Chapter 5.
Enumerations

Chapter 4 provides the information for classes and subtypes which store data to the save file. Some of these items may have had enumeration types, denoted by “enum <name>” in those earlier chapters. This chapter expands that information for the enumeration types given by <name>.

An enumeration consists of an enumeration name and a set of named enumeration constants. An enumeration type declaration gives the enumeration name and defines the set of named identifiers. A variable of an enumeration type stores only one of the values from the enumeration set. Listed below are the enumeration tags and the meaning of their integer identifiers used in ACIS.

All enumerations given in this chapter store in the save file the information in the second column (within quotation marks). The first column provides the notation for that enumeration value used in the code. The third column provides a short description.

AF_ADJUST_MODE

Purpose: Capitalized text used to specify adjustment mode.

Filename: acis/faceter/attribs/refine.hxx

Values:

AF_ADJUST_NONE	“0”	no adjustments
AF_ADJUST_NON_GRID	“1”	smooth vertices around triangles
AF_ADJUST_ALL	“2”	smooth all vertices

AF_GRID_MODE

Purpose: Capitalized text used to specify grid mode.

Filename: acis/faceter/attribs/refine.hxx”

Values:	AF_GRID_NONE	"0" no grids at all
	AF_GRID_INTERIOR	"1" grids in interior
	AF_GRID_TO_EDGES	"2" allow grid to divide edges

AF_SURF_MODE

Purpose: Capitalized text used to specify surface mode.

Filename: acis/faceter/attribs/af_enum.hxx

Values:	AF_SURF_ALL	"0" all surfaces
	AF_SURF_REGULAR	"1" regular surfaces
	AF_SURF_IRREGULAR	"2" irregular surfaces
	AF_SURF_PLANE	"3" planes
	AF_SURF_CONE	"4" cones
	AF_SURF_SPHERE	"5" spheres
	AF_SURF_TORUS	"6" tori
	AF_SURF_SPLINE	"7" splines
	AF_SURF_MODE_ARRAY_DIM	"8" dimension arrays

AF_TRIANG_MODE

Purpose: Capitalized text used to specify triangulation mode.

Filename: acis/faceter/attribs/refine.hxx

Values:	AF_TRIANG_NONE	“0” no triangulation
	AF_TRIANG_ALL	“1” triangulate everywhere
	AF_TRIANG_FRINGE_1	“2” triangulate against the boundary
	AF_TRIANG_FRINGE_2	“3” triangulate first grid level
	AF_TRIANG_FRINGE_3	“4” triangulate 3 levels of fringe
	AF_TRIANG_FRINGE_4	“5” triangulate 4 levels of fringe

blend_how

Purpose: Text specifies what type of blending is to be performed at ends.

Filename: acis/kernbool/blending/bl_enum.hxx

Values:	bl_how_default	“0” follow default behavior
	bl_how_cap	“1” cap or mitre regardless of edge convexity
	bl_how_roll_on	“2” roll-on regardless of edge convexity
	bl_error	“3” could be used to prevent a blend from spreading too far

bl_continuity

Purpose: Text specifies blending continuity.

Filename: acis/kernbool/blending/bl_enum.hxx

Values:	unset_continuity	”0” unset the continuity
	position_continuous	”1” position is continuous
	slope_continuous	”2” slope is continuous
	curvature_continuous	”3” curvature is continuous

bl_convexity

Purpose: Text specifies blending convexity.

Filename: abl1.0/abl_husk/msc/bl_cxty.hxx

Values:

bl_convexity_unknown	”0” convexity is unknown
bl_convex	”1” blend is convex
bl_concave	”2” blend is concave

bl_cvxty_ents

Purpose: Text specifies blending convexity.

Filename: acis/kern/bool/blending/blnattri.cxx

Values:

bl_convexity_unknown	”0” convexity is unknown
bl_convex	”1” blend is convex
bl_concave	”2” blend is concave

bl_ed_convexity

Purpose: Text specifies blending convexity of an entity.

Filename: acis/kernbool/blending/bl_enum.hxx

Values:	bl_ed_undefined_cvxty	“0” undefined convexity
	bl_ed_convex	“1” convex blend
	bl_ed_concave	“2” concave
	bl_ed_convex_smooth	“3” smooth convex
	bl_ed_concave_smooth	“4” smooth concave
	bl_ed_smooth	“5” smooth
	bl_ed_convex_cusp	“6” convex cusp
	bl_ed_concave_cusp	“7” concave cusp
	bl_ed_cusp	“8” cusp

color

Purpose: Number specifies the color used. (Specified as integer in code).

Filename: tb/testbed

Values:	black	“0” black
	red	“1” red
	green	“2” green
	blue	“3” blue
	cyan	“4” cyan
	yellow	“5” yellow
	magenta	“6” magenta
	white	“7” white

cross_section_forms

Purpose: Number specifies the type of cross section.

