Autodesk® Inventor® 2013 API Object Model

Version 2, Feb. 9, 2012

Application

- ApplicationAddIns
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  - TranslatorAddIn
- ApplicationEvents
- AssemblyEvents
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    - CommandCategory
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    - MiniToolbarControls
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      - MiniToolbarCheckBox *(hh)*
      - MiniToolbarComboBox *(hh)*
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  - MaterialsEnumerator
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  - CheckPoint
    - Transaction
      - CheckPointsEnumerator
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- TransientRep
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    - EdgeDefinitions
      - EdgeDefinition
    - LumpDefinitions
      - LumpDefinition
        - FaceShellDefinitions
          - FaceShellDefinition
            - FaceDefinitions
              - FaceDefinition
                - EdgeLoopDefinitions
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    - WireDefinitions
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      - CommandBarControls
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    - DockableWindow
      - DockableWindowEvents
  - EnvironmentLists
  - Environments
    - Environment
      - CommandBarList
      - DisabledCommandList
      - PanelBar
      - RadialMarkingMenus
        - RadialMarkingMenu
  - 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
              - BrowserFolders
                - BrowserFolder
          - ClientBrowserNodeDefinition *(ee)*
          - NativeBrowserNodeDefinition *(ee)*
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      - ClientNodeResources
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    - DocumentDescriptorsEnumerator
      - DocumentDescriptor
    - DocumentEvents
    - DocumentInterests
      - DocumentInterest
    - EnvironmentManager
    - FileVersions
      - FileVersion
    - GraphicsDataSetsCollection *
    - HighlightSet
    - InventorVBAProject
    - PrintManager
    - PropertySets
      - PropertySet
        - Property
    - ReferencedOLEFileDescriptors
      - ReferencedOLEFileDescriptor
    - ReferenceKeyManager
    - SelectSet
    - SketchSettings
    - SoftwareVersion
    - UnitsOfMeasure

PartDocument *(a)*

- DisplaySettings
- GroundPlaneSettings
- ObjectVisibility
- PartComponentDefinition **[n]**
  - AnalysisManager
    - DraftAnalyses
      - DraftAnalysis
  - ClientGraphicsCollection *
  - DataIO
  - MateDefinitions
    - MateDefinition **(o)**
      - AngleMateDefinition *(o)*
      - CompositeMateDefinition *(o)*
      - FlushMateDefinition *(o)*
      - InsertMateDefinition *(o)*
      - MateMateDefinition *(o)*
      - RotateRotateMateDefinition *(o)*
      - RotateTranslateMateDefinition *(o)*
      - TangentMateDefinition *(o)*
  - iPartFactory
    - FactoryOptions
    - iPartTableColumns
      - iPartTableColumn
    - iPartTableRows
      - iPartTableRow
        - iPartTableCell
  - iPartMember
  - LightingStyles
    - LightingStyle *(z)*
      - Lights
        - Light
  - MassProperties
  - Materials
    - Material
- ModelingSettings
  - UserCoordinateSettings
    - iFeatureTemplateDescriptors
      - iFeatureTemplateDescriptor
  - Parameters *
  - PartEvents
  - PlanarSketches
    - PlanarSketch *(p)* **[ff]** *
      - ProjectedCuts
        - ProjectedCut
      - SketchBlocks
        - SketchBlock
  - SurfaceBodies *
- UserCoordinateSystems
  - UserCoordinateSystem
    - UserCoordinateSystemDefinition
  - 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
- ReferenceComponents
  - DerivedAliasComponents
    - DerivedAliasComponent
      - DerivedAssemblyComponents
        - DerivedAssemblyComponent
          - DerivedAssemblyDefinition
            - DerivedAssemblyOccurrences
              - DerivedAssemblyOccurrence
                - ReferenceFeatureEnumerator
  - DerivedPartComponents
    - DerivedPartComponent
      - DerivedPartDefinition **[cc]**
        - DerivedPartCoordinateSystemDef *(cc)*
        - DerivedPartEntities
          - DerivedPartEntity
        - DerivedPartTransformDef *(cc)*
        - DerivedPartUniformScaleDef *(cc)*
        - ParametersEnumerator
        - ReferenceFeaturesEnumerator
        - SketchBlockDefinitionsEnumerator
          - SketchBlockDefinition
        - SketchBlocks
        - Sketches3DEnumerator
  - RenderStyles
    - RenderStyle *(z)*
  - Sketch3DSettings
  - SketchBlockDefinitions
    - SketchBlockDefinition *(ff)*
  - Sketches3D
    - Sketch3D *
- PartFeatures **[bb]**
  - PartFeature **[c]**
    - FeatureDimensions
    - AliasFreeformFeatures
      - AliasFreeformFeature *(c)*
    - 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)*
      - ExtrudeDefinition
        - 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
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            - FilletVariableRadiusEdgeSet *(x)*
            - FilletIntermediateRadius
  - GrillFeatures
    - GrillFeature *(c)*
  - 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)*
      - MoveFaceDefinition
        - DirectionAndDistanceMoveDefinition
        - FreeMoveDefinition
        - PlanarMoveDefinition
  - MoveFeatures
    - MoveFeature *(c)*
      - MoveDefinition
        - MoveOperation **[ff]**
        - FreeDragMoveOperation *(ff)*
        - MoveAlongPathMoveOperation *(ff)*
        - RotateAboutLineMoveOperation *(ff)*
  - NonParametricBaseFeatures
    - NonParametricBaseFeature *(c)*
      - NonParametricBaseFeatureDefinition
  - RectangularPatternFeatures
    - RectangularPatternFeature *(c)*
      - FeaturePatternElements
        - FeaturePatternElement
  - ReplaceFaceFeatures
    - ReplaceFaceFeature *(c)*
  - RestFeatures
    - RestFeature
  - RevolveFeatures
    - RevolveFeature *(c)*
      - PartFeatureExtent **[e]**
      - AngleExtent *(e)*
      - FullSweepExtent *(e)*
  - RibFeatures
    - RibFeature *(c)*
      - RibDefinition
        - BossSets
          - BossSet
  - 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 *
  - ReferenceFeatures
    - ReferenceFeature *(c)*

