Autodesk® Inventor® 2010 API Object Model

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Application

- ApplicationAddIns
  - ApplicationAddIn
  - TranslatorAddIn
- ApplicationEvents
- AssemblyEvents
- AssemblyOptions
- ChangeManager
  - ChangeDefinitions
    - ChangeDefinition
      - ChangeProcessor
- ColorSchemes
  - ColorScheme
- CommandManager
  - CommandCategories
    - CommandCategory
  - ControlDefinitions
    - ControlDefinition **[b]**
    - ButtonDefinition *(b)*
    - ComboBoxDefinition *(b)*
    - MacroControlDefinition *(b)*
  - InteractionEvents
    - InteractionGraphics
      - ClientGraphics *
      - GraphicsDataSets *
    - KeyboardEvents
    - MeasureEvents
    - MouseEvents
      - PointInferenceEnumerator
        - PointInference
    - SelectEvents
    - TriadEvents
  - UserInputEvents
- ContentCenter
  - ContentTreeViewNode
    - ContentFamiliesEnumerator
      - ContentFamily
        - ContentTableColumns
          - ContentTableColumn
            - ExpressionLimits
        - ContentTableRows
          - ContentTableRow
            - ContentTableCell
    - ContentTreeViewNodesEnumerator
      - ContentTreeViewNode
- ContentCenterOptions
- DisplayOptions
  - ShadedDisplayOptions
  - WireframeDisplayOptions
- DrawingOptions
- ErrorManager
  - MessageSection
- FileAccessEvents
- FileDialog
  - FileDialogEvents
- FileLocations
- FileManager
  - FileManagerEvents
  - FilesEnumerator
    - File
      - FileDescriptorsEnumerator
        - FileDescriptor
- FileOptions
- FileUIEvents
- FileVersion
- GeneralOptions
  - GripSnapOptions
  - ThreadTableQuery
- HardwareOptions
- HelpManager
- iFeatureOptions
- InventorVBAProjects
  - InventorVBAProject
    - InventorVBAComponents
      - InventorVBAComponent
        - InventorVBAMembers
          - InventorVBAMember
            - InventorVBAArguments
              - InventorVBAArgument
- LanguageTools
- MeasureTools
- ModelingEvents
- NotebookOptions
- PartOptions
- ProgressBar
- RepresentationEvents
- SaveOptions
- Sketch3DOptions
- SketchEvents
- SketchOptions
- SoftwareVersion
- StyleEvents
- StylesManager
  - MaterialsEnumerator
- TransactionManager
  - CheckPoint
    - Transaction
      - CheckPointsEnumerator
      - TransactionEvents
      - TransactionsEnumerator
- TransientBRep
- TransientGeometry *
- TransientObjects *
- UnitsOfMeasure
- UserInterfaceManager
  - CommandBars
    - CommandBar
      - CommandBarControls
        - CommandBarControl
- EnvironmentList
- Environments
  - Environment
    - CommandBarList
    - DisabledCommandList
    - PanelBar
- Ribbons
  - Ribbon
    - RibbonTabs
      - RibbonTab
        - RibbonPanels
          - RibbonPanel
            - CommandControls
              - CommandControl
- UserInterfaceEvents
- Views
  - View
    - Camera
- Documents
  - Document **[a]**
    - AttributeManager
      - AttributesEnumerator
      - AttributeSetsEnumerator
    - BrowserPanes
      - BrowserPane
        - BrowserNode
          - BrowserNodeDefinition **[ee]**
          - BrowserNodesEnumerator
            - BrowserNode
              - BrowserFoldersEnumerator
                - BrowserFolder
              - ClientBrowserNodeDefinition *(ee)*
              - NativeBrowserNodeDefinition *(ee)*
      - BrowserPanesEvents
      - ClientNodeResources
        - ClientNodeResource
    - DocumentDescriptorsEnumerator
      - DocumentDescriptor
    - DocumentEvents
    - DocumentInterests
      - DocumentInterest
    - EnvironmentManager
    - FileVersions
      - FileVersion
    - GraphicsDataSetsCollection *
    - HighlightSet
    - InventorVBAProject
    - PrintManager
    - PropertySets
      - PropertySet
        - Property
    - ReferencedOLEFileDescriptors
      - ReferencedOLEFileDescriptor
    - ReferenceKeyManager
    - SelectSet
    - SketchSettings
    - SoftwareVersion
    - UnitsOfMeasure

