

TS ChartServer™ Reference Manual



Version 8.6.0

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TS CHARTSERVER

TS ChartServer allows you to create simple multi-dimensional charts quickly from any Thoroughbred Development Environment. It is a Windows Workstation product that adds value to the presentation of your Thoroughbred-based applications.

This installation requires Thoroughbred 8.4.1 (or above) and VIP Workstation to be installed and running properly.

Operating System Support: UNIX, Linux, OpenVMS, and Windows
For specific information, please contact your Thoroughbred Sales Representative.

Creating a Chart

You must create and save a chart before performing edits.

TS ChartServer Syntax

To use TS ChartServer use the following syntax:

```
CALL"CHSCOM",MSG$ [ALL]
```

To define how the chart displays use the following:

```
METHOD MSG$ [ALL] □  
[0]      Termination value  
[1]      Chart ID (8 max)  
[2]      Chart description (40 max)  
[3]      Header Multi-lines can be defined by using | (piping) to create  
         separate lines For example: line1|line2 would create two lines  
         line1  
         line2  
[4]      Footer Multi-lines can be defined by using | (piping) to create  
         separate lines For example: line1|line2 would create two lines  
         line1  
         line2
```

```

[5]      (1,1)      Default chart
          P=Pie, B=Bar, S=Stacked Bar, G=Graph Plot, A=Area
          (2,1)      Orientation
          0=X-axis horizontal 1=X-axis vertical
          (3,2)      Column (upper x coordinate for window)
          (5,2)      Row (upper y coordinate for window)
          (7,2)      Rows (length of chart window)
          (9,3)      Columns (width of physical window)

[6]      Value string(s) For example: 0310 translates to 3 values in each of
          10 sets [1□,10] [1A□,10A] [1B□,10B]
          1,2        Number values in a set
          3,2        Number of sets
          □          [X1,X2,Xn] [Y1,Y2,Yn]
[7]      Description strings
          [Xdesc-1,Xdesc-2,Xdesc-n] [Ydesc-1,Ydesc-2,Ydesc-n]

```

Example:

Type and run the following program in Thoroughbred Basic.

```

00010      CLOSE (100);                !Dictionary must be open
          OPEN (100) "IDDBD"

00020      DIM M$[8]

00030      M$[1]="ChartID",            !Chart Identification
          M$[2]="Chart Description",    ! Description
          M$[3]="Header",              ! Header
          M$[4]="Footer",              ! Footer
          M$[5]="B0"                   !Bar chart 0-x-axis
                                          horizontal

```

```

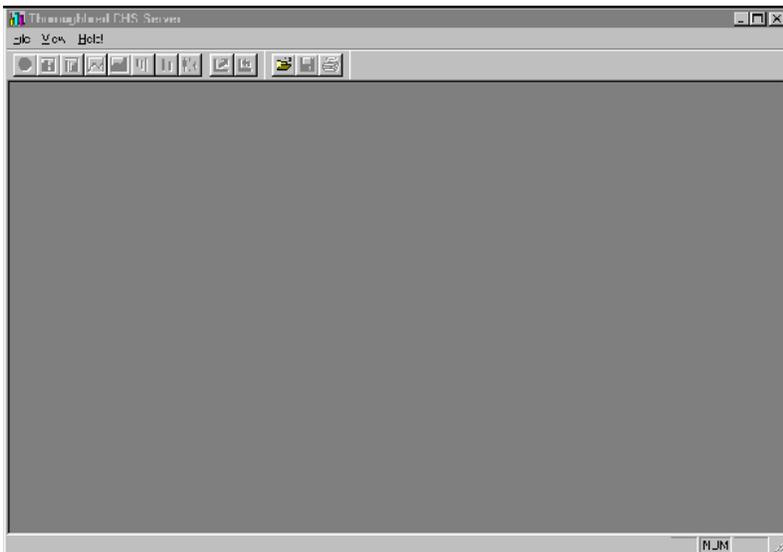
00040      M$ [6] ="0204" +           !2 values in each of 4 sets
          "[1,2,3,4]" +           !x-axis points
          "[10,15," +             !Set 1 - Values 1 & 2
          "20,25," +             !Set 2 - Values 1 & 2
          "30,35," +             !Set 3 - Values 1 & 2
          "40,45]" +             !Set 4 - Values 1 & 2
00050      M$ [7] ="[Set1,Set2,Set3,Set4]" + !Description for each Set
          "[Value1,Value2]" +     !Legend Description for each
                                   value within a set
00100      CALL "CHSCOM",M$[ALL]    !Display Chart

```

When you run this program from any Thoroughbred Environment, the system opens the TS ChartServer window and displays the defined chart. It will remain in memory until you **Exit** TS ChartServer or **Save** the chart. For more information see Saving a Chart. To see the results of this program see the TS ChartServer Window Example.

