

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

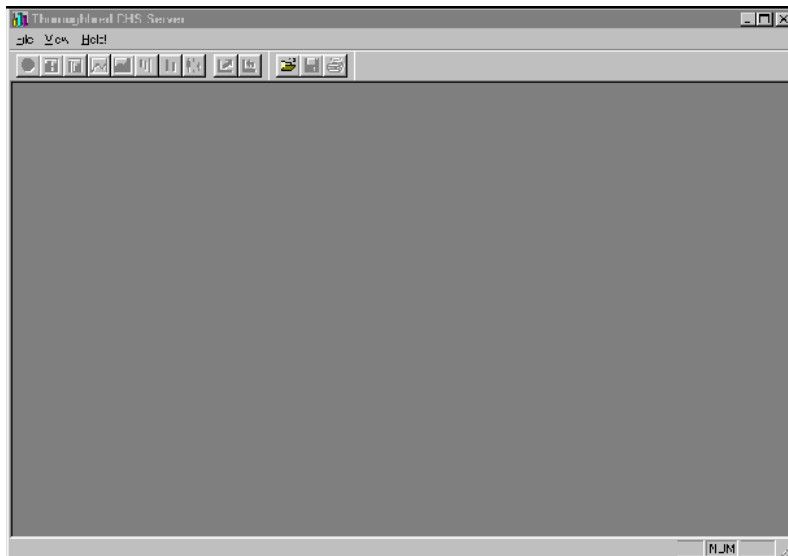
```

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

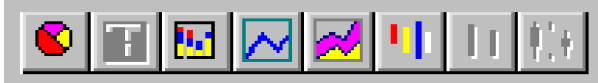
When you select the TS ChartServer icon or when you create a chart from any Thoroughbred Environment, the following window appears. If you have just created a chart this window displays that chart. For more information see TS ChartServer Window Example.



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.

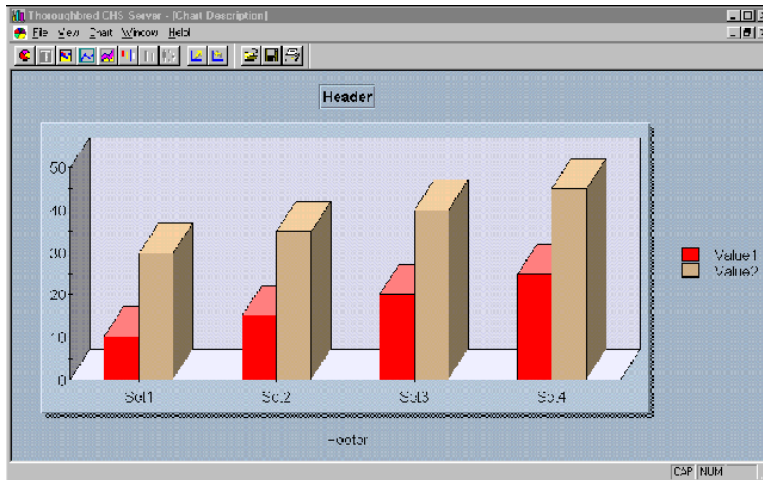
Save – This button allows you to save the file (the first time it is opened) or to save edits to the chart.

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.

