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CHARTING YOUR DATA

BY ITSELF, quote data does not always provide a clear enough picture for making investment decisions. Fortunately, eSignal includes a number of charting functions to help you analyze an issue. With just a few mouse clicks, you'll be able to examine both minute-to-minute developments and longer-term trends.

Here are the chart types you can choose from:

- 1 **Daily charts.** Daily charts display historical daily data for an issue in graphical format.
- 1 **Daily tables.** Daily tables are tabular versions of Daily charts.
- 1 **Point & Figure charts.** Point & Figure charts graph an issue's significant up and down trends over a specified period of time.
- 1 **Interval charts.** Interval charts track an issue's current and previous intraday days' prices in time intervals that you choose.
- 1 **Interval Tabular charts.** Interval Tabular charts are tabular versions of Interval charts.
- 1 **Price/Volume charts.** Price/Volume charts graph an issue's trade volume at various price levels for the current day.

Chapter 9

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- 1 **Tick charts.** Tick charts show the price and volume of each trade (tick) for an issue during the current day.
- 1 **Time & Sales charts.** Time & Sales charts list an issue's bid/ask changes and volumes for the current day's trading.
- 1 **Time/Volume charts.** Time/Volume charts graph an issue's trade volume for the current day in time intervals that you choose.
- 1 **Market Profile charts.** Market Profile charts are designed for futures contracts and use a unique way of effectively organizing price and time to make it possible for traders to see which price areas the market is accepting and which ones it's rejecting. By using letters signifying specific 30 minute blocks of time during which each price is hit, you can see which prices the market is seeking to rotate around.

Anatomy of a Chart Window

A Chart window displays historical information about issues in table or graphical form. The exact information displayed is determined by the symbol you enter and the chart type you select.

9-1 identifies the basic elements of a Chart window.



Figure 9-1. Chart Window Elements

Toolbar

The toolbar contains a Symbol field, Chart field, Chart duration field, several icons, and a connection status button.

Symbol Field Contains the symbol used to create the chart. You type a new symbol into this field, and its data automatically displays on the chart. If you want to return to previously entered symbols, you can select them from the pull-down list.



Click the Link toolbar to link to the Chart window symbol from other window types.

Chart Type

Identifies which chart type you're displaying. You can change the chart type by selecting another chart type from the pull-down list.

Chart Duration

Identifies the duration of the Chart. You can change the duration by selecting a different duration from the pull-down list.



Opens the Properties dialog box, where you can change specific chart options.



Displays or removes the volume histogram from the bottom of Daily, Tick, or Interval charts.



Lets you magnify an area of a chart.



Lets you restore the full chart view.



Displays or removes the Information window on Daily, Tick, or Interval charts.



Lets you add technical studies to Daily or Interval charts.



Displays or removes the line representing bid/ask data from Tick or Interval charts.



Displays trade data.



Displays a quote area at the top of the Chart window.

Information Window

The Chart Information window displays the data for the bar or tick you currently have highlighted.

Charting Area

The charting area contains the actual chart. It can be graphical or tabular depending on the chart type you select. Each chart type has options you can set that let you tailor the chart to your needs.

Depending on the chart type and properties you've set, the chart area may include an information window, a volume histogram, and various technical studies (see Figure 9-1).

Viewing Data in a Chart Window

You can create a new Chart window by right-clicking a symbol in a Quote, Portfolio, Summary or Leaders window; by choosing New from the File menu; or by clicking the Chart icon on the eSignal toolbar.

If you already have a Chart window open and don't want to open yet another one, you can display a new chart in the open Chart window.

To display a new chart in an open Chart window

- 1 Enter the symbol you want to chart in the Symbol field, and then press Enter.
- 2 For a different chart type, choose the Chart Type from the pull-down list attached to the chart type field, and then press Enter.
- 3 Select a duration for the chart from the chart duration pull-down list.

To redisplay a symbol in a Chart window

- 1 Click the down arrow to the right of the Symbol field and choose the symbol from the pull-down list.


The updated chart for the symbol automatically displays. If you want to change the chart type, repeat step 2 above.