- PartDocument *(a)*
  - PartComponentDefinition **[n]**
    - AnalysisManager
      - DraftAnalyses
        - DraftAnalysis
    - ClientGraphicsCollection *
    - DataIO
    - iMateDefinitions
      - iMateDefinition **[o]**
      - AngleIMateDefinition *(o)*
      - CompositeIMateDefinition *(o)*
      - FlushIMateDefinition *(o)*
      - InsertIMateDefinition *(o)*
      - MateIMateDefinition *(o)*
      - RotateRotateIMateDefinition *(o)*
      - RotateTranslateIMateDefinition *(o)*
      - TangentIMateDefinition *(o)*
    - iPartFactory
      - FactoryOptions
      - iPartTableColumns
        - iPartTableColumn
      - iPartTableRows
        - iPartTableRow
          - iPartTableCell
    - iPartMember
    - LightingStyles
      - LightingStyle *(z)*
        - Lights
          - Light
    - MassProperties
    - Materials
      - Material
    - ModelingSettings
      - UserCoordinateSystemSettings
        - iFeatureTemplateDescriptors
          - iFeatureTemplateDescriptor
    - Parameters *
    - PartEvents
    - PlanarSketches
      - PlanarSketch *(p)* **[ff]** *
        - ProjectedCuts
          - ProjectedCut
        - SketchBlocks
          - SketchBlock
    - ReferenceComponents
      - DerivedAliasComponents
        - DerivedAliasComponent
      - DerivedAssemblyComponents
        - DerivedAssemblyComponent
          - DerivedAssemblyDefinition
            - DerivedAssemblyOccurrences
              - DerivedAssemblyOccurrence
            - ReferenceFeaturesEnumerator
      - DerivedPartComponents
        - DerivedPartComponent
          - DerivedPartDefinition **[cc]**
            - DerivedPartEntities
              - DerivedPartEntity
            - DerivedPartCoordinateSystemDef *(cc)*
            - DerivedPartTransformDef *(cc)*
            - DerivedPartUniformScaleDef *(cc)*
            - ParametersEnumerator
            - ReferenceFeaturesEnumerator
            - SketchBlockDefinitionsEnumerator
              - SketchBlocksEnumerator
            - SketchBlocks
            - Sketches3DEnumerator
    - RenderStyles
      - RenderStyle *(z)*
    - Sketch3DSettings
    - SketchBlockDefinitions
      - SketchBlockDefinition *(ff)*
    - Sketches3D
      - Sketch3D *
    - SurfaceBodies *
    - UserCoordinateSystems
      - UserCoordinateSystem
    - WorkAxes
      - WorkAxis
        - AnalyticEdgeWorkAxisDef
        - FixedWorkAxisDef
        - LineAndPlaneWorkAxisDef
        - LineAndPointWorkAxisDef
        - LineWorkAxisDef
        - NormalToSurfaceWorkAxisDef
        - RevolvedFaceWorkAxisDef
        - TwoPlanesWorkAxisDef
        - TwoPointsWorkAxisDef
    - WorkPlanes
      - WorkPlane
        - FixedWorkPlaneDef
        - LineAndTangentWorkPlaneDef
        - LinePlaneAndAngleWorkPlaneDef
        - NormalToCurveWorkPlaneDef
        - PlaneAndOffsetWorkPlaneDef
        - PlaneAndPointWorkPlaneDef
        - PlaneAndTangentWorkPlaneDef
        - PointAndTangentWorkPlaneDef
        - ThreePointsWorkPlaneDef
        - TorusMidPlaneWorkPlaneDef
        - TwoLinesWorkPlaneDef
        - TwoPlanesWorkPlaneDef
    - WorkPoints
      - WorkPoint
        - CentroidWorkPointDef
        - CurveAndEntityWorkPointDef
        - FixedWorkPointDef
        - MidPointWorkPointDef
        - NonLinearEdgeWorkPointDef
        - PointWorkPointDef
        - ThreePlanesWorkPointDef
        - TorusCenterPointWorkPointDef
        - TwoLinesWorkPointDef
  - PartFeatures **[bb]**
    - PartFeature **[c]**
      - FeatureDimensions
        - FeatureDimension
      - BendPartFeatures
        - BendPartFeature *(c)*
      - BossFeatures
        - BossFeature
      - BoundaryPatchFeatures
        - BoundaryPatchFeature *(c)*
          - BoundaryPatchDefinition
            - BoundaryPatchLoops
              - BoundaryPatchLoop
      - ChamferFeatures
        - ChamferFeature *(c)*
          - ChamferDefinition **[d]**
            - DistanceAndAngleChamferDef *(d)*
            - DistanceChamferDef *(d)*
            - TwoDistancesChamferDef *(d)*
      - CircularPatternFeatures
        - CircularPatternFeature *(c)*
          - FeaturePatternElements
            - FeaturePatternElement
      - ClientFeatures
        - ClientFeature *(c)*
          - ClientFeatureDefinition
            - ClientFeatureElements
