

DirectTrace API Implementation Grid - Completeness 3/07/2011

	Capabilities	Implementation Level	Optimization Level	OpenCL Acceleration	Testing Level	Version		
						Basic	CL	Ultimate
Features	Functionalities	100	70	0	50	100	100	100
	Shaders	100	50	100	50	100	100	100
	Optimized Algorithms	100	70	50	50	0	100	100
	Explicit Multithreading	90	70	50	40	0	100	100
	Implicit Multithreading	50	10	50	20	0	0	100
	OpenCL acceleration	75	40	100	20	0	100	100
	Texturing	20	0	100	20	0	100	100
	Bezier Curves	0	0	0	0	0	0	100
	Vertex Lists	0	0	0	0	0	0	100
	DTScene	Begin (PRIMITIVE, int =0)	100	70	0	40		
Clone (DTScene &)		75	40	0	40			
DeleteAllMaterials ()		100	40	0	40			
DeleteMaterials (int)		100	70	0	40			
End ()		100	50	0	40			
Intersector (DTRayBuffer &)		100	100	0	70			
IntersectorCL (DTRayBuffer &)		70	70	50	40			
MaterialAttrib (int, void *, int)		100	40	0	60			
NewMaterial (int, int, int, int)		100	40	0	40			
PrimitiveAttrib (void *data, int size)		100	40	0	40			
PrimitiveAttribfv (float *, int)		100	40	0	60			
PrimitiveAttribMV3fv (float *)		100	0	0	60			
PrimitiveAttribMV4fv (float *)		100	0	0	40			
PrimitiveAttribdv (double *, int)		60	40	0	40			
PrimitiveAttribMV3dv (double *)		50	40	0	40			
PrimitiveAttribMV4dv (double *)		50	0	0	40			
RemoveAllUnreferencedVertices (int)		10	0	0	40			
Reset()		80	40	0	40			
Vertex()		0	0	0	0			
Vertices(int)		0	0	0	0			
Vertex3fv (float *)		80	50	0	60			
Vertex4fv (float *)		80	50	0	30			
VertexMV3fv (float *)		50	0	0	30			
VertexMV4fv (float *)		50	0	0	30			
Vertex3dv (double *)		80	0	0	30			
Vertex4dv (double *)		80	0	0	30			
VertexMV3dv (double *)		50	0	0	30			
VertexMV4dv (double *)		50	0	0	30			
VertexAttrib (void *, int)		0	0	0	30			
VertexAttribfv (float *, int)		0	0	0	30			
VertexAttribMV3fv (float *)	0	0	0	30				
VertexAttribMV4fv (float *)	0	0	0	30				
DTImage	DTImage (DirectTraceAPI &api)	100	60	100	50			
	DTImage (Handle &hand)	100	60	100	50			
	~DTImage ()	100	60	100	50			
	operator=(DTImage)	100	50	100	50			
	operator=(float)	100	50	100	50			
	operator=(float *)							
	operator+=(DTImage)	100	50	100	50			
	operator+=(float)	100	50	100	50			
	operator+=(float *)							
	operator-=(DTImage)	100	50	100	50			
	operator-=(float)	100	50	100	50			
	operator-=(float *)							
	operator*(DTImage)							
	operator*(float)	100	50	100	50			
	operator*(float *)							
	operator/=(DTImage)							
	operator/=(float)	100	50	100	50			
	operator/=(float *)							
	Abs()	100	50	100	50			
	Clamp()	100	50	100	50			
	DeInterleave (int level)	100	50	90	40			
	Interleave (DTImage &, int)	100	10	10	50			
	LoadImage (char *name)							
	LoadImageBMP(char *)							
	Numbering()	100	60	80	50			
Resize (int =0, int =4, bool =false)	100	70	100	60				
RunCLShaders (int, float *, Handle *[], void *[], int [], int =0)	100	40	100	50				
RunShader(int(*shader)(float *, float *[]), Handle *[])	100	30	0	50				
SaveImage (char *name)								
SaveImageBMP(char *)								
SetCLShaders (char *, char *, int, int)	100	50	100	50				
DTRays	DTRayBuffer (DirectTraceAPI &api)	100	70	100	50			
	~DTRayBuffer ()	100	70	100	50			
	operator= (DTRayBuffer &)	100	60	100	50			
	Centers ()	100	70	100	70			
	Directions()	100	70	100	70			
	FrustumRaysFromProjectionMatrix ()	30	30	30	20			
	GenerateRandomRays (float *)	20	50	0	30			
	void GetElement (int nb, float *center, float *direction)							
	GetElement (DTImage &source, int nb, float *vector)	100	20	20	20			
	GetNbOfActiveRays ()	100	100	100	70			
	GetNormalsAtIntersections (DTScene &, DTRayBuffer &, int)	100	50	70	60			
	GetUVAtIntersections (DTScene &, DTRayBuffer &, int)	100	50	70	60			
	GetZBuffer ()	0	0	0	0			
	MergeWith (DTRayBuffer &, Handle *[], Handle *[])	100	60	100	50			
	MergeWith (DTRayBuffer &)	100	60	100	50			
	MoveRaysToIntersections (float =-0.000002f)	0	0	0	0			
	Normalize ()	100	60	100	70			
	PointToIntersectionSetup (DTRayBuffer &rays, DTRayBuffer &normals, DTRayBuffer &points, int pos)							
	Resize(int,int)	100	70	100	70			
	RunCLShaders (int, float *, Handle *argV[], void *[], int [], int =0)	100	50	100	70			
	RunShader (int(*) (void *, void *, float *[]), Handle *[])	100	50	100	70			
	RunShader (int(*) (float *[]), Handle *[])	100	50	100	70			
	SetFrustumRaysFromPyramidF (float *, float *[4], SUBCOPY_STYLE =SUBCOPY_NONE, int =0)	100	70	100	70			
	SetCLShaders (char *, char *, int, int)	100	50	100	70			
	SetRandomlyDisplacedFrustumRaysFromPyramidF (float *, float *[4], SUBCOPY_STYLE =SUBCOPY_NONE, int =0)	100	70	100	70			
	SetRays4D (int, float *, float *)	0	0	0	0			
	SetZBuffer ()	0	0	0	0			
	Shuffle ()	0	0	0	0			
	Shuffle (Handle *argHandleV[])	100	20	20	20			
	Touch (COHERENCY_TYPE =FULLY_INCOHERENT_RAYS)	100	70	100	50			