TS ChartServer Window

When you select the TS ChartServer icon or when you create a chart from any Thoroughbred Environment, the following window appears. If you have just created a chart this window displays that chart. For more information see TS ChartServer Window Example.



The Toolbar and Chartbar can be moved using normal Windows procedures. They can also be "shown/hidden" from the view menu.

The following buttons are available from the Toolbar and Chartbar:

Chartbar



These buttons allow you to change the format of the chart. You may select from Pie, Bar, Stacked Bar (when you define multiple values in a chart), Plot, Area, HiLo, HiLo Open-Close, and Candle charts.



Transpose – This button allows you to transpose the number of sets and the number in each set. In the previous example:

```
00040 M$ [6] = "0204 [1, 2, 3, 4] [10, 15, 20, 25, 30, 35, 40, 45] "
```

This produces a chart containing 2 values for each of 4 sets. By selecting the **Transpose** button this will change to 0402 or 4 values for each of 2 sets.

Orientation – This button allows you to change the chart orientation (horizontal/vertical).

Toolbar



Open – This button allows you to open a *.chs file to edit.

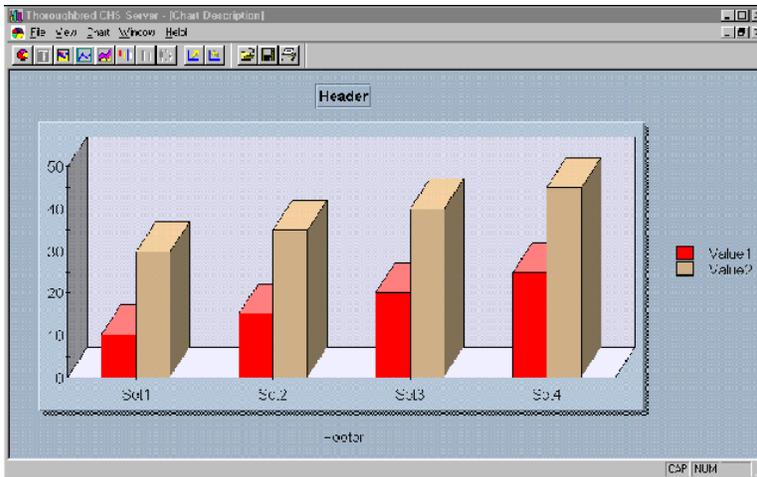
Save – This button allows you to save the file (the first time it is opened) or to save edits to the chart.

Note: From the File menu you can save the chart as *.chs, *.bmp, *.wmf, *.emf, *.jpg, or *.png files, copy the chart to the clipboard, make changes to the chart and save, or exit without saving. For more information see Saving a Chart.

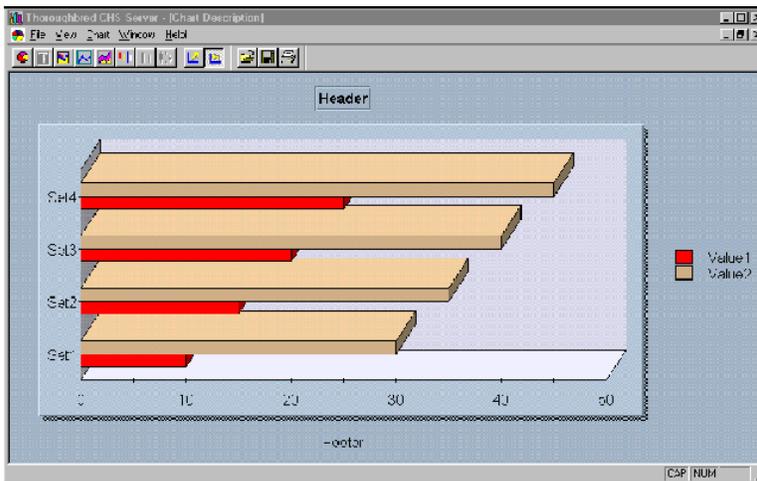
Print – This button allows you to print the edited chart.