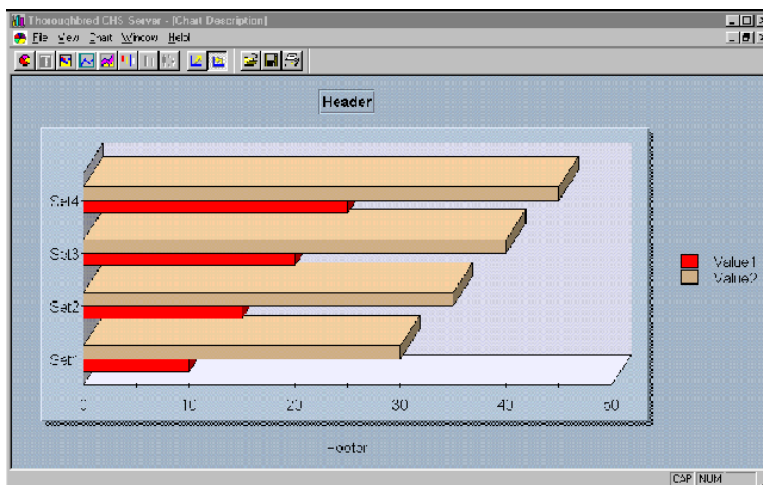
Print – This button allows you to print the edited chart.

TS ChartServer Window Example

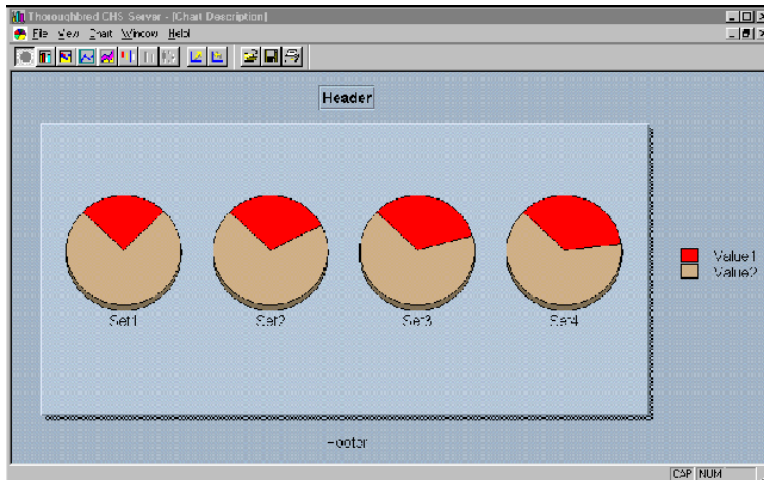
When you create a chart using the TS ChartServer Syntax Example (see the *Example* in TS ChartServer Syntax) the following displays:



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

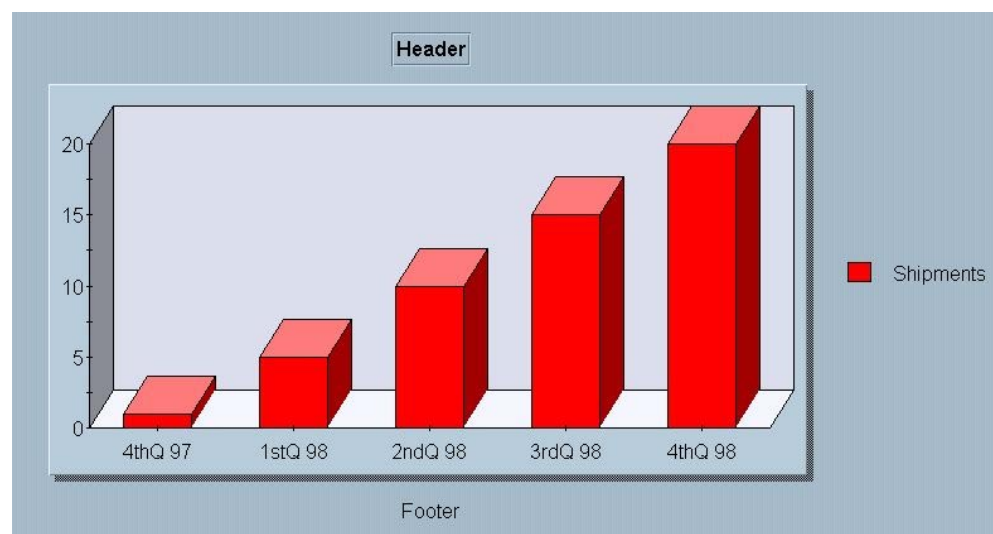
CHARTMC1 - Chart Server Example 1 (MET) 05/08/02 13:08:53 (1)

```