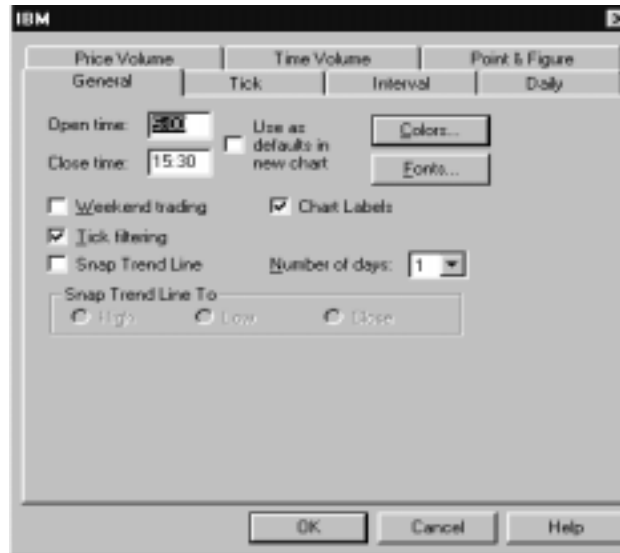
Setting Chart Properties

You can change settings that affect the way data is collected and appears in Chart windows. There are some general options that affect all or most of the charts. Each chart type also has its own set of properties that you set independently.

Chart properties are maintained using the Chart Options dialog box, which has tabs for general options and for the various chart types.

To set Chart window options

- 1 Click  in the Chart window toolbar or choose Properties from the Chart Options menu (Alt-O, S).



- 2 The Chart Options dialog box appears. Enter your changes in the dialog box and click OK to save and apply your changes.

HELP 

See the Help topic for the General tab in the Chart Properties dialog box for detailed information about the options.

Changing Fonts, Colors, Trend Lines

Right-clicking in the chart area of a Chart window presents you with a pop-up menu that allows you to change fonts and colors and draw trend lines (graphical charts only).

You can draw trend lines in graphical charts to make it easier to view the general trend of the data. The way trend lines display depends on settings in the General tab of the Chart Options dialog box. If the Snap Trend line checkbox is not selected, you can draw the trendline anywhere on the chart. If Snap Trend line is selected, you can choose to anchor the trend line on High, Low, or Close data.


To draw trend lines (graphical charts only)

- 1 Right-click in the chart and choose Draw Trend Lines.

The cursor changes to a crosshair.

- 2 Position the crosshair on the starting point of the line. Hold down the left mouse button and drag the mouse to draw the line. If Snap Trend line is enabled, the line is anchored to the data points you specified.

Displaying Volume Information

You can add or remove volume information in Interval, Interval Tabular, Tick, Daily, and Daily Tabular charts by clicking the Volume Histogram  toolbar.

For graphical charts, volume information displays as a histogram—a bar chart that shows the trading volume for the symbol. In Daily charts, a bar represents one day's volume. In a Tick chart, a bar represents a trade. In Interval charts, the interval length that you set in the Properties dialog box determines the volume interval. For Tabular charts, volume information is displayed in an additional column in the table.

Displaying Chart Information

In your Daily, Tick, and Interval charts, you can include a small Chart Information window that lists the latest data used to generate the chart, for instance, if an Interval chart includes a volume histogram and bid/ask information along with the basic information about the last price. The Chart Information window shows the latest data for each of those categories or for the currently highlighted bar.

To remove or display chart information

- 1 Click the Information button in the Chart window toolbar.

To move the Information window

- 1 Position the cursor in the window, click and hold the left mouse button, slide the window to its new location, and then release the mouse button.

Zooming In and Out

You can zoom in on areas of Daily, Tick, or Interval charts that you'd like to examine more closely. The degree of magnification depends on the size of the area you select—the smaller the area, the greater the magnification. If you need still more magnification, you can continue zooming. When you're finished, you can zoom out until you reach the original chart magnification.

To zoom in

- 1 Click the Zoom In button on the Chart window toolbar. The mouse pointer changes to a crosshair.
- 2 Position the crosshair cursor near the area you want to magnify.
- 3 Hold down the left mouse button and drag out the area. A dotted-line box appears around the area as you drag.
- 4 Release the mouse button to display a magnified chart of the area.

To zoom out

- 1 Click the Zoom Out button on the Chart window toolbar to move back one level of magnification. If necessary, keep clicking until you return to the original magnification.

