AUTODESK® Fusion 360 API Object Model

Application

ApplicationEvent

Data
- DataHubs
  - DataHub
    - DataProjects
      - DataProject
        - DataFolder
          - DataFolders
            - DataFolder
            - DataFiles
              - DataFile

FavoriteAppearances
FavoriteMaterials

ImportManager
- ImportOptions **[CC]**
  - DXF2DImportOptions
  - FusionArchiveImportOptions *(CC)*
  - IGESImportOptions *(CC)*
  - SATImportOptions *(CC)*
  - SMTImportOptions *(CC)*
  - STEPImportOptions *(CC)*

MaterialLibraries
- MaterialLibrary
  - Materials
    - Material
      - Properties
        - Property

Appearances
- Appearance
  - Properties
    - Property **[CC]**
    - AppearanceTexture *(CC)*
    - AppearanceTextureProperty *(CC)*
    - BooleanProperty *(CC)*
    - ChoiceProperty *(CC)*
    - ColorProperty *(CC)*
    - FilenameProperty *(CC)*
    - FloatProperty *(CC)*
    - IntegerProperty *(CC)*
    - StringProperty *(CC)*

Preferences
- GeneralPreferences
- GraphicsPreferences
- GridPreferences
- MaterialPreferences
- NetworkPreferences
- ProductUsageData
- UnitAndValuePreferences
- DefaultUnitsPreferencesCollection
  - DefaultUnitsPreferences **[M]**
  - FusionDefaultUnitsPreferences *(M)*
- ProductPreferencesCollection
  - ProductPreferences **[N]**
  - FusionProductPreferences *(N)*

User
ViewPort
- Camera
WebRequestEvent

UserInterface

ApplicationCommandEvent

CommandDefinitions
- CommandDefinition
  - ControlDefinition **[U]**
    - ButtonControlDefinition *(U)*
    - CheckBoxControlDefinition *(U)*
    - ListControlDefinition *(U)*
      - ListItems
        - ListItem
  - CommandCreatedEvent
  - Command
    - CommandInputs
      - CommandInput **[W]**
        - BoolValueCommandInput *(W)*
        - ButtonRowCommandInput *(W)*
        - DirectionCommandInput
        - DistanceValueCommandInput
        - DropDownCommandInput *(W)*
        - FloatSliderCommandInput *(Z)*
        - FloatSpinnerCommandInput *(W)*
        - GroupCommandInput *(W)*
        - ImageCommandInput *(W)*
        - IntegerSliderCommandInput *(Z)*
        - IntegerSpinnerCommandInput *(W)*
        - MultiSelectCommandInput *(W)*
          - ListItems
            - ListItem
        - RadioButtonCommandInput *(W)*
        - SelectionCommandInput *(W)*
        - SliderCommandInput *(W)* **[Z]**
        - StringValueCommandInput *(W)*
        - TabCommandInput *(W)*
        - TableCommandInput *(W)*
        - TextBoxCommandInput *(W)*
        - ValueCommandInput *(W)*
    - CommandEvent
    - InputChangedEvent
    - KeyboardEvent
    - MouseEvent
    - SelectionEvent
    - ValidateInputsEvent

DocumentEvent
FileDialog
ProgressDialog
ToolbarPanelList
- ToolbarPanel
  - ToolbarControls
    - ToolbarControl **[V]**
      - CommandControl *(V)*
      - DropDownControl *(V)*
      - SeperatorControl *(V)*
      - SplitButtonControl *(V)*

Toolbars
- Toolbar
Workspaces
- Workspace
  - ToolbarPanels
  - WorkspaceEvent

Documents

FusionDocument **(O)**
- Selections
- Design *(A)*
  - ExportManager
    - ExportOptions **[AA]**
      - FusionArchiveExportOptions *(AA)*
      - IGESExportOptions *(AA)*
      - IGESExportOptions *(AA)*
      - SATExportOptions *(AA)*
      - SMTExportOptions *(AA)*
      - STEPExportOptions *(AA)*
      - STLExportOptions *(AA)*
  - Components
    - FusionUnitsManager
    - InterferenceResults
      - InterferenceResult
        - InterferenceInput
    - ParameterList
      - Parameter **[P]**
  - Timeline
    - TimelineGroups
      - TimelineGroup
    - TimelineObject
  - UserParameters
    - UserParameter *(P)*
  - Snapshots
    - Snapshot

Document **[O]**
- Products
  - Product **[A]**

CAM *(A)*
- GenerateToolpathFuture
- Setups
  - Setup
    - CAMFolders
      - CAMFolder
    - CAMPatterns
      - CAMPattern
    - ChildOperationList
    - Operations
      - Operation