              - ClientFeatureElement
            - ClientGraphicsCollection *
      - CoilFeatures
        - CoilFeature *(c)*
          - PartFeatureExtent **[e]**
          - PitchAndHeightCoilExtent *(e)*
          - PitchAndRevolutionCoilExtent *(e)*
          - RevolutionAndHeightCoilExtent *(e)*
          - SpiralCoilExtent *(e)*
      - CombineFeatures
        - CombineFeature
      - DecalFeatures
        - DecalFeature *(c)*
    - DeleteFaceFeatures
      - DeleteFaceFeature *(c)*
    - EmbossFeatures
      - EmbossFeature *(c)*
    - ExtendFeatures
      - ExtendFeature *(c)*
    - ExtrudeFeatures
      - ExtrudeFeature *(c)*
        - PartFeatureExtent **[e]**
        - DistanceExtent *(e)*
        - FromToExtent *(e)*
        - ThroughAllExtent *(e)*
        - ToExtent *(e)*
        - ToNextExtent *(e)*
    - FaceDraftFeatures
      - FaceDraftFeature *(c)*
    - FilletFeatures
      - FilletFeature *(c)*
        - FilletDefinition
          - FilletRadiusEdgeSet **[x]**
          - FilletConstantRadiusEdgeSet *(x)*
          - FilletConstantRadiusFaceSet
          - FilletFullRoundSet
          - FilletSetback
          - FilletSetbackVertex
          - FilletVariableRadiusEdgeSet *(x)*
            - FilletIntermediateRadius
    - GrillFeatures
      - GrillFeature
    - HoleFeatures
      - HoleFeature *(c)*
        - HolePlacementDefinition **[f]**
          - PartFeatureExtent **[e]**
          - ConcentricHolePlacementDefinition *(f)*
          - DistanceExtent *(e)*
          - HoleTapInfo *(g)*
          - LinearHolePlacementDefinition *(f)*
          - PointHolePlacementDefinition *(f)*
          - SketchHolePlacementDefinition *(f)*
          - ThroughAllExtent *(e)*
          - ToExtent *(e)*
    - iFeatures
      - iFeature *(c)*
        - iFeatureDefinition
          - iFeatureInputs
            - iFeatureInput **[t]**
            - iFeatureEntityInput *(t)*
            - iFeatureParameterInput *(t)*
            - iFeatureSketchPlaneInput *(t)*
            - iFeatureVectorInput *(t)*
            - iFeatureWorkPlaneInput *(t)*
          - iFeatureTable
            - iFeatureTableColumns
              - iFeatureTableColumn
            - iFeatureTableRows
              - iFeatureTableRow
                - iFeatureTableCell
          - iFeatureTemplateDescriptor
    - KnitFeatures
      - KnitFeature *(c)*
    - LipFeatures
      - LipFeature
    - LoftFeatures
      - LoftFeature *(c)*
        - LoftDefinition
          - LoftSectionDimensions
            - LoftSectionDimension
          - LoftRails
            - LoftRail
          - MapPointCurves
            - MapPointCurve
    - MirrorFeatures
      - MirrorFeature *(c)*
    - MoveFaceFeatures
      - MoveFaceFeature *(c)*
    - MoveFeatures
      - MoveFeature
    - NonParametricBaseFeatures
      - NonParametricBaseFeature *(c)*
    - RectangularPatternFeatures
      - RectangularPatternFeature *(c)*
        - FeaturePatternElements
          - FeaturePatternElement
    - ReferenceFeatures
      - ReferenceFeature *(c)*
    - ReplaceFaceFeatures
      - ReplaceFaceFeature *(c)*
    - RestFeatures
      - RestFeature
    - RevolveFeatures
      - RevolveFeature *(c)*
        - PartFeatureExtent **[e]**
        - AngleExtent *(e)*
        - FullSweepExtent *(e)*
    - RibFeatures
      - RibFeature *(c)*
    - RuleFilletFeatures
      - RuleFilletFeature
    - SculptFeatures
      - SculptFeature *(c)*
        - SculptSurface
    - ShellFeatures
      - ShellFeature *(c)*
        - ShellDefinition
          - ShellThicknessFaceSet
    - SnapFitFeatures
      - SnapFitFeature
    - SplitFeatures
      - SplitFeature *(c)*
    - SweepFeatures
      - SweepFeature *(c)*
        - Path
          - PathEntity
        - SweepDefinition **[w]**
          - PathAndGuideRailSweepDef *(w)*
          - PathAndGuideSurfaceSweepDef *(w)*
          - PathAndSectionTwistsSweepDef *(w)*
          - PathSweepDef *(w)*
    - ThickenFeatures
      - ThickenFeature *(c)*
    - ThreadFeatures
      - ThreadFeature *(c)*
        - ThreadInfo **[g]**
          - StandardThreadInfo *(g)*
          - TaperedThreadInfo *(g)*
    - TrimFeatures
      - TrimFeature *(c)*
    - WorkSurfaces
      - WorkSurface
        - SurfaceBody *