=====
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

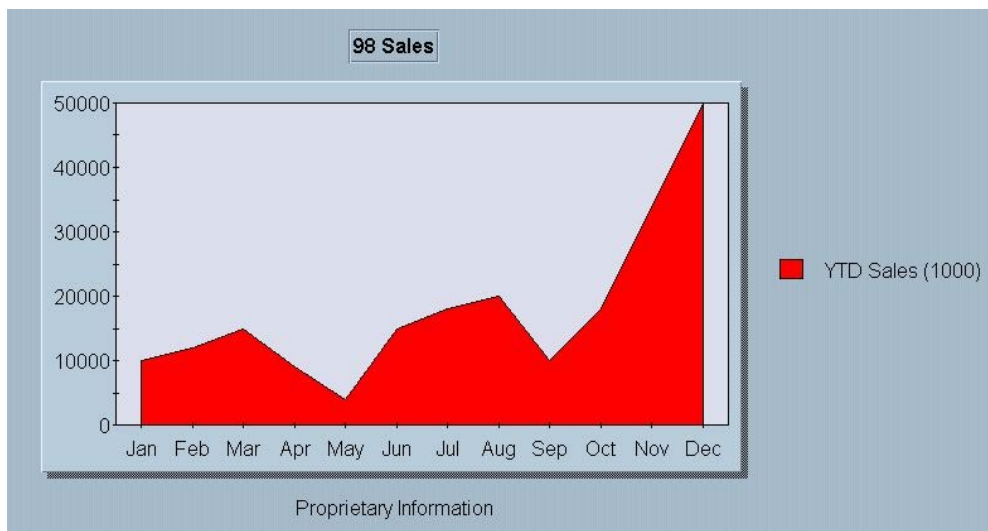
CHARTMC2 - Chart Server Example 2 (MET) 05/08/02 13:09:15 (1)

```
=====
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

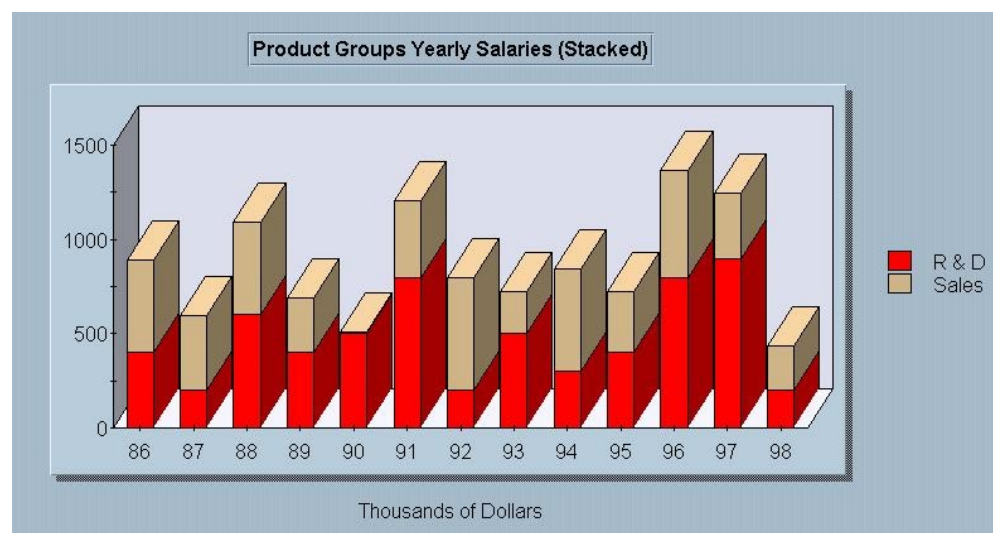
CHARTMC3 - Chart Server Example 3 (MET) 05/08/02 13:09:33 (1)

```
=====
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+
        ! nmbrr 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.
