Chapter 7.
Enumerations

Topic: Ignore

In C++, an enumeration (enumerated data type) defines a list of constant integer values, each with a unique identifier name. Enumerations are defined using the enum keyword. Refer to the *3D ACIS Online Help User's Guide* for a description of the fields in the reference template.

Arg_Type

Enumeration: Rendering Control

Purpose: Defines the type of data held by a Render_Arg.

Filename: rbase/rnd_husk/include/rh_args.hxx

Values:

ARG_UNDEF=0	Undefined argument
ARG_INT=–1	Integer argument
ARG_REAL=–2	Real argument
ARG_STRING=–3	String argument
ARG_COLOR=–4	Color argument
ARG_VECTOR=–5	Vector argument
ARG_ON_OFF=–6	On/off argument
ARG_FALL_OFF=–7	Light fall off type argument

Output_Mode

Enumeration: Image Output

Purpose: Specifies the format of scanlines output by subsequent rendering calls to application graphics drivers.

Filename: rbase/rnd_husk/include/rh_args.hxx

Values:	OUTPUT_MODE_RGB=0	RGB triples in range (unsigned char) 0–255.
	OUTPUT_MODE_Z=1	World space values (real) specifying distance from visible surface to eye–point.
	OUTPUT_MODE_RGB_FLOAT=2	RGB triples (real)
	OUTPUT_MODE_RGB_FLOAT_CLAMP=3	RGB triples in range (real) 0 – 1.0

Projection_Type

Enumeration: Faceting, Rendering Control

Purpose: Specifies the type of projection. Required for refinement criterion that use image space.

Filename: rbase/rnd_husk/api/rnd_api.hxx

Values:	PROJ_ORTHOGRAPHIC=0	Orthographic projection
	PROJ_PERSPECTIVE=1	Perspective projection

Render_Mode

Enumeration: Rendering Control

Purpose: Specifies the mode of rendering.

Filename: rbase/rnd_husk/include/rh_args.hxx

Values:	RENDER_MODE_FLAT=0	Constant Color across facet.
	RENDER_MODE_LAMBERT=1	Illumination model based on the diffuse reflection of a surface.
	RENDER_MODE_GOURAUD=2	Interpolated intensities across facet.
	RENDER_MODE_PHONG=3	Interpolated normals across facet.
	RENDER_MODE_PREVIEW=4	Anti–aliasing and transparency.
	RENDER_MODE_FULL=5	All Visual attributes.
	RENDER_MODE_RAYTRACE_PREVIEW=6	Same as raytrace full but without anti–aliasing.
	RENDER_MODE_RAYTRACE_FULL=7	Same as full but with improved anti–aliasing on secondary effects.

Render_Control_Var

Enumeration: Rendering Control, Viewing

Purpose: Rendering control variables for ray–tracing.

Filename: rbase/rnd_husk/include/rh_args.hxx

Values:

CVAR_OCTTREE_DEPTH=0	octtree depth is the maximum depth of the octtree data structure constructed during ray tracing. An octtree is constructed when rendering using ray tracing, either in a ray tracing mode, or when ray tracing is required by a shader in preview or full rendering modes. The default is 8.
CVAR_OCTTREE_OCCUPANCY=1	octtree occupancy is the maximum occupancy of a leaf cell of the octtree data structure constructed for ray tracing. The occupancy corresponds to the number of facets contained in an octtree leaf cell. An octtree is constructed when rendering using ray tracing, either in a ray tracing mode, or when ray tracing is required by a shader in the preview or full rendering modes. The default is 8.
CVAR_RAYTRACE_LEVEL=2	raytrace level is the maximum level of recursion that is enforced when tracing secondary rays. The default is 16.
CVAR_MIN_PIXEL_CONTRIB=3	min pixel contrib is used for determining whether the contribution made by a secondary ray can be ignored. A combination of this control variable and the level variable define the recursive ray tracing termination criteria. The range is 0.0 to 1.0. The default is 0.05.
CVAR_PIXEL_THRESHOLD=4	pixel threshold controls anti–aliasing. It determines when to adaptively super–sample the image.

The image is sampled until adjacent color samples differ in the largest of their red, green and blue components by an amount not exceeding the pixel threshold. Range is 0.0 to 1.0. The default is 0.1.

RNDR_PROJECTION_TYPE

Enumeration: Rendering Control

Purpose: Specifies the type of projection to use when rendering.

Filename: rbase/rnd_husk/intrface/rndr_env.hxx

Values:

RNDR_FLAT_PROJECTION=0	Flat projection.
RNDR_PERSPECTIVE_PROJECTION=1	Perspective projection.

Shader_Type

Enumeration: Rendering Control

Purpose: Specifies the type of a shader.

Filename: rbase/rnd_husk/intrface/rh_func.hxx

Values:

RH_BACKGROUND_SHADER=0	background
RH_FOREGROUND_SHADER=1	foreground
RH_TEXTURE_SPACE_SHADER=2	texture space
RH_LIGHT_SHADER=3	light
RH_ENVIRONMENT_SHADER=4	environment map
REFLECTANCE_COMP_SHADER=5	reflectance
DISPLACEMENT_COMP_SHADER=6	displacement (bump mapping)
COLOR_COMP_SHADER=7	color
TRANSPARENCY_COMP_SHADER=8	transparency