- SheetMetalComponentDefinition *(n)*
  - FlatPattern *(n)*
    - CosmeticBendFeatures
      - CosmeticBendFeature
    - FlatBendResults
      - FlatBendResult
    - FlatPatternFeatures
    - FlatPunchResults
      - FlatPunchResult
    - SurfaceBodies *
  - SheetMetalFeatures *(bb)*
    - BendFeatures
      - BendFeature *(c)*
        - BendDefinition
          - BendOptions
    - ContourFlangeFeatures
      - ContourFlangeFeature *(c)*
        - ContourFlangeDefinition
          - PartFeatureExtent **[e]**
          - BendOptions
          - CenteredWidthExtent *(e)*
          - CornerOptions
          - EdgeWidthExtent *(e)*
          - FromToWidthExtent *(e)*
          - OffsetWidthExtent *(e)*
          - WidthOffsetWidthExtent *(e)*
    - ContourRollFeatures
      - ContourRollFeature
    - CornerChamferFeatures
      - CornerChamferFeature *(c)*
        - CornerChamferDefinition
          - ChamferDefinition **[d]**
            - DistanceAndAngleChamferDef *(d)*
            - DistanceChamferDef *(d)*
            - TwoDistancesChamferDef *(d)*
    - CornerFeatures
      - CornerFeature *(c)*
        - CornerDefinition
          - BendOptions
          - CornerOptions
    - CornerRoundFeatures
      - CornerRoundFeature *(c)*
        - CornerRoundDefinition
          - CornerRoundEdgeSet
    - CutFeatures
      - CutFeature *(c)*
        - CutDefinition
          - PartFeatureExtent **[e]**
          - CutAcrossBendsExtent *(e)*
          - DistanceExtent *(e)*
          - FromToExtent *(e)*
          - ThroughAllExtent *(e)*
          - ToExtent *(e)*
          - ToNextExtent *(e)*
    - FaceFeatures
      - FaceFeature *(c)*
        - FaceFeatureDefinition
          - BendOptions
    - FlangeFeatures
      - FlangeFeature *(c)*
        - BendFeature *(c)*
        - CornerFeature *(c)*
        - FlangeDefinition
          - PartFeatureExtent **[e]**
          - BendOptions
          - CenteredWidthExtent *(e)*
          - CornerOptions
          - DistanceHeightExtent *(e)*
          - EdgeWidthExtent *(e)*
          - FromToWidthExtent *(e)*
          - LegacyDistanceHeightExtent *(e)*
          - OffsetWidthExtent *(e)*
          - ToHeightExtent *(e)*
          - WidthOffsetWidthExtent *(e)*
    - FoldFeatures
      - FoldFeature *(c)*
        - FoldDefinition
          - BendOptions
    - HemFeatures
      - HemFeature *(c)*
        - HemDefinition
          - PartFeatureExtent **[e]**
          - BendOptions
          - CenteredWidthExtent *(e)*
          - DoubleHemDefinition
          - EdgeWidthExtent *(e)*
          - FromToWidthExtent *(e)*
          - OffsetWidthExtent *(e)*
          - RolledHemDefinition
          - SingleHemDefinition
          - TeardropHemDefinition
          - WidthOffsetWidthExtent *(e)*
    - LoftedFlangeFeatures
      - LoftedFlangeFeature
    - PunchToolFeatures
      - PunchToolFeature *(c)*
    - RefoldFeatures
      - RefoldFeature
    - RipFeatures
      - RipFeature
    - UnfoldFeatures
      - UnfoldFeature
  - SheetMetalStyles
    - SheetMetalStyle *(z)*
      - BendOptions
      - CornerOptions
  - UnfoldMethods
    - UnfoldMethod *(z)*