Adding Technical Studies

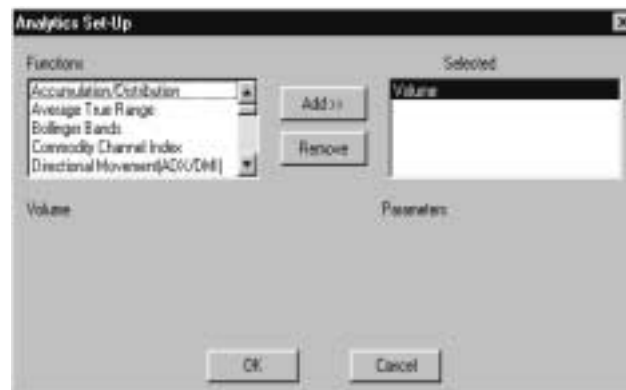
You can add technical studies to Daily, Daily Tabular, Interval, and Interval Tabular charts. These studies may aid you in making buy/sell decisions or in identifying market trends by displaying additional information based on statistical calculations. Technical studies are displayed in graphical format for graphical charts and as a new column in tabular charts.

HELP

See the Help topic Adding Technical Studies for more on the technical study types.

To add a technical study

- 1 Click the Analytics button in the toolbar or click the Analytics button in a tab of the Chart Options dialog box. The Analytics Set-Up dialog box appears.



- 2 Select the study you want to add, and then click the Add button.
- 3 If necessary, change the color and parameter fields for the study.
- 4 Repeat steps 2 and 3 for each study you want to add, and then click OK.

To remove a technical study

- 1 Select the unwanted study in the Selected list, click Remove, and then click OK.

Working with Tick and Time & Sales Charts

Tick chart and Time & Sales windows each display an issue's trading activity on a tick-by-tick basis.

Tick charts display data graphically. Each tick on the chart represents a trade. You can choose to connect the ticks to see the price trend better. You can also choose to include a volume histogram and a line representing bid/ask prices.

Figure 9-2 is an example of a Tick chart.



Figure 9-2. Tick Chart Example

A Time & Sales window is a tabular list of all trades and bid/ask changes for an issue for the current trading day. You can choose to display trade data, bid/ask data, or both. Trade data includes the time, exchange, price, and size. Bid/Ask data includes the bid or ask price, the exchange of the bid or ask, and the size.

Figure 9-3 is an example of a Time & Sales window.

Time	Exg	Price	Size
4/9 12:55:42	NMS	15.92	100
4/9 12:55:38	NMS	15.92	100
4/9 12:55:29	NMS	15.91	200
4/9 12:55:08	NMS	15.92	1000
4/9 12:54:52	NMS	15.91	500
4/9 12:54:48	NMS	15.91	500
4/9 12:54:42	NMS	15.91	300
4/9 12:54:33	NMS	15.91	100
4/9 12:54:27	NMS	15.91	200
4/9 12:54:15	NMS	15.92	100
4/9 12:54:15	NMS	15.91	400
4/9 12:54:14	NMS	15.91	400
4/9 12:54:12	NMS	15.91	100
4/9 12:54:11	NMS	15.91	500

Figure 9-3. Time & Sales Window Example

You can change settings in the Chart Properties dialog box that affect the way that Tick and Time & Sales windows display data. You can set properties to:

- 1 Connect ticks in the chart (Tick chart only)
- 1 Include grid lines in the Chart window (Tick chart only)
- 1 Include volume information

- 1 Include bid/ask data



See the Help topic for the Tick tab in the Chart Options dialog box for detailed information about the options.

Working with Interval and Interval Tabular Charts

Interval chart and Interval Tabular windows display data for an issue over the course of a trading day. You choose the interval for which data is charted. You can also choose to include technical studies with the chart.

Interval charts display data graphically. You can choose from five chart styles: bar chart, O-bar chart, candlestick chart, flow chart, or close line chart. You can optionally include grid lines and a line representing bid/ask prices.

9-4 is an example of an Interval chart.