TS ChartServer Window Example

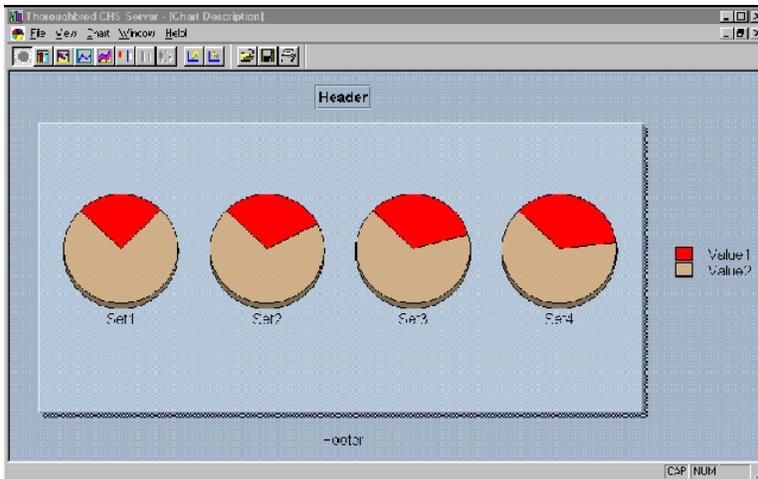
When you create a chart using the TS ChartServer Syntax Example (see the *Example* in TS ChartServer Syntax) the following displays:



Select the **Orientation** button and the following displays:



Select the **Pie** button from the Chartbar and the following displays:



Once you make your edits you can **Save** the chart, **Copy** the chart to the clipboard, or **Exit** without saving. You can also **Print** the chart to your printer.

Saving a Chart

TS ChartServer allows you to save a chart in several formats.

Saving as a Thoroughbred Charts file (.chs)*

- From the **File** menu select **Save** and the chart will be saved to the **Tsi\Charts** folder.
- From the File menu select **Save As** and then you can save the chart as a Thoroughbred Charts file (.chs) in the folder of your choice.

Saving in a different format

- From the **File** menu select **Save As** and then you can save the chart as a Bitmap (bmp), Windows Metafile (wmf), Windows Enhanced Metafile (emf), JPEG File Interchange Format (jpg), or Portable Network Graphics file (png) in the folder of your choice.

Copying to the Clipboard

- From the **File** menu select **Copy to Clipboard** and then you can **Paste** the chart in any DDE compliant application.

TS ChartServer Examples

The following examples have been included with the product and can be found in **\Tsi\Charts**.

| | |
|----------|-------------------|
| CHARTMC1 | Bar Chart |
| CHARTMC2 | Area Chart |
| CHARTMC3 | Stacked Bar Chart |
| CHARTMC4 | Pie Chart |
| CHARTMC5 | Bar Chart |

Example 1: Bar Chart

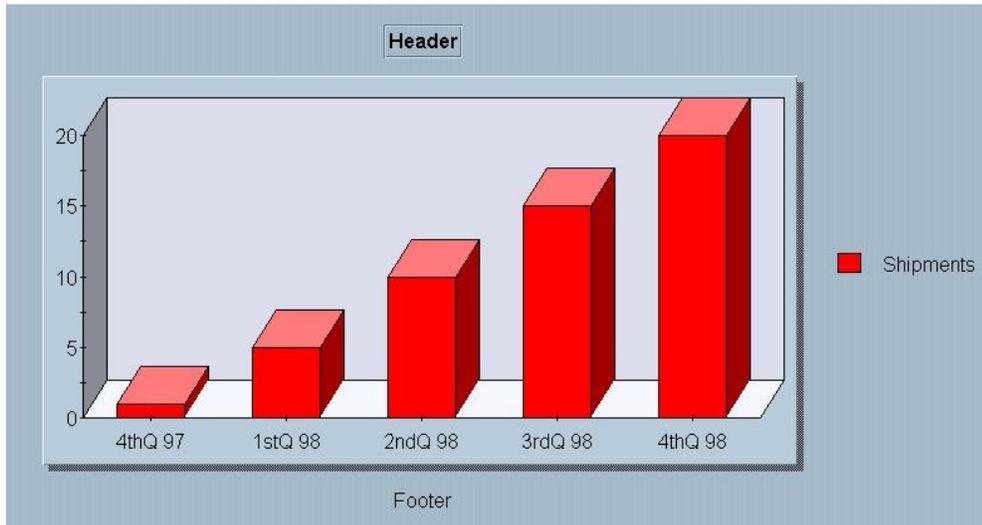
CHARTMC1 - Chart Server Example 1 (MET) 05/08/02 13:08:53 (1)

```
=====
CHARTMC1 - Chart Server Example 1 (MET)                05/08/02 13:08:53  (1)
=====
METHOD MSG$[ALL]

....
PROCEDURE
  DIM M$[8];                ! Dim array for chart data.
  M$[1]="C1",              ! Set chart name.
  M$[2]="A Sample Chart",  ! Set chart window title.
  M$[3]="Header",         ! Set chart header line.
  M$[4]="Footer",         ! Set chart footer line.
  M$[5]="B0",             ! Set Bar type chart; X axis display.
  M$[6]="0105"+          ! Set 1 set of nmbrs; 5 nmbrs in set +
    "[10,20,30,40,50]"  ! number set definition +
    "[1,5,10,15,20]",    ! number values.
                        ! Define x-value descriptions +

  M$[7]="[4thQ 97,1stQ 98,2ndQ 98,3rdQ 98,4thQ 98]" +
    "[Shipments]";      ! y-value description.

  CALL "CHSCOM",M$[ALL]; ! Display chart.
  INPUT "CR TO EXIT",*,; ! Input.
  GOTO CUEXIT           ! Exit.
```