- AssemblyDocument *(a)*
  - LightingStyles
    - LightingStyle *(z)*
      - Lights
        - Light
  - Materials
    - Material *(z)*
  - ModelingSettings
    - RenderStyles
      - RenderStyle *(z)*
  - WeldmentComponentDefinition *(m)*
    - Machining
      - Preparations
        - WeldsComponentDefinition
    - Welds
      - CosmeticWelds
        - CosmeticWeld
      - Weld
        - WeldBeads
          - WeldBead
  - AssemblyComponentDefinition **[m]**
    - AssemblyConstraints
      - AssemblyConstraint **[l]**
        - LayoutConstraint
        - AngleConstraint *(l)*
        - FlushConstraint *(l)*
        - InsertConstraint *(l)*
        - MateConstraint *(l)*
        - RotateRotateConstraint *(l)*
        - RotateTranslateConstraint *(l)*
        - TangentConstraint *(l)*
        - TransitionalConstraint *(l)*
        - TranslateTranslateConstraint *(l)*
    - AssemblyEvents
    - BOM
      - BOMViews
        - BOMView
          - BOMRowsEnumerator
            - BOMRow
              - ComponentDefinitionsEnumerator
    - BOMQuantity
    - ClientGraphicsCollection *
    - ComponentOccurrences
      - ComponentOccurrence
        - AssemblyConstraintsEnumerator
        - ComponentOccurrencesEnumerator
        - SurfaceBodies
        - VirtualComponentDefinition
    - DataIO
    - Features
    - iAssemblyFactory
      - FactoryOptions
      - iAssemblyTableColumns
        - iAssemblyTableColumn
          - iAssemblyTableCell
      - iAssemblyTableRows
        - iAssemblyTableRow
          - iAssemblyTableCell
    - IAssemblyMember
    - iMateDefinitions
      - iMateDefinition **[o]**
      - AngleIMateDefinition *(o)*
      - CompositeIMateDefinition *(o)*
      - FlushIMateDefinition *(o)*
      - InsertIMateDefinition *(o)*
      - MateIMateDefinition *(o)*
      - RotateRotateIMateDefinition *(o)*
      - RotateTranslateIMateDefinition *(o)*
      - TangentIMateDefinition *(o)*
    - iMateResults
      - iMateResult
        - iMateResultsEnumerator
    - InterferenceResults
      - InterferenceResult
    - MassProperties
    - OccurrencePatterns
      - OccurrencePattern **[k]**
        - OccurrencePatternElements
          - OccurrencePatternElement
        - CircularOccurrencePattern *(k)*
        - FeatureBasedOccurrencePattern *(k)*
        - RectangularOccurrencePattern *(k)*
    - Parameters *
    - RepresentationsManager
      - DesignViewRepresentations
        - DesignViewRepresentation
      - LevelOfDetailRepresentations
        - LevelOfDetailRepresentation
      - PositionalRepresentations
        - PositionalRepresentation
    - UserCoordinateSystems
      - UserCoordinateSystem
    - WorkAxes
      - WorkAxis
        - AssemblyWorkAxisDef
    - WorkPlanes
      - WorkPlane
        - AssemblyWorkPlaneDef
    - WorkPoints
      - WorkPoint
        - AssemblyWorkPointDef