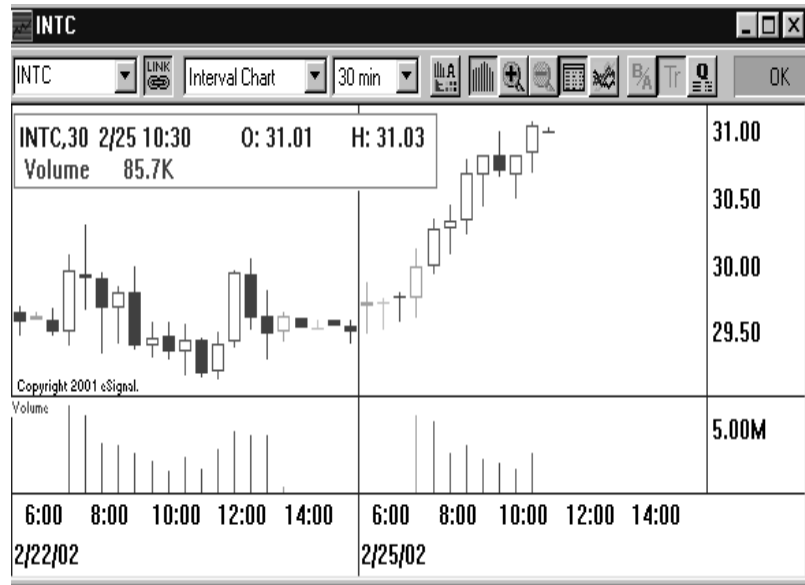
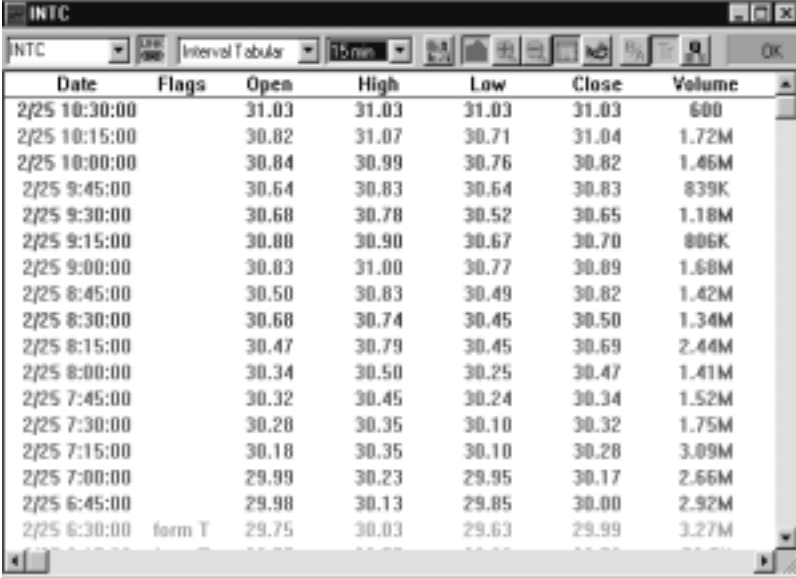


Figure 9-4. Interval Chart Example

Interval Tabular windows display the same data in table form.

9-5 is an example of an Interval Tabular window.



The screenshot shows a window titled "INTC" with a toolbar and a table of data. The toolbar includes a dropdown menu set to "Interval Tabular", a "15 min" interval selector, and several icons for chart manipulation. The table has the following columns: Date, Flags, Open, High, Low, Close, and Volume. The data rows show price movements from 6:30:00 to 10:30:00 on 2/25.

Date	Flags	Open	High	Low	Close	Volume
2/25 10:30:00		31.03	31.03	31.03	31.03	600
2/25 10:15:00		30.82	31.07	30.71	31.04	1.72M
2/25 10:00:00		30.84	30.99	30.76	30.82	1.46M
2/25 9:45:00		30.64	30.83	30.64	30.83	839K
2/25 9:30:00		30.68	30.78	30.52	30.65	1.18M
2/25 9:15:00		30.80	30.90	30.67	30.70	806K
2/25 9:00:00		30.83	31.00	30.77	30.89	1.68M
2/25 8:45:00		30.50	30.83	30.49	30.82	1.42M
2/25 8:30:00		30.68	30.74	30.45	30.50	1.34M
2/25 8:15:00		30.47	30.79	30.45	30.69	2.44M
2/25 8:00:00		30.34	30.50	30.25	30.47	1.41M
2/25 7:45:00		30.32	30.45	30.24	30.34	1.52M
2/25 7:30:00		30.28	30.35	30.10	30.32	1.75M
2/25 7:15:00		30.18	30.35	30.10	30.28	3.09M
2/25 7:00:00		29.99	30.23	29.95	30.17	2.66M
2/25 6:45:00		29.98	30.13	29.85	30.00	2.92M
2/25 6:30:00	form T	29.75	30.03	29.63	29.99	3.27M

Figure 9-5. Interval Tabular Chart Window

You can change settings in the Chart Properties dialog box that affect the way that the Interval chart and Interval Tabular windows display data. You can:

- 1 Toggle between the two chart types
- 1 Choose a chart style (Interval chart only)
- 1 Include technical studies
- 1 Include or exclude grid lines in the Chart window (Interval chart only)

- 1 Set the interval length
- 1 Include or exclude trades

HELP 

See the Help topic for the Interval tab in the Chart Options dialog box for detailed information about the options.

