ELWAVE 7.1 is the ability to scan stocks and commodities for certain market conditions. Because there will be any number of stocks with wave counts at a variance to the larger wave count (for example, the wave count for AMZN may resemble the wave count of the Nasdaq, while the wave count for CSCO may not), this scanning feature is a real plus for traders using ELWAVE 7.1. To use the scanning feature, open up the "Scan Inspector" in the View pulldown menu in the toolbar. Traders can create a scan list or start off

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with a predefined list. By using the edit button, traders can add symbols to their lists. Scanning conditions include factors such as "conservative downtrend in wave 3, medium term," "find neutral stocks prior to acceleration," and "wave 2 or 4 in uptrend, medium term."

The items on this list will need to be analyzed first, then scanned and sorted into groups that meet the criteria. ELWAVE's batch processor handles the scanning and criteria-setting, with ELWAVE providing a variety of preset screening criteria as well as allowing traders to develop their own.

Once the list of tradables has been analyzed, all a trader need do is select the conditions for which the tradables will be scanned and click on the SCAN NOW! button. The scan sorts the tradables on the scan list into accepted/ rejected categories. Once the scan is complete, traders can click "Open Chart" to see the different charts of the accepted tradables. ELWAVE 7.1 can be configured to create charts that fit into the accepted category, charts that can be saved to a file or printed. Once a scan is complete, a Summary Inspector can provide specific wave information (degree, trend, absolute percentage, exit, reward, risk, and risk/reward ratio).

For those less familiar with Elliott wave concepts, ELWAVE documentation provides a complete discussion of what the different screening criteria mean — for example, why finding a stock in a wave 2 or a wave 4 of an uptrend is a good thing.

RIDING THE WAVES OUT

There are a number of interesting features beyond the automatic wave count labeling from ELWAVE 7.1's "true Elliott engine" and the scanning capabilities. ELWAVE 7.1 provides commentary on wave conditions, as well as a "wave tree" that highlights the fractal pattern of the unfolding wave structure (including potential alternative wave structures). Impulse and corrective waves, zigzags, and flats are all noted and classified here.

Helpfully, clicking on any individual button in the wave tree will cause the chart window to zoom in on the part of

the chart that corresponds with the button in the wave tree. When ELWAVE says there is an expanded flat in a given structure, a trader can click on the button that corresponds to the expanded flat and the chart will zoom in on that structure. It's a wonderful "show me the wave" function that helps traders learn more about the different wave types in real settings, as opposed to idealized versions abstracted from real price action.

Cracking open a new charting/market analysis software program always brings a combination of anxiety and excitement: Will I be able to understand the software? Will I ever become as comfortable with Brand B as I was with Brand A? Will this platform be the one that fits in with what I want to do in the markets? ELWAVE 7.1 is likely to evoke these same sentiments. The software is quite user-friendly and, once properly set up, is remarkably commonsensical.

For those accustomed to creating their own Elliott wave charts by hand, it can be disorienting to see not only the exacting way ELWAVE 7.1 maps out waves down below the minuette level, but also in the way it creates price projections, spots areas where previous wave counts will no longer be valid and alternative wave counts become needed, and scans tradables for the most profitable Elliott wave trading opportunities. One of the especially helpful aspects of ELWAVE's documentation is its discussion on trading with Elliott waves, which is recommended for those newer Elliotticians who can spot waves but have not yet learned how to "ride" them as successful Elliott wave traders.

FINALLY

In the final analysis, ELWAVE 7.1 will help strengthen the reputation of Elliott wave methods for veteran Elliotticians and wave skeptics both. Veterans of the Elliott wave theory will no doubt continue to compare their own hand-drawn wave counts and projections with what ELWAVE's "Elliott engine" derives, and will likely benefit from the "modern" additions ELWAVE's researchers have included — even if some of those additions seem like cardinal sins to classic Elliotticians (such as allowing wave 4

to overlap into wave 1 territory).

Wave skeptics will likely find in ELWAVE a challenging counterargument to the idea that Elliott waves exist solely in the minds of the Elliotticians who draw them. Who knows? Perhaps a few skeptics might even find that ELWAVE's low cost and ease of use is compelling enough for them to add ELWAVE 7.1 to the set of tools they already use when trying to decipher price moves in the wonderfully nonrandom world of the markets.

ELWAVE 7.1 is still a work in progress to some degree. An expanded, web-based tutorial is under development, and there were some initial difficulties in data formatting that required a visit to tech support and the downloading of a patch that helped the software work smoothly and efficiently. But for those who rely on Elliott wave methodologies to help them make major trading and investing decisions, software like ELWAVE 7.1 is becoming increasingly indispensable. Even as a way of double-checking hand-drawn Elliott wave patterns, ELWAVE 7.1 is a powerful ally in differentiating the corrective from the impulsive, and determining where true opportunity lies and money-losing danger awaits.

David Penn is Technical Writer for STOCKS & COMMODITIES.

SUGGESTED READING

Frost, A.J., and Robert R. Prechter Jr. [1978]. *Elliott Wave Principle*, New Classics Library.

Gopalakrishnan, Jayanthi [2000]. "Elwave 6.0," product review, *Technical Analysis of* STOCKS & COMMODITIES, Volume 18: September.

Prechter, Robert R., Jr. [1999]. *The Wave Principle Of Human Social Behavior And The New Science Of Socionomics,* New Classics Library.