Component

ModelParameters
- ModelParameter *(P)*

PhysicalProperties

Features
- Feature **[K]**
- BaseFeatures
  - BaseFeature *(K)*
- BoundaryFillFeatures
  - BoundaryFillFeature *(K)*
    - BRepCells
      - BRepCell
  - BoundaryFillFeatureInput
- BoxFeatures
  - BoxFeature *(K)*
- ChamferFeatures
  - ChamferFeature *(K)*
    - ChamferTypeDefinition **[X]**
      - DistanceAndAngleChamferTypeDefinition *(X)*
      - EqualDistanceChamferTypeDefinition *(X)*
      - TwoDistancesChamferTypeDefinition *(X)*
  - ChamferFeatureInput
- CircularPatternFeatures
  - CircularPatternFeature *(K)*
  - CircularPatternFeatureInput
  - PatternElements
    - PatternElement
- CoilFeatures
  - CoilFeature *(K)*
- CylinderFeatures
  - CylinderFeature *(K)*
- DeleteFaceFeatures
  - DeleteFaceFeature *(K)*
- DraftFeatures
  - DraftFeature *(K)*
  - DraftFeatureInput
- ExtendFeatures
  - ExtendFeature *(K)*
  - ExtendFeatureInput
- ExtrudeFeatures
  - ExtrudeFeature *(K)*
    - ExtentDefinition **[L]**
      - AllExtentDefinition *(L)*
      - OneSideToExtentDefinition *(L)*
      - TwoSideDistanceExtentDefinition *(L)*
      - TwoSideToExtentDefinition *(L)*
  - ExtrudeFeatureInput
- FilletFeatures
  - FilletFeature *(K)*
    - FilletEdgeSets
      - FilletEdgeSet **[Y]**
        - ChordLengthFilletEdgeSet *(Y)*
        - ConstantRadiusFilletEdgeSet *(Y)*
        - VariableRadiusFilletEdgeSet *(Y)*
  - FilletFeatureInput
- FormFeatures
  - FormFeature *(K)*

- HoleFeatures
  - HoleFeature *(K)*
    - ExtentDefinition **[L]**
      - AllExtentDefinition *(L)*
      - DistanceExtentDefinition *(L)*
      - OneSideToExtentDefinition *(L)*
    - SketchPointHolePositionDefinition *(DD)*
    - HolePositionDefinition **[DD]**
      - AtCenterHolePositionDefinition *(DD)*
      - OnEdgeHolePositionDefinition *(DD)*
      - PlaneAndOffsetsHolePositionDefinition *(DD)*
      - PointHolePositionDefinition *(DD)*
      - SketchPointsHolePositionDefinition *(DD)*
  - HoleFeatureInput
- LoftFeatures
  - LoftFeature *(K)*
    - LoftCenterLineOrRails
      - LoftCenterLineOrRail
    - LoftSections
      - LoftSection
        - LoftEndCondition **[EE]**
          - LoftDirectionEndCondition *(EE)*
          - LoftFreeEndCondition *(EE)*
          - LoftPointSharpEndCondition *(EE)*
          - LoftPointTangentEndCondition *(EE)*
          - LoftSmoothEndCondition *(EE)*
          - LoftTangentEndCondition *(EE)*
  - LoftFeatureInput
- MirrorFeatures
  - MirrorFeature *(K)*
  - MirrorFeatureInput
  - PatternElements
    - PatternElement
- MoveFeatures
  - MoveFeature *(K)*
  - MoveFeatureInput
- OffsetFeatures
  - OffsetFeature *(K)*
  - OffsetFeatureInput
- PatchFeatures
  - PatchFeature *(K)*
  - PatchFeatureInput
- PathPatternFeatures
  - PathPatternFeature *(K)*
  - PathPatternFeatureInput
  - PatternElements
    - PatternElement
- PipeFeatures
  - PipeFeature *(K)*
- RectangularPatternFeatures
  - RectangularPatternFeature *(K)*
  - RectangularPatternFeatureInput
  - PatternElements
    - PatternElement
- RemoveFeatures
  - RemoveFeature *(K)*
- ReplaceFaceFeatures
  - ReplaceFaceFeature *(K)*
  - ReplaceFaceFeatureInput

