/NW=nw	Specifies the time-bandwidth product. This value should typically be in the range [2,6]. Given a time-bandwidth product nw it is recommended to use no more than 2*nw tapers in order to maximize variance efficiency. The default value of the time-bandwidth product is 3.
/DTPS=*sumsWave*	Saves the sums of the generated DPSS windows in a wave specified by *sumsWave*.
/Q	Suppress printing information in the history.
/Z	Suppress errors. The variable V_Flag is set to 0 if successful and to -1 otherwise.

Details

DPSS generates Slepian's Discrete Prolate Spheroidal Sequences in a 2D double-precision wave of dimensions *numPoints* by *numWindows*.

If you do omit /DEST the operation creates the output wave M_DPSS in the current data folder. The sequences/tapers are arranged as columns in the output wave.

Examples

```
DPSS/DEST=dpss5 1000,5
Display dpss5[][0],dpss5[][1],dpss5[][2],dpss5[][3],dpss5[][4]
ModifyGraph rgb(dpss5#1)=(0,65535,0),rgb(dpss5#2)=(1,16019,65535)
ModifyGraph rgb(dpss5#3)=(65535,0,52428),rgb(dpss5#4)=(0,0,0)

// Different sequences are orthogonal
MatrixOp/o aa=col(dpss5,1)*col(dpss5,4)
Integrate/METH=1 aa/D=W_INT
Print W_INT[numpnts(W_INT)-1]
```

See Also

MultiTaperPSD, **WindowFunction**, **ImageWindow**, **Hanning**

References

D. Slepian, "Prolate spheroidal wave functions, Fourier analysis and uncertainty -- V: The discrete case.", Bell Syst. Tech J., vol 57 pp. 1317-1430, May 1978.

DrawAction

DrawAction [**/L=*layerName*/W=*winName***] ***keyword* = *value*** [, ***keyword* = *value*** …]

The DrawAction operation deletes, inserts, and reads back a named drawing object group or the entire draw layer.

Parameters

DrawAction accepts multiple *keyword* = *value* parameters on one line.

beginInsert [=*index*]	Inserts draw commands before or at *index* position or at position specified by getgroup or delete parameters; position otherwise is zero.
commands [=*start*,*stop*]	Stores commands in S_recreation for draw objects between *start* and *stop* index values, range defined by getgroup, or entire layer otherwise.
delete [=*start*,*stop*]	Deletes draw objects between *start* and *stop* index values, range defined by getgroup, or entire layer otherwise.
extractOutline [=*start*,*stop*]	Stores polygon outline between *start* and *stop* index values, range defined by getgroup, or entire layer otherwise. Waves W_PolyX and W_PolyY contain coordinates with NaN separators. V_npnts contains the number of objects, V_startPos contains the starting index value and V_endPos contains the ending index value. Coordinates are for the first object encountered.
endInsert	Terminates insert mode.
getgroup=*name*	Stores first and last index of named group in V_startPos and V_endPos. Use `_all_` to specify the entire layer. Sets V_flag to truth group exists.

Flags

/L=*layerName*	Specifies the drawing layer on which to act. *layerName* is one of the drawing layers as specified in **SetDrawLayer**.
/W=*winName*	Sets the named window or subwindow for drawing. When omitted, action will affect the active window or subwindow. This must be the first flag specified when used in a Proc or Macro or on the command line. When identifying a subwindow with *winName,* see **Subwindow Syntax** on page III-92 for details on forming the window hierarchy.

Details

Commands stored in S_recreation are the same as those that would be generated for the range of objects in the recreation macro for the window but also have comment lines preceding each object of the form:

```
// ;ITEMNO:n;
```

where *n* is the item number of the draw object.

Examples

Create a drawing with a named group:

```
NewPanel /W=(455,124,936,413)
SetDrawEnv fillfgc= (65535,0,0)
DrawRect 58,45,132,103
SetDrawEnv gstart,gname= fred
SetDrawEnv fillfgc= (65535,43690,0)
DrawRect 79,62,154,120
SetDrawEnv arrow= 1
DrawLine 139,70,219,70
SetDrawEnv gstop
SetDrawEnv fillfgc= (0,65535,65535)
DrawRect 95,77,175,138
SetDrawEnv fillfgc= (0,0,65535)
DrawRect 111,91,191,156
```

Get and print commands for the “fred” group:

```
DrawAction getgroup=fred,commands
Print S_recreation
```

prints:

```
// ;ITEMNO:2;
SetDrawEnv gstart,gname= fred
// ;ITEMNO:3;
SetDrawEnv fillfgc= (65535,43690,0)
// ;ITEMNO:4;
DrawRect 79,62,154,120
// ;ITEMNO:5;
SetDrawEnv arrow= 1
// ;ITEMNO:6;
DrawLine 139,70,219,70
// ;ITEMNO:7;
SetDrawEnv gstop
```

Replace group fred (the orange rectangle and the arrow) with a different object. First delete the group and enter insert mode:

```
DrawAction getgroup=fred, delete, begininsert
```

Next draw the replacement:

```
SetDrawEnv gstart,gname= fred
SetDrawEnv fillfgc= (65535,65535,0)
DrawOval 82,62,161,123
SetDrawEnv gstop
```

Lastly exit insert mode:

```
DrawAction endinsert
```

See Also

The **SetDrawEnv** operation and Chapter III-3, **Drawing**.