Filename: acis/sg_husk/vrbln/blnd_sec.hxx

Values:

XSECT_UNKNOWN	'"–1" cross section is unknown
CIRCULAR	"0" cross section iscircular
THUMBWEIGHTS	"1" thumbweights
ROT_ELLIPSE	"2" cross section is rotational ellipse
RND_CHAMFER	"3" cross section is round chamfer
G2_CONTINUOUS	"4" cross section is G2 continuous
CHAMFER	"5" cross section is chamfer

CURVE_EXTENSION_TYPE

Purpose: Number specifies the extension type.

Filename: acis/sg_husk/intcur/sub_int.hxx

Values:

EXTEND_CURVATURE	"0" extend the curvature
EXTEND_TANGENT	"1" extend the tangent

face_body_rel

Purpose: Text specifies the relationship between face and body entities.

Filename: acis/kernbool/boolean/at_bool.cxx

Values:	face_body_unknown	"unknown" face or body is unknown
	face_body_inside	"inside" face or body is inside
	face_body_outside	"outside" face or body is outside
	face_body_symmetric	"symmetric" face or body is symmetric
	face_body_antisymmetric	"antisymmetric" face or body is antisymmetric
	face_body_retain	"retain" retain face or body
	face_body_discard	"discard" discard face or body
	–9999	"NULL"

face_body_rel_ents

Purpose: Text specifies the relationship between face and body entities.

Filename: acis/kernbool/boolean/at_bool.cxx

Values:	face_body_unknown	"unknown" face or body is unknown
	face_body_inside	"inside" face or body is inside
	face_body_outside	"outside" face or body is outside
	face_body_symmetric	"symmetric" face or body is symmetric
	face_body_antisymmetric	"antisymmetric" face or body is antisymmetric
	face_body_retain	"retain" retain face or body
	face_body_discard	"discard" discard face or body
	–9999	"NULL"

5

merge_action

Purpose: Text specifies how merging is performed.

Filename: acis/ga_husk/attrib/at_name.hxx

Values:

MergeLose	“0“ Lose the attribute
MergeKeepKept	“1” Keep the attribute on the kept entity
MergeKeepLost	“2” Transfer from lost to kept. Lose any on kept
MergeKeepOne	“3“ Transfer from lost to kept if none on kept
MergeKeepAll	“4” Transfer from lost to kept. Keep any on kept
MergeCustom	“5“ Call application supplied routine for name

rad_form_ents

Purpose: Text specifies the type of radius blending.

Filename: acis/sg_husk/vrbln/at_b_bl.cxx

Values:

RADIUS_UNSET	“unknown” radius is unset
TWO_ENDS	“two_ends” radius at two ends
FUNCTIONAL	“functional” radius is functional
FIXED_WIDTH	“fixed_width” radius has fixed width
–9999	“NULL”

sec_form_ents

Purpose: Text specifies the form of section.

Filename: acis/sg_husk/vrbln/at_b_bl.cxx

Values:

XSECT_UNKNOWN	"unknown" cross section is unknown
CIRCULAR	"circular" cross section is circular
THUMBWEIGHTS	"thumbweights" cross section thumbweights
–9999	"NULL"

split_action

Purpose: Text specifies what to do with elements involved in a split.

Filename: acis/ga_husk/attrib/at_name.hxx

Values:

SplitLose	"0" Lose the attribute
SplitKeep	"1" Keep the attribute on the old entity
SplitCopy	"2" Copy the attribute to the new entity
SplitCustom	"3" Call application supplied routine for name

token_name

Purpose: Capitalized text specifies token names. (static char* in code).

Filename: acis/faceter/attribs/nodedata.cxx

Values:	0	"POSITION_TOKEN" position
	1	"NORMAL_TOKEN" normal
	2	"COLOR_TOKEN" color
	3	"TRANSPARENCY_TOKEN" transparency
	4	"TEXTURE_COORDS_TOKEN" texture coordinates
	5	"UV_TOKENS" uv parameter values
	6	"UV_DERIVS_TOKEN" uv derivative vectors
	7	"UV_CHANGE_TOKEN" uv parameter change
	8	"POINTER_TOKEN" pointer

trans_action

Purpose: Text specifies what to do with elements involved in a tranform.

Filename: acis/ga_husk/attrib/at_name.hxx

Values:	TransLose	"0" Lose the attribute
	TransIgnore	"1" Leave the attribute unchanged
	TransApply	"2" Apply transform (action depends on derived type)
	TransCustom	"3" Call application supplied routine for name

transition_ents

Purpose: Text specifies what to do with entities involved in a transition.

Filename: abl/abl_husk/attrib/bl_inst.cxx

Values:	blend_unknown	"unknown" unknown blend
	blend_runout	"runout" blend runout
	blend_cap	"cap" blend cap
	blend_rollon	"rollon" blend rollon
	–9999	NULL

underlying_sf_type

Purpose: Text specifies surface type.

Filename: acis/kerngeom/d3_vbl/vbl_bdyi.hxx

Values:	CYLINDER	"0" cylinder
	TORUS	"1" torus
	PIPE	"2" pipe
	GIVEN_TWIST	"3" given wist