SheetMetalComponentDefinition *(n)*

- FlatPattern *(n)*
  - CosmeticBendFeatures
    - CosmeticBendFeature
  - FlatBendResults
    - FlatBendResult
  - FlatPatternFeatures
    - FlatPunchResult
  - SurfaceBodies *
- SheetMetalStyles
  - SheetMetalStyle *(z)*
    - BendOptions
    - CornerOptions
  - UnfoldMethods
    - UnfoldMethod *(z)*

SheetMetalFeatures *(bb)*

- PartFeature **[c]**
- 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
    - LoftedFlangeDefinition
- PunchToolFeatures
  - PunchToolFeature *(c)*
- RefoldFeatures
  - RefoldFeature
- RipFeatures
  - RipFeature
    - RipDefinition
      - PointToPointRipTypeDef
      - SinglePointRipTypeDef
- UnfoldFeatures
  - UnfoldFeature

AssemblyDocument *(a)*

- DisplaySettings
  - GroundPlaneSettings
  - LightingStyles
    - LightingStyle *(z)*
      - Lights
        - Light
- Materials
  - Material *(z)*
- ModelingSettings
  - ObjectVisibility
- RenderStyles
  - RenderStyle *(z)*
- WeldmentComponentDefinition *(m)*
  - Machining
  - Preparations
  - WeldsComponentDefinition
- Welds
  - CosmeticWelds
    - CosmeticWeld
  - Weld
  - WeldBeads
    - WeldBead