=====
```



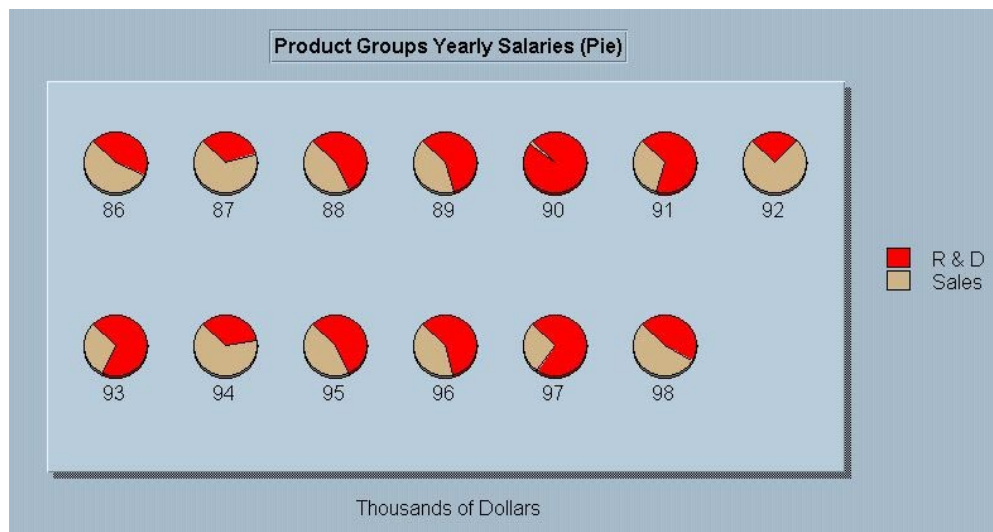
Example 4: Pie Chart

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$[6]="0213"+                             ! Set 2 sets of nmbrs; 13 nmbrs in set+
        ! nmbr set definition +
        "[86,87,88,89,90,91,92,93,94,95,96,97,98]"+
        ! 1st set of number values +
        "[400,200,600,400,500,800,200,500,300,400,800,900,200,"+
        ! 2nd set of number values.
        "493,394,493,292,11,403,594,222,545,324,565,345,234]",
        ! Define x-value descriptions +
    M$[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

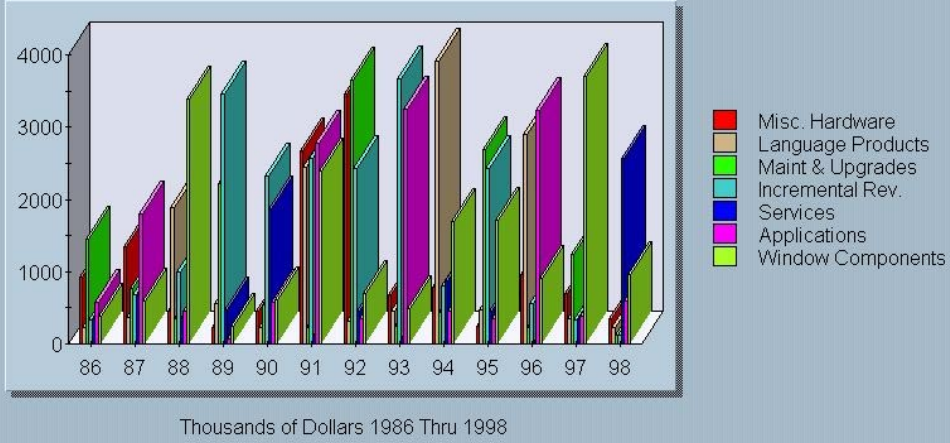
CHARTMC5 - Chart Server Example 5 (MET) 05/08/02 13:10:04 (1)

```
=====
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.