

CSM Commands

Primitives

POINT	xloc yloc zloc
BOX	xbase ybase zbase dx dy dz
SPHERE	xcent ycent zcent radius
CYLINDER	xbeg ybeg zbeg xend yend zend radius
CONE	xvrtx yvrtx zvrtx xbase ybase zbase radius
TORUS	xcent ycent zcent dxaxis dyaxis dzaxis majorRad minorRad \$filename bodynumber=1 \$primetype \$argName1 argValue1 ...argValue4 name → UDP/UDF /name → path(\$pwd)/name.udc \$/name → path(\$csm)/name.udc \$\$/name → path(\$root)/udc/name.udc \$name index=0
IMPORT	
UDPRIM	
RESTORE	

Grown

EXTRUDE	dx dy dz
RULE	reorder=0
BLEND	begList=0 endList=0 reorder=0 oneFace=0
REVOLVE	xorig yorig zorig dxaxis dyaxis dzaxis angDeg
SWEEP	
LOFT*	smooth

Applied

FILLET	radius edgeList=0 listStyle=0
CHAMFER	radius edgeList=0 listStyle=0
HOLLOW	thick=0 entList=0 listStyle=0

Booleans

INTERSECT	\$order=none index=1 maxtol=0
SUBTRACT	\$order=none index=1 maxtol=0
UNION	toMark=0 trimList=0 maxtol=0
JOIN	toler=0 toMark=0
CONNECT	faceList1 faceList2 edgeList1=0 edgeList2=0
EXTRACT	entList
COMBINE	toler=0

Transforms

TRANSLATE	dx dy dz
ROTATEX	angDeg yaxis zaxis
ROTATEY	angDeg zaxis xaxis
ROTATEZ	angDeg xaxis yaxis
SCALE	fact xcent=0 ycent=0 zcent=0
MIRROR	nx ny nz dist=0
APPLYCSYS	\$csysName ibody=0
REORDER	ishift iflip=0

Sketch

SKBEG	x y z relative=0
SKVAR	\$type valList
SKCON	\$type index1 index2=-1 \$value=0
LINSEG	x y z
CIRARC	xon yon zon xend yend zend
ARC	xend yend zend dist \$plane=xy
SPLINE	x y z
SSLOPE	dx dy dz
BEZIER	x y z
SKEND	wireonly=0

Solver

SOLBEG	\$varList
SOLCON	\$expr
SOLEND	

Stack

MARK	
STORE	\$name index=0 keep=0
GROUP	nbody=0

Logic

IFTHEN	val1 \$op1 val2 \$op2=and val3 \$op3 val4
ELSEIF	val1 \$op1 val2 \$op2=and val3 \$op3 val4
ELSE	
ENDIF	

Looping

PATBEG	\$pmtrName ncopy
PATBREAK	expr
PATEND	

Error handling

CATBEG	sigCode
CATEND	
THROW	sigCode

Declarations

DIMENSION	\$pmtrName nrow ncol despmtr=0
CFGPMTR	\$pmtrName values
DESPMTR	\$pmtrName values
CONPMTR	\$pmtrName value
OUTPMTR	\$pmtrName
LBOUND	\$pmtrName bounds
UBOUND	\$pmtrName bounds

Attribution

ATTRIBUTE	\$attrName attrValue
CSYSTEM	\$csysName csysList
GETATTR	\$pmtrName attrID global=0

User-defined components

INTERFACE	\$argName \$argType default=0
END	

Miscellaneous

SET	\$pmtrName exprs
UDPARG	\$primetype \$argName1 argValue1 ...
SELECT	\$type arg1 ...
ASSERT	arg1 arg2 toler=0 verify=0
DUMP	\$filename remove=0 toMark=0
EVALUATE	\$type arg1 ...
NAME	\$branchName
PROJECT	x y z dx dy dz useEdges=0

User-defined Primitives/Functions

bezier	\$filename debug imax jmax cp[]
biconvex	thick camber
box	dx dy dz rad @area @volume
csm	\$filename \$pmtrname pmtrvalue @volume
createBEM	\$filename space imin imax nocrod
createPoly	\$filename hole[]
droop	xle thetale xye thetate
editAttr	\$attrname \$input \$output overwrite \$filename verbose @nchange
ellipse	rx ry rz nedge thbeg
fitcurve	\$filename ncp ordered periodic xform[] xyz[] @npnt @rms
flend	fracra fracrb toler plot
freeform	\$filename imax jmax kmax xyz[]
ganged	\$op toler
guide	nxsect origin axis
hex	corners[] uknots[] vknots[] wknots[] @area @volume
import	\$filename bodynumber @numbodies
kulfan	class[] ztail[] upper[] alower[]
naca	series thickness camber maxloc offset sharp
naca456	thkcode toc xmaxt leindex camcode cmax xmaxc cl a
nurbbody	\$filename
parsec	yte poly[] param[] meanline
pod	length fineness @volume
poly	points[]
printBbox	
printBrep	

(continued on other side)