AssemblyComponentDefinition **[m]**

- AssemblyConstraints
  - AssemblyConstraint **[l]**
    - DriveConstraintSettings
    - LayoutConstraint
    - AngleConstraint *(l)*
      - ConstraintLimits
    - FlushConstraint *(l)*
      - ConstraintLimits
    - InsertConstraint *(l)*
      - ConstraintLimits
    - MateConstraint *(l)*
      - ConstraintLimits
    - RotateRotateConstraint *(l)*
    - RotateTranslateConstraint *(l)*
    - TangentConstraint *(l)*
      - ConstraintLimits
    - TransitionalConstraint *(l)*
    - TranslateTranslateConstraint *(l)*
- AssemblyEvents
- BOM
  - BOMViews
    - BOMView
      - BOMRowsEnumerator
        - BOMRow
          - ComponentDefinitionsEnumerator
- BOMQuantity
- ClientGraphicsCollection *
- ComponentOccurrences
  - ComponentOccurrence
    - AssemblyConstraintsEnumerator
    - ComponentOccurrencesEnumerator
    - SurfaceBodies
    - VirtualComponentDefinition
- DataIO
- Features
- AssemblyFactory
  - FactoryOptions
    - AssemblyTableColumns
      - IAssemblyTableColumn
    - AssemblyTableRows
      - AssemblyTableRow
        - IAssemblyTableCell
- IAssemblyMember
- MateDefinitions
  - MateDefinition **(o)**
    - AngleMateDefinition *(o)*
      - ConstraintLimits
    - CompositeMateDefinition *(o)*
      - ConstraintLimits
    - FlushMateDefinition *(o)*
      - ConstraintLimits
    - InsertMateDefinition *(o)*
      - ConstraintLimits
    - MateMateDefinition *(o)*
      - ConstraintLimits
    - RotateRotateMateDefinition *(o)*
    - RotateTranslateMateDefinition *(o)*
    - TangentMateDefinition *(o)*
      - ConstraintLimits
- MateResults
  - MateResult
    - MateResultsEnumerator
- InterferenceResults
  - InterferenceResult
- MassProperties
- OccurrencePatterns
  - OccurrencePattern **[k]**
    - OccurrencePatternElements
      - OccurrencePatternElement
    - CircularOccurrencePattern *(k)*
    - FeatureBasedOccurrencePattern *(k)*
    - RectangularOccurrencePattern *(k)*
- Parameters
- RepresentationsManager
  - DesignViewRepresentations
    - DesignViewRepresentation
  - LevelOfDetailRepresentations
    - LevelOfDetailRepresentation
  - PositionalRepresentations
    - PositionalRepresentation
- UserCoordinateSystems
  - UserCoordinateSystem
    - UserCoordinateSystemDefinition
- VisibleOccurrenceFinder
- WorkAxes
  - WorkAxis
    - AssemblyWorkAxisDef
- WorkPlanes
  - WorkPlane
    - AssemblyWorkPlaneDef
- WorkPoints
  - WorkPoint
    - AssemblyWorkPointDef

DrawingDocument *(a)*

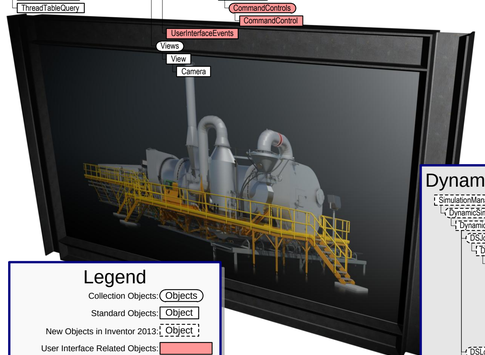
- BorderDefinitions
  - BorderDefinition
- DrawingBOMs
  - DrawingBOM
    - DrawingBOMColumns
      - DrawingBOMColumn
    - DrawingBOMRows
      - DrawingBOMRow
        - DrawingBOMCell
- AutoCADBlockDefinitions
  - AutoCADBlockDefinition
- DrawingEvents
- DrawingPrintManager
- DrawingSettings
  - AutomatedCenterlineSettings
- SheetFormats
  - SheetFormat
- SheetSettings
- SketchedSymbolDefinitions
  - SketchedSymbolDefinition
- TitleBlockDefinitions
  - TitleBlockDefinition
- DrawingStylesManager
  - Styles
    - Style **[z]**
  - BalloonStylesEnumerator
    - BalloonStyle *(z)*
  - CentermarkStylesEnumerator
    - CentermarkStyle *(z)*
  - DimensionStylesEnumerator
    - DimensionStyle *(z)*
  - DrawingStandardStylesEnumerator
    - DrawingStandardStyle *(z)*
  - FeatureControlFrameStylesEnumerator
    - FeatureControlFrameStyle *(z)*
  - HoleTableStylesEnumerator
    - HoleTableStyle *(z)*
  - LeaderStylesEnumerator
    - LeaderStyle *(z)*
  - LayersEnumerator
    - Layer *(z)*
  - ObjectDefaultsStylesEnumerator
    - ObjectDefaultsStyle *(z)*
  - PartsListStylesEnumerator
    - PartsListStyle *(z)*
  - RevisionTableStylesEnumerator
    - RevisionTableStyle *(z)*
  - SurfaceTextureStylesEnumerator
    - SurfaceTextureStyle *(z)*
  - TableStylesEnumerator
    - TableStyle *(z)*
  - TextStylesEnumerator
    - TextStyle *(z)*
- Sheets
  - Sheet
    - AutoCADBlocks
      - AutoCADBlock
    - Balloons
      - Balloon
        - BalloonValueSets
          - BalloonValueSet
            - Leader *
    - Border
    - Centerlines
      - Centerline
    - Centermarks
      - Centermark
    - 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
      - ChainDimensionSets
        - ChainDimensionSet
    - 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)*