Example 2: Area Chart

CHARTMC2 - Chart Server Example 2 (MET) 05/08/02 13:09:15 (1)

```
=====
CHARTMC2 - Chart Server Example 2 (MET)                05/08/02 13:09:15  (1)
=====
METHOD MSG$[ALL]

....
PROCEDURE
  DIM M$[8];                ! Dim array for chart data.
  M$[1]="C2",              ! Set chart name.
  M$[2]="Chart for 98 Sales", ! Set chart window title.
  M$[3]="98 Sales",        ! Set chart header line.
  M$[4]="Proprietary Information", ! Set chart footer line.
  M$[5]="A0",              ! Set Area type chart; X axis display.
  M$[6]="0112"+           ! Set 1 set of nmbrs; 12 nmbrs in set +
    "[1,2,3,4,5,6,7,8,9,10,11,12]" + ! number set definition +
    "[10000,12000,15000,9000,4000,15000," + ! 1st set of values +
    "18000,20000,10000,18000,34000,50000]" + ! 2nd set of values.
    ! Define x-value descriptions +

  M$[7]=" [Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec] "+
    "[YTD Sales (1000)]"; ! y-value description.

  CALL "CHSCOM",M$[ALL]; ! Display chart.
  INPUT "CR TO EXIT",*,; ! Input.
  GOTO CUEXIT           ! Exit.
```



Example 3: Stacked Bar Chart

CHARTMC3 - Chart Server Example 3 (MET) 05/08/02 13:09:33 (1)

```

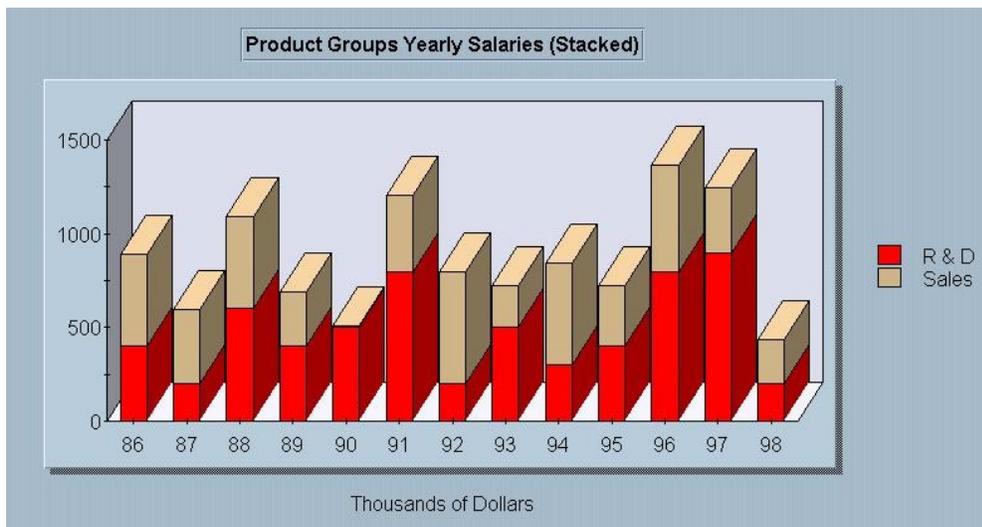
=====
CHARTMC3 - Chart Server Example 3 (MET)                05/08/02 13:09:33    (1)
=====
METHOD MSG$[ALL]

....
PROCEDURE
  DIM M$[8];                ! Dim array for chart data.
  M$[1]="C3",              ! Set chart name.
  M$[2]="Yearly Salaries (Stacked)", !Set chart window title.
  M$[3]="Product Groups Yearly "+ ! Set chart header
    "Salaries (Stacked)",      ! line.
  M$[4]="Thousands of Dollars", ! Set chart footer line.
  M$[5]="S0",                ! Set StackedBar chart; x-axis display.
  M$[6]="0213"+            ! Set 2 sets of nmbrs; 13 nmbrs in set+
    ! nمبر set definition +
    "[86,87,88,89,90,91,92,93,94,95,96,97,98]" +
    ! 1st set of number values +
    "[400,200,600,400,500,800,200,500,300,400,800,900,200," +
    ! 2nd set of number values.
    "493,394,493,292,11,403,594,222,545,324,565,345,234]",

    ! Define x-value descriptions +
  M$[7]="[86,87,88,89,90,91,92,93,94,95,96,97,98]" +
    "[R & D,Sales]";      ! y-value descriptions.

  CALL "CHSCOM",M$[ALL];    ! Display chart.
  INPUT "CR TO EXIT",*,;    ! Input.
  GOTO CUEXIT              ! Exit.