- ReverseNormalFeatures
  - ReverseNormalFeature *(K)*
- RevolveFeatures
  - RevolveFeature *(K)*
    - AngleExtentDefinition *(L)*
    - ExtentDefinition **[L]**
      - OneSideToExtentDefinition *(L)*
      - TwoSideAngleExtentDefinition *(L)*
      - TwoSideToExtentDefinition *(L)*
  - RevolveFeatureInput
- RibFeatures
  - RibFeature *(K)*
- RuleFilletFeatures
  - RuleFilletFeature *(K)*
- ScaleFeatures
  - ScaleFeature *(K)*
  - ScaleFeatureInput
- ShellFeatures
  - ShellFeature *(K)*
  - ShellFeatureInput
- SilhouetteSplitFeatures
  - SilhouetteSplitFeature *(K)*
  - SilhouetteSplitFeatureInput
- SphereFeatures
  - SphereFeature *(K)*
- SplitBodyFeatures
  - SplitBodyFeature *(K)*
  - SplitBodyFeatureInput
- SplitFaceFeatures
  - SplitFaceFeature *(K)*
  - SplitFaceFeatureInput
- StitchFeatures
  - StitchFeature *(K)*
  - StitchFeatureInput
- SurfaceDeleteFaceFeatures
  - SurfaceDeleteFaceFeature *(K)*
- SweepFeatures
  - SweepFeatureInput
  - SweepFeature *(K)*
- ThickenFeatures
  - ThickenFeature *(K)*
  - ThickenFeatureInput
- ThreadFeatures
  - ThreadDataQuery
  - ThreadFeature *(K)*
    - ThreadInfo
  - ThreadFeatureInput
- TorusFeatures
  - TorusFeature *(K)*
- TrimFeatures
  - TrimFeatureInput
  - TrimFeature *(K)*
- UnstitchFeatures
  - UnstitchFeature *(K)*
- WebFeatures
  - WebFeature *(K)*

MeshBodies
- MeshBody
  - PolygonMesh
  - TriangleMesh

BRepBodies
- BRepBody
  - PhysicalProperties
  - MeshManager
    - TriangleMeshCalculator
    - TriangleMesh
    - TriangleMeshList
    - TriangleMesh
- BRepLumps
  - BRepLump
    - BRepShells
      - BRepShell
        - BRepFaces
          - BRepFace
            - SurfaceEvaluator
            - MeshManager
            - PhysicalProperties
        - BRepEdges
          - BRepEdge
            - BRepVertices
            - BRepVertex
            - CurveEvaluator3D
        - BRepLoops
          - BRepLoop
        - BRepCoEdges
          - BRepCoEdge
            - CurveEvaluator2D

AsBuiltJoints
- AsBuiltJoint
- AsBuiltJointInput

ContactSets
- ContactSet

Joints
- Joint
  - JointGeometry
  - JointMotion **[BB]**
    - BallJointMotion *(BB)*
      - JointLimits
    - CylindricalJointMotion *(BB)*
      - JointLimits
    - PinSlotJointMotion *(BB)*
      - JointLimits
    - PlanarJointMotion *(BB)*
      - JointLimits
    - RevoluteJointMotion *(BB)*
      - JointLimits
    - RigidJointMotion *(BB)*
    - SliderJointMotion *(BB)*
      - JointLimits
  - JointInput

JointOrigins
- JointOrigin
  - JointOriginInput

Occurrences
- Occurrence
  - Component
  - OccurrenceList
    - Occurrence
    - PhysicalProperties

RigidGroups
- RigidGroup

Sketches
- Sketch
  - SketchEntity **[Q]**
  - Profiles
    - Profile
      - AreaProperties
      - ProfileLoops
        - ProfileLoop
          - ProfileCurves
            - ProfileCurve
  - SketchCurves
    - SketchCurve **[R]** *(Q)*
    - SketchArcs
      - SketchArc *(R)*
    - SketchCircles
      - SketchCircle *(R)*
    - SketchConicCurves
      - SketchConicCurve *(R)*
    - SketchEllipses
      - SketchEllipse *(R)*
    - SketchEllipticalArcs
      - SketchEllipticalArc *(R)*
    - SketchFittedSplines
      - SketchFittedSpline *(R)*
    - SketchFixedSplines
      - SketchFixedSpline *(R)*
    - SketchLines
      - SketchLine *(R)*
  - SketchPoints
    - SketchPoint *(Q)*
    - SketchEntityList
  - SketchTexts
    - SketchText *(Q)*
    - SketchTextInput