- DisplaySettings
  - GroundPlaneSettings
- PresentationExplodedViews
  - PresentationExplodedView
    - TrailsEnumerator
      - Trail
        - TrailSegment

Leaders

- Leader
  - LeaderNode
    - LeaderNodesEnumerator
      - LeaderNode



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

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

2D Sketch

- Sketch **[p]**
  - DataIO
  - DimensionConstraints
    - DimensionConstraint **[s]**
    - ArcLengthDimConstraint *(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

Attributes

- *Inventor Entity*
  - AttributeSets
    - AttributeSet
      - Attribute

3D Sketch

- Sketch3D
  - Profiles3D
    - Profile3D
      - ProfilePath3D
        - ProfileEntity3D
      - Wires
        - Wire
  - DimensionConstraints3D
    - DimensionConstraint3D **[y]**
    - LineLengthDimConstraint3D *(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)*
  - SilhouetteCurves
    - SilhouetteCurve
  - SketchEntities3DEnumerator
    - 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

Parameters

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

Apprentice Objects

- ApprenticeServerComponent
  - ApprenticeServerDocument
    - ApprenticePrintManager
    - ClientViews
      - ClientView
    - ApprenticeServerDrawingDocument
      - ApprenticeDrawingPrintManager
    - DesignProjectManager
      - DesignProjects
        - ProjectPaths
          - ProjectPath
    - FileManager
      - FilesEnumerator
        - File
          - FileDescriptorsEnumerator
            - FileDescriptor
    - FileOptions
    - FileSaveAs
    - SoftwareVersion
    - TransientGeometry *
    - TransientObjects *

B-Rep

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

BIM Exchange

- PartComponentDefinition
- AssemblyComponentDefinition
- BIMComponent
  - BIMComponentDescription
    - BIMComponentPropertySets
      - BIMComponentPropertySet
        - BIMComponentProperty
  - BIMConnectorLinks
    - BIMConnectorLink
  - BIMConnectors
    - BIMConnector
      - BIMConnectorDefinition
    - BIMCableTrayConnector
      - BIMCableTrayConnectorDefinition
    - BIMConduitConnector
      - BIMConduitConnectorDefinition
    - BIMDuctConnector
      - BIMDuctConnectorDefinition
    - BIMElectricalConnector
      - BIMElectricalConnectorDefinition
    - BIMPipeConnector
      - BIMPipeConnectorDefinition

Client Graphics

- DrawingView
- ComponentDefinition
- Sheet
- ClientGraphicsCollection
- InteractionGraphics
- Document
- DrawingView
- Sheet
- GraphicsDataSetsCollection
- InteractionGraphics
- ClientGraphics
  - GraphicsNode
    - GraphicsPrimitive **[gg]**
      - CurveGraphics *(gg)*
      - LineGraphics *(gg)*
      - LineStripGraphics *(gg)*
      - PointGraphics *(gg)*
      - ComponentGraphics
    - SurfaceGraphics
      - SurfaceGraphicsEdgeList
        - SurfaceGraphicsEdge
      - SurfaceGraphicsFaceList
        - SurfaceGraphicsFace
      - SurfaceGraphicsVertexList
        - SurfaceGraphicsVertex
    - TextGraphics
      - TriangleFanGraphics
        - GraphicsColorMapper
        - GraphicsTextureCoordinateSet
      - TriangleGraphics
        - GraphicsColorMapper
        - GraphicsTextureCoordinateSet
      - TriangleStripGraphics
        - GraphicsColorMapper
        - GraphicsTextureCoordinateSet
      - ViewList
- GraphicsDataSets
  - GraphicsDataSet **[dd]**
    - GraphicsColorMapper
    - GraphicsColorSet *(dd)*
    - GraphicsCoordinateSet *(dd)*
    - GraphicsImageSet *(dd)*
    - GraphicsIndexSet *(dd)*
    - GraphicsNormalSet *(dd)*
    - GraphicsTextureCoordinateSet *(dd)*

Dynamic Simulation

- SimulationManager
- DynamicSimulations
  - DynamicSimulation
    - DSJoints
      - DSJoint
        - DSJointDefinition
          - DSDegreesOfFreedom
            - DSDegreeOfFreedom
              - DSResults
                - DSResult
                - DSValue
                - DSValueGraph
    - DSLoads
      - DSLoad
        - DSLoadDefinition
          - DSValue
          - DSValueGraph
    - DSSettings

Legend

- Collection Objects: Objects
- Standard Objects: Object
- New Objects in Inventor 2013.: 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: *