```



Example 4: Pie Chart

CHARTMC4 - Chart Server Example 4 (MET) 05/08/02 13:09:48 (1)

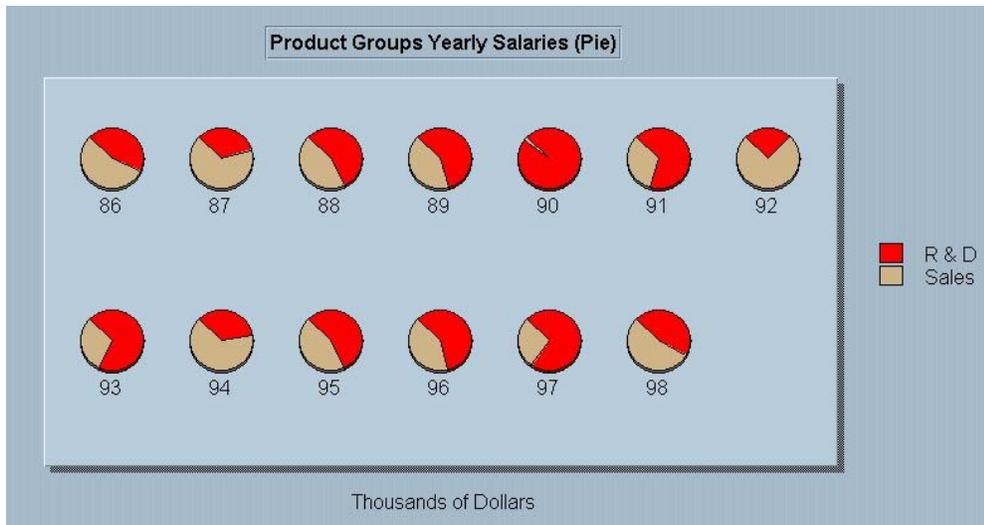
```

=====
CHARTMC4 - Chart Server Example 4 (MET)                05/08/02 13:09:48    (1)
=====
METHOD MSG$[ALL]

.....
PROCEDURE
  DIM M$[8];                ! Dim array for chart data.
  M$[1]="C4",              ! Set chart name.
  M$[2]="Yearly Salaries (Pie)", ! Set chart window name.
  M$[3]="Product Groups Yearly "+ ! Set chart header
    "Salaries (Pie)",      ! line.
  M$[4]="Thousands of Dollars", ! Set chart footer line.
  M$[5]="P0",              ! Set Pie type chart; x-axis display.
  M$[6]="0213"+           ! Set 2 sets of nmbrs; 13 nmbrs in set+
    ! nمبر set definition +
    "[86,87,88,89,90,91,92,93,94,95,96,97,98]"+
    ! 1st set of number values +
    "[400,200,600,400,500,800,200,500,300,400,800,900,200,"+
    ! 2nd set of number values.
    "493,394,493,292,11,403,594,222,545,324,565,345,234]",
    ! Define x-value descriptions +
  M$[7]=" [86,87,88,89,90,91,92,93,94,95,96,97,98]"+
    "[R & D,Sales]";      ! y-value descriptions.

  CALL "CHSCOM",M$[ALL];  ! Display chart.
  INPUT "CR TO EXIT",*,;  ! Input.
  GOTO CUEXIT             ! Exit.