- DrawingDocument *(a)*
  - BorderDefinitions
    - BorderDefinition
  - DrawingBOMs
    - DrawingBOM
      - DrawingBOMColumns
        - DrawingBOMColumn
      - DrawingBOMRows
        - DrawingBOMRow
          - DrawingBOMCell
  - DrawingEvents
  - DrawingPrintManager
  - DrawingSettings
    - AutomatedCenterlineSettings
  - SheetFormats
    - SheetFormat
  - SheetSettings
  - SketchedSymbolDefinitions
    - SketchedSymbolDefinition
  - TitleBlockDefinitions
    - TitleBlockDefinition
  - DrawingStylesManager
    - Styles
      - Style **[z]**
      - BalloonStylesEnumerator
        - BalloonStyle *(z)*
      - CenterMarkStylesEnumerator
        - CenterMarkStyle
      - DimensionStylesEnumerator
        - DimensionStyle *(z)*
    - DrawingStandardStylesEnumerator
      - DrawingStandardStyle *(z)*
      - FeatureControlFrameStylesEnumerator
        - FeatureControlFrameStyle *(z)*
      - HoleTableStylesEnumerator
        - HoleTableStyle *(z)*
      - LayersEnumerator
        - Layer *(z)*
    - LeaderStylesEnumerator
      - LeaderStyle *(z)*
      - ObjectDefaultsStylesEnumerator
        - ObjectDefaultsStyle *(z)*
      - SurfaceTextureStylesEnumerator
        - SurfaceTextureStyle *(z)*
      - TextStylesEnumerator
        - TextStyle *(z)*
  - Sheets
    - Sheet
      - Balloons
        - Balloon
          - BalloonValueSets
            - BalloonValueSet
          - Leader *
      - Border
      - Centerlines
        - Centerline
      - Centermarks
        - Centermark
      - CustomTables
        - CustomTable
          - Columns
            - Column
          - Rows
            - Row
              - Cell
          - TableFormat
      - DataIO
      - DrawingDimensions
        - DrawingDimension **[ff]**
          - DimensionText
      - BaselineDimensionSets
        - BaselineDimensionSet
      - GeneralDimensions
        - GeneralDimension *(ff)* **[u]**
          - DimensionText
        - AngularGeneralDimension *(u)*
        - DiameterGeneralDimension *(u)*
        - LinearGeneralDimension *(u)*
        - RadiusGeneralDimension *(u)*
      - OrdinateDimensions
        - OrdinateDimension *(ff)*
      - OrdinateDimensionSets
        - OrdinateDimensionSet
          - OrdinateDimensionsEnumerator
      - DrawingNotes
        - DrawingNote **[aa]**
          - BendNotes
            - BendNote
          - ChamferNotes
            - ChamferNote
          - GeneralNotes
            - GeneralNote *(aa)*
          - HoleThreadNotes
            - HoleThreadNote *
          - LeaderNotes
            - LeaderNote *(aa)*
              - Leader *
          - PunchNotes
            - PunchNote
      - DrawingSketches
        - DrawingSketch *(p)* *
          - SketchFillRegions
            - SketchFillRegion
      - DrawingViews
        - DrawingView **[v]**
          - AutomatedCenterlineSettings
          - BreakOperations
            - BreakOperation
          - BreakOutOperations
            - BreakOutOperation
          - ClientGraphicsCollection *
          - DataIO
          - DrawingCurvesEnumerator
            - DrawingCurve
              - DrawingCurveSegments
                - DrawingCurveSegment
          - DrawingSketches
          - DrawingViewEvents
          - DrawingViewLabel
          - GraphicsDataSetsCollection
          - OriginIndicator
          - DetailDrawingView *(v)*
          - SectionDrawingView *(v)*
      - FeatureControlFrames
        - FeatureControlFrame
          - FeatureControlFrameRows
            - FeatureControlFrameRow
              - Leader *
          - GeometryIntent
      - HoleTables
        - HoleTable
          - HoleTableColumns
            - HoleTableColumn
          - HoleTableRows
            - HoleTableRow
              - HoleTableCell
          - HoleTag
      - PartsLists
        - PartsList
          - PartsListColumns
            - PartsListColumn
          - PartsListRows
            - PartsListRow
              - PartsListCell
      - RevisionTables
        - RevisionTable
          - RevisionTableColumns
            - RevisionTableColumn
          - RevisionTableRows
            - RevisionTableRow
              - RevisionTableCell
      - SketchedSymbols
        - SketchedSymbol
          - Leader *
      - SurfaceTextureSymbols
        - SurfaceTextureSymbol
          - Leader *
      - TitleBlock