Working with Daily and Daily Tabular Charts

Daily charts and Daily Tabular windows display daily data for equity, index, mutual fund, and futures symbols. You get to choose the time frame. The amount of data available depends on the symbol type. (Up to ten years of historical data is available for some issues.) You can also choose whether or not to include volume information and technical studies.

NOTE: Daily data is downloaded over the Internet from a special eSignal server via the same Internet connection used for the rest of your data.

Daily charts display data graphically. You can choose from five different chart styles.

9-6 is an example of a Daily chart.

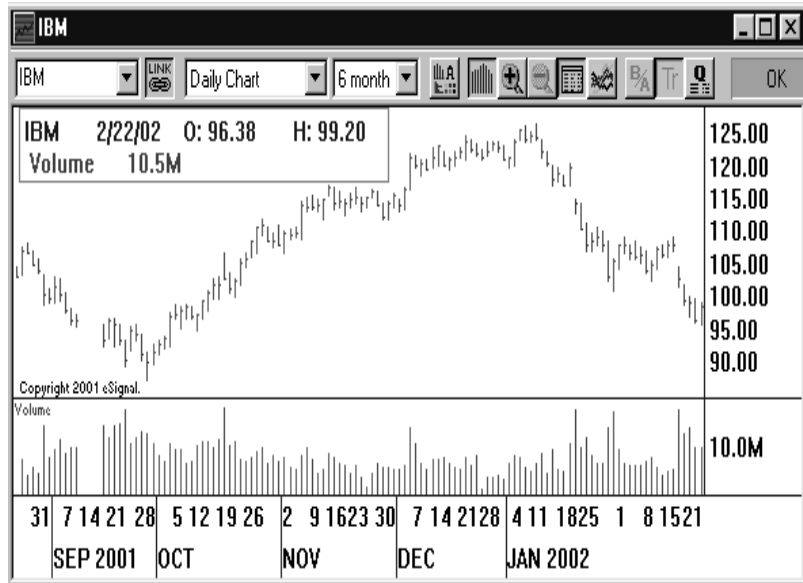


Figure 9-6. Daily Chart Example

Daily Tabular windows display data in table format.

9-7 is an example of a Daily Tabular window.

Date	Open	High	Low	Close	Volume
6/12/02	38.85	38.98	37.19	38.59	7.52
6/11/02	40.28	40.28	38.55	38.73	6.56
6/10/02	39.05	40.16	39.00	39.72	5.04
6/7/02	39.20	40.35	38.93	40.02	6.57
6/6/02	40.95	41.30	39.90	40.11	4.75
6/5/02	40.15	41.29	39.97	41.10	6.73
6/4/02	38.60	40.15	38.50	39.77	7.03
6/3/02	40.71	40.99	38.63	38.76	9.49
5/31/02	40.60	42.09	40.60	40.71	6.34
5/30/02	41.50	42.01	40.58	40.76	6.12
5/29/02	42.28	42.64	41.87	41.81	2.54

Figure 9-7. Daily Tabular Window Example

You can change settings in the Chart Properties dialog box that affect the way that Daily charts and Daily Tabular windows display data. You can:

- 1 Toggle between the two chart types
- 1 Include technical studies
- 1 Choose a chart style (Daily chart only)
- 1 Include or exclude grid lines in the Chart window (Daily chart only)
- 1 Set the date range for specific start and stop dates, or for a relative date range



See the Help topic for the Daily tab in the Chart Options dialog box for detailed information about the options.

Working with Price/Volume Charts

Price/Volume charts appear as a horizontal bar graph, with bars representing trade volume at various price levels. You can filter the data to exclude prices below your level of interest. Price/Volume charts are available only to online users.

9-8 is an example of a Price/Volume chart.