```



Example 5: Bar Chart

CHARTMC5 - Chart Server Example 5 (MET) 05/08/02 13:10:04 (1)

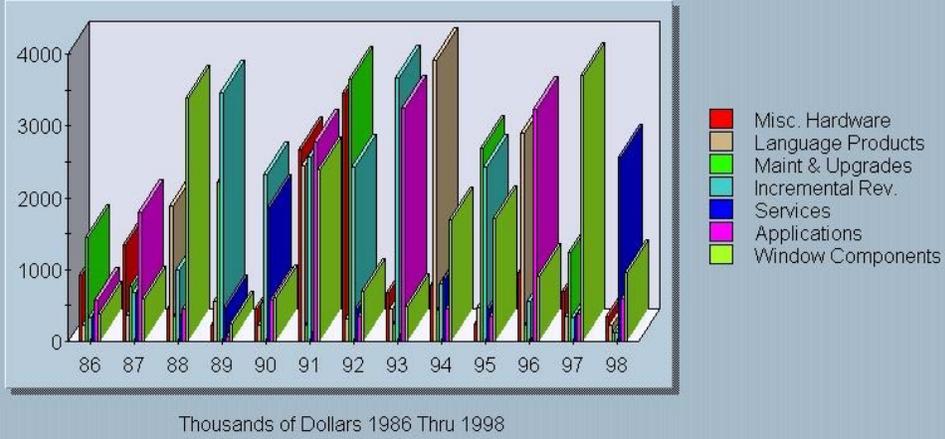
```
=====
CHARTMC5 - Chart Server Example 5 (MET)                05/08/02 13:10:04  (1)
=====
METHOD MSG$[ALL]

....
PROCEDURE
  DIM M$[8];                ! Dim array for chart data.
  M$[1]="C5",                ! Set chart name.
  M$[2]="Yearly Salaries (Bar)", ! Set chart window title.
  M$[3]="Product Groups Yearly "+ ! Set chart header
    "Salaries (Bar)",        ! line.
  M$[4]="Thousands of Dollars 1986"+!Set chart footer
    " Thru 1998",          ! line.
  M$[5]="B0",                ! Set Bar type chart; x-axis display.
  M$[6]="0713"+              ! Set 7 sets of nmbrs; 13 nmbrs in set+
    ! number set definitions +
    "[86,87,88,89,90,91,92,93,94,95,96,97,98]"+
    ! 1st set of numbers +
  "[920,1340,456,234,457,2679,3450,679,789,243,967,698,346,"+
    ! 2nd set of numbers +
  "235,368,1890,562,234,2445,323,457,3909,467,2897,345,232,"+
    ! 3rd set of numbers +
  "1456,777,343,2222,543,235,3656,243,445,2686,232,1234,121,"+
    ! 4th set of numbers +
  "335,687,987,3453,2323,2565,2432,3675,797,2433,557,334,121,"+
    ! 5th set of numbers +
  "353,656,343,466,1868,99,454,68,880,454,23,345,2564,"+
    ! 6th set of numbers +
  "585,1796,452,64,568,2769,346,3243,454,343,3232,382,594,"+
    ! 7th set of numbers.
  "392,593,3385,249,604,2394,704,482,1694,1705,908,3708,959] ",

    ! Define x-value descriptions +
  M$[7]="[86,87,88,89,90,91,92,93,94,95,96,97,98]"+
    ! y-value descriptions.
  "[Misc. Hardware,Language Products,Maint & Upgrades,"+
  "Incremental Rev.,Services,Applications,Window Components]";

  CALL "CHSCOM",M$[ALL];    ! Display chart.
  INPUT "CR TO EXIT",*,;    ! Input.
  GOTO CUEXIT                ! Exit.
=====
```

Product Groups Yearly Salaries (Bar)



MULTI-LANGUAGE

For more information about Multi-Language, see the Dialog, Message, and MenuBar Text Translations section and the Character.