- PresentationDocument *(a)*
  - PresentationExplodedViews
    - PresentationExplodedView
      - TrailsEnumerator
        - Trail
          - TrailSegment

Client Graphics

- DrawingView
- ComponentDefinition
- Sheet
- ClientGraphicsCollection
- InteractionGraphics
- ClientGraphics
- GraphicsNode
  - CurveGraphics
    - GraphicsPrimitive
    - LineGraphics
    - LineStripGraphics
    - PointGraphics
  - SurfaceGraphics
    - SurfaceGraphicsEdgeList
      - SurfaceGraphicsEdge
    - SurfaceGraphicsFaceList
      - SurfaceGraphicsFace
  - TextGraphics
  - TriangleFanGraphics
    - GraphicsColorMapper
    - GraphicsTextureCoordinateSet
  - TriangleGraphics
    - GraphicsColorMapper
    - GraphicsTextureCoordinateSet
  - TriangleStripGraphics
    - GraphicsColorMapper
    - GraphicsTextureCoordinateSet
  - ViewList

- Document
- GraphicsDataSetsCollection
- InteractionGraphics
- GraphicsDataSets
  - GraphicsDataSet **[dd]**
    - GraphicsColorMapper
    - GraphicsColorSet *(dd)*
    - GraphicsCoordinateSet *(dd)*
    - GraphicsIndexSet *(dd)*
    - GraphicsNormalSet *(dd)*
    - GraphicsTextureCoordinateSet

Transient Geometry & Objects

Geometry

- Arc2d
- BSplineCurve2d
- BSplineCurve2dDefinition
- Circle2d
- EllipseFull2d
- EllipticalArc2d
- Line2d
- LineSegment2d
- Point2d
- Polyline2d
- Arc3d
- BSplineCurve
- BSplineCurveDefinition
- Circle
- EllipseFull
- EllipticalArc
- Line
- LineSegment
- Point
- Polyline3d
- BSplineSurface
- Cone
- Cylinder
- EllipticalCone
- EllipticalCylinder
- Plane
- Sphere
- Torus

Math Objects

- Box
- Box2d
- Matrix
- Matrix2d
- UnitVector
- UnitVector2d
- Vector
- Vector2d

Utility Objects

- Color
- DataMedium
- EdgeCollection
- FaceCollection
- FileMetadata
- NameValueMap
- ObjectCollection
- ObjectCollectionByVariant
- ObjectsEnumeratorByVariant
- TranslationContext

Parameters

- Parameters
  - Parameter **[i]**
    - Tolerance
    - CustomPropertyFormat
  - CustomParameterGroups
    - CustomParameterGroup
  - DerivedParameterTables
    - DerivedParameterTable
      - DerivedParameters
        - DerivedParameter
  - ModelParameters
    - ModelParameter *(i)*
  - ParameterTables
    - ParameterTable
      - TableParameters
        - TableParameter *(i)*
  - ReferenceParameters
    - ReferenceParameter *(i)*
  - UserParameters
    - UserParameter *(i)*

Attributes

Inventor Entity

- AttributeSets
  - AttributeSet
    - Attribute

Apprentice Objects

- ApprenticeServerComponent
  - ApprenticeServerDocument
    - ApprenticePrintManager
    - ClientViews
      - ClientView
  - ApprenticeServerDrawingDocument
    - ApprenticeDrawingPrintManager
  - FileSaveAs

B-Rep

- SurfaceBodies
  - SurfaceBody
    - DataIO
    - FaceShells
      - FaceShell
        - Faces
          - Face
            - Wires
              - Wire
            - EdgeLoops
              - EdgeLoop
                - Edges
                  - Edge
                    - CurveEvaluator
                    - Vertices
                      - Vertex
                        - Wire
                    - EdgeUses
                      - Curve2dEvaluator
                      - EdgeUse
                        - Wire
    - SurfaceEvaluator