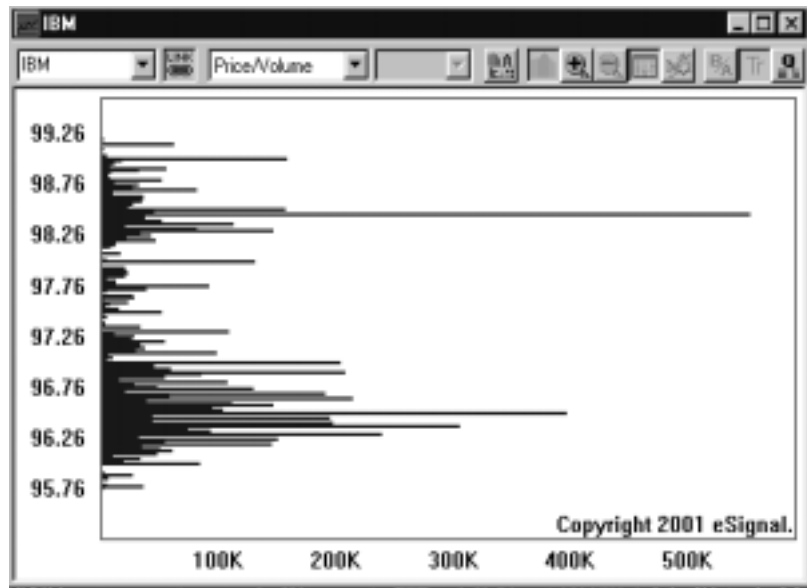


Figure 9-8. Price/Volume Chart Example

Filter settings in the Chart Properties dialog box enable you to filter out price points that fall below a specified volume or percentage of the highest volume bar.



See the Help topic for the Price Volume tab in the Chart Options dialog box for detailed information about the options.

Working with Time/Volume Charts

Time/Volume charts let you see the volume of an issue at the time intervals you choose. For example, you can see volume in 15- or 30-minute intervals. The information is displayed in a horizontal bar chart, with each bar representing the volume for the time interval.

9-9 is an example of a Time/Volume chart.

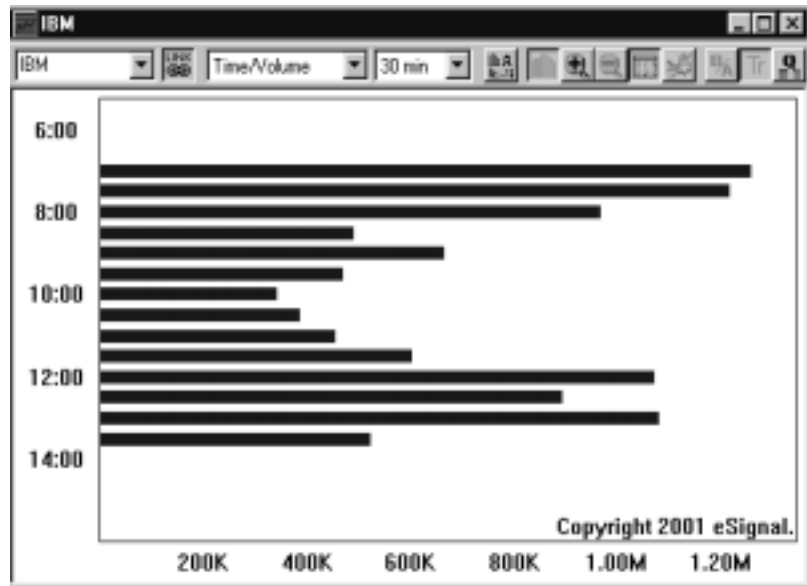


Figure 9-9. Time/Volume Chart Example

You can adjust the interval for which Time/Volume data is displayed in the Properties dialog box. The smallest interval you can choose is five minutes.

Working with Point & Figure Charts

Point & Figure charts are a tool used by traders to time buy and sell decisions for equities and commodities. The chart graphically depicts significant upward and downward movements in the issue's daily closing price. Patterns in these movements give buy and sell signals to investors. You can calculate reversals in whole or partial intervals

Figure 9-10 is an example of a Point & Figure chart.