SketchDimensions
- SketchDimension **[T]**
  - SketchAngularDimension *(T)*
  - SketchConcentricCircleDimension *(T)*
  - SketchDiameterDimension *(T)*
  - SketchEllipseMajorRadiusDimension *(T)*
  - SketchEllipseMinorRadiusDimension *(T)*
  - SketchLinearDimension *(T)*
  - SketchOffsetCurvesDimension *(T)*
  - SketchOffsetDimension *(T)*
  - SketchRadialDimension *(T)*

GeometricConstraints
- GeometricConstraint **[S]**
  - CircularPatternConstraint *(S)*
  - CoincidentConstraint *(S)*
  - CollinearConstraint *(S)*
  - ConcentricConstraint *(S)*
  - EqualConstraint *(S)*
  - HorizontalConstraint *(S)*
  - HorizontalPointsConstraint *(S)*
  - MidPointConstraint *(S)*
  - ParallelConstraint *(S)*
  - PerpendicularConstraint *(S)*
  - PolygonConstraint *(S)*
  - RectangularPatternConstraint *(S)*
  - SmoothConstraint *(S)*
  - SymmetryConstraint *(S)*
  - TangentConstraint *(S)*
  - VerticalConstraint *(S)*
  - VerticalPointsConstraint *(S)*

ConstructionAxes
- ConstructionAxisInput
- ConstructionAxis
  - ConstructionAxisDefinition **[E]**
    - ConstructionAxisByLineDefinition *(E)*
    - ConstructionAxisCircularFaceDefinition *(E)*
    - ConstructionAxisEdgeDefinition *(E)*
    - ConstructionAxisNormalToFaceAtPointDefinition *(E)*
    - ConstructionAxisPerpendicularAtPointDefinition *(E)*
    - ConstructionAxisTwoPlaneDefinition *(E)*
    - ConstructionAxisTwoPointDefinition *(E)*

ConstructionPlanes
- ConstructionPlaneInput
- ConstructionPlane
  - ConstructionPlaneDefinition **[D]**
    - ConstructionPlaneAtAngleDefinition *(D)*
    - ConstructionPlaneDistanceOnPathDefinition *(D)*
    - ConstructionPlaneMidplaneDefinition *(D)*
    - ConstructionPlaneOffsetByPlaneDefinition *(D)*
    - ConstructionPlaneOffsetDefinition *(D)*
    - ConstructionPlaneTangentAtPointDefinition *(D)*
    - ConstructionPlaneTangentDefinition *(D)*
    - ConstructionPlaneThreePointsDefinition *(D)*
    - ConstructionPlaneTwoEdgesDefinition *(D)*

ConstructionPoints
- ConstructionPointInput
- ConstructionPoint
  - ConstructionPointDefinition **[F]**
    - ConstructionPointCenterDefinition *(F)*
    - ConstructionPointEdgePlaneDefinition *(F)*
    - ConstructionPointPointDefinition *(F)*
    - ConstructionPointThreePlanesDefinition *(F)*
    - ConstructionPointTwoEdgesDefinition *(F)*

3D Math
- BoundingBox3D
- Matrix3D
- Vector3D

2D Math
- BoundingBox2D
- Matrix2D
- Vector2D

Surface Geometry
- Surface **[J]**
  - SurfaceEvaluator
- Cone *(J)*
- Cylinder *(J)*
- EllipticalCone *(J)*
- EllipticalCylinder *(J)*
- NurbsSurface *(J)*
- Plane *(J)*
- Sphere *(J)*
- Torus *(J)*

3D Wireframe Geometry
- Curve3D **[H]**
  - CurveEvaluator3D
- Arc3D *(H)*
- Circle3D *(H)*
- Ellipse3D *(H)*
- EllipticalArc3D *(H)*
- InfiniteLine3D *(H)*
- Line3D *(H)*
- NurbsCurve3D *(H)*
- Point3D

2D Geometry
- Curve2D **[G]**
  - CurveEvaluator2D
- Arc2D *(G)*
- Circle2D *(G)*
- Ellipse2D *(G)*
- EllipticalArc2D *(G)*
- Line2D *(G)*
- NurbsCurve2D *(G)*
- Point2D
- CurveEvaluator2D

Miscellaneous
- *Entity*
  - Attributes
    - Attribute
- Color
- ObjectCollection
- Path
  - PathEntity
- ValueInput

Legend

Collection Objects:	Objects
Standard Objects:	Object
Base Class Objects:	**[x]**
Derived Objects:	*(x)*
Modeling Related Objects:	
Assembly Related Objects:	
User Interface Related Objects:	
Construction Geometry Objects:	
Body Related Objects:	
Sketch Related Objects:	