2D Sketch

- Sketch **[p]**
  - DataIO
  - DimensionConstraints
    - DimensionConstraint **[s]**
    - DiameterDimConstraint *(s)*
    - EllipseRadiusDimConstraint *(s)*
    - OffsetDimConstraint *(s)*
    - RadiusDimConstraint *(s)*
    - TangentDistanceDimConstraint *(s)*
    - ThreePointAngleDimConstraint *(s)*
    - TwoLineAngleDimConstraint *(s)*
    - TwoPointDistanceDimConstraint *(s)*
  - GeometricConstraints
    - GeometricConstraint **[q]**
    - CoincidentConstraint *(q)*
    - CollinearConstraint *(q)*
    - ConcentricConstraint *(q)*
    - EqualLengthConstraint *(q)*
    - EqualRadiusConstraint *(q)*
    - GroundConstraint *(q)*
    - HorizontalAlignConstraint *(q)*
    - HorizontalConstraint *(q)*
    - MidpointConstraint *(q)*
    - OffsetConstraint *(q)*
    - ParallelConstraint *(q)*
    - PatternConstraint *(q)*
    - PerpendicularConstraint *(q)*
    - SmoothConstraint *(q)*
    - SplineFitPointConstraint *(q)*
    - SymmetryConstraint *(q)*
    - TangentSketchConstraint *(q)*
    - VerticalAlignConstraint *(q)*
    - VerticalConstraint *(q)*
  - Profiles
    - Profile
      - ProfilePath
        - ProfileEntity
          - TextBox
            - RegionProperties
            - Wires
              - Wire
  - SketchEntitiesEnumerator
    - SketchEntity **[r]**
  - SketchArcs
    - SketchArc *(r)*
  - SketchCircles
    - SketchCircle *(r)*
  - SketchEllipses
    - SketchEllipse *(r)*
  - SketchEllipticalArcs
    - SketchEllipticalArc *(r)*
  - SketchFixedSplines
    - SketchFixedSpline *(r)*
  - SketchImages
    - SketchImage
  - SketchLines
    - SketchLine *(r)*
  - SketchOffsetSplines
    - SketchOffsetSpline *(r)*
  - SketchPoints
    - SketchPoint *(r)*
  - SketchSplines
    - SketchSpline *(r)*
      - SketchSplineHandle
  - TextBoxes
    - TextBox

3D Sketch

- Sketch3D
  - DimensionConstraints3D
    - DimensionConstraint3D **[y]**
    - LineLength3DimConstraint3D *(y)*
    - PointAndPlaneDistanceDimConstraint3D *(y)*
    - RadiusDimConstraint3D *(y)*
    - TwoLineAngleDimConstraint3D *(y)*
    - TwoPointDistanceDimConstraint3D *(y)*
  - GeometricConstraints3D
    - GeometricConstraint3D **[h]**
    - BendConstraint *(h)*
    - CoincidentConstraint3D *(h)*
    - CollinearConstraint3D *(h)*
    - CustomConstraint3D *(h)*
    - GroundConstraint3D *(h)*
    - HelicalConstraint3D *(h)*
    - ParallelConstraint3D *(h)*
    - PerpendicularConstraint3D *(h)*
    - SmoothConstraint3D *(h)*
    - SplineFitPointsConstraint3D *(h)*
    - TangentConstraint3D *(h)*
  - Profiles3D
    - Profile3D
      - ProfilePath3D
        - ProfileEntity3D
          - Wires
            - Wire
  - Sketch3DEntitiesEnumerator
    - SketchEntity3D **[j]**
  - SketchArcs3D
    - SketchArc3D *(j)*
  - SketchCircles3D
    - SketchCircle3D *(j)*
  - SketchEllipses3D
    - SketchEllipse3D *(j)*
  - SketchEllipticalArcs3D
    - SketchEllipticalArc3D *(j)*
  - SketchFixedSplines3D
    - SketchFixedSpline3D *(j)*
  - SketchLines3D
    - SketchLine3D *(j)*
  - SketchPoints3D
    - SketchPoint3D *(j)*
  - SketchSplines3D
    - SketchSpline3D *(j)*
      - SketchSplineHandle3D

Leaders

- Leader
  - LeaderNode
    - LeaderNodesEnumerator
      - LeaderNode

Legend

- Collection Objects: Objects
- Standard Objects: Object
- New Objects in Inventor 2010: Object
- User Interface Related Objects:
- Part Document Related Objects:
- Assembly Document Related Objects:
- Drawing Document Related Objects:
- Base Class Objects: **[x]**
- Derived Objects: *(x)*

See related object model chart for this object at the bottom of the poster: *