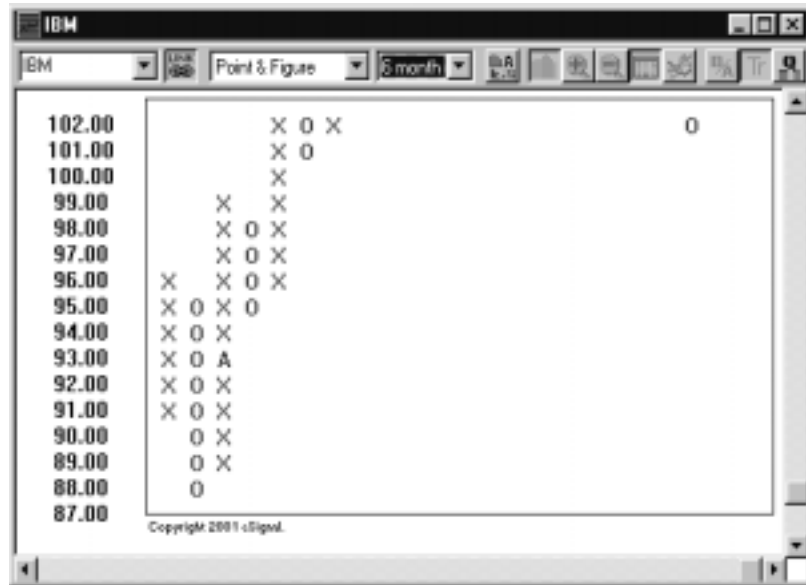


Figure 9-10. Point & Figure Chart Example

The chart consists of columns of Xs and Os, with price levels on the vertical axis to the left. While prices are moving upward, an X appears each time the issue gains a predetermined amount (price interval). The column of Xs continues upward until the issue reaches a reversal, a significant trend change.

When a reversal occurs, a new column begins, this time consisting of Os. As the prices are moving downward, an O appears each time the issue loses the price interval amount. This column continues until another reversal occurs, when a new column of Xs is begun.

Dates are noted in the graph by replacing an X or O with a code representing the month when that price level was reached. January through September are represented by the numbers 1 through 9; October through December are represented by the letters A through C.

The default for a reversal is a price three price intervals higher or lower than the previous high or low. The default price interval is determined automatically based on the price of the issue.

You can change settings in the Chart Properties dialog box that affect the way the Point & Figure chart window displays data. You can:

- 1 Change the number of intervals that are required to reverse the chart
- 1 Change the price interval between Xs and Os
- 1 Include or exclude grid lines in the Chart window
- 1 Set the date range: start and stop for a specific date range, or duration for a relative date range

HELP 

See the Help topic for the Point & Figure tab in the Chart Options dialog box for detailed information about the options.

Working with Market Profile Charts

Market Profile charts are a tool used by traders to time buy and sell decisions for equities and commodities. The chart graphically depicts significant upward and downward movements in the issue's daily closing price. Patterns in these movements give buy and sell signals to investors.

Market Profile charts provide a unique way of effectively organizing price and time and make it possible for traders to see which price areas the market is accepting and which ones it's rejecting. By using letters signifying specific 30 minute blocks of time during which each price is hit, you can see which prices the market is seeking to rotate around

Figure 9-11 is an example of a Market Profile chart

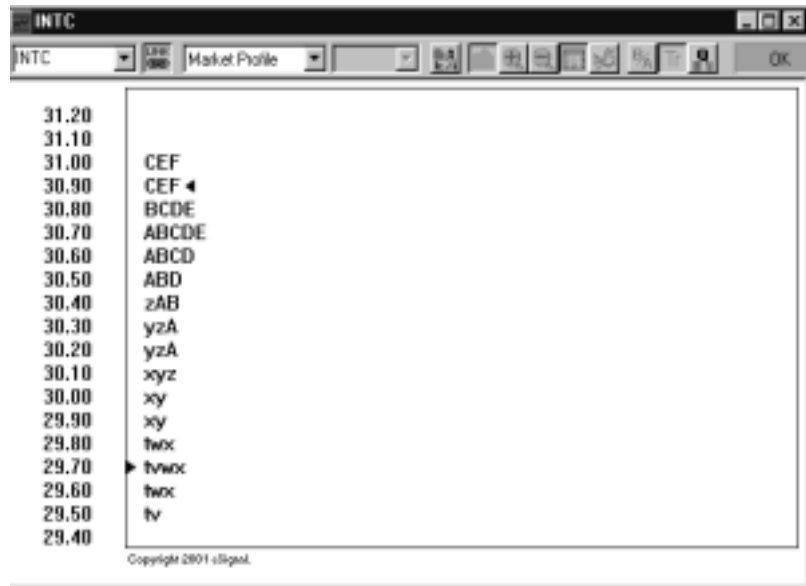


Figure 9-11. Market Profile Chart Example