附件中，demo里为github上的各类demo，其中C++写的64位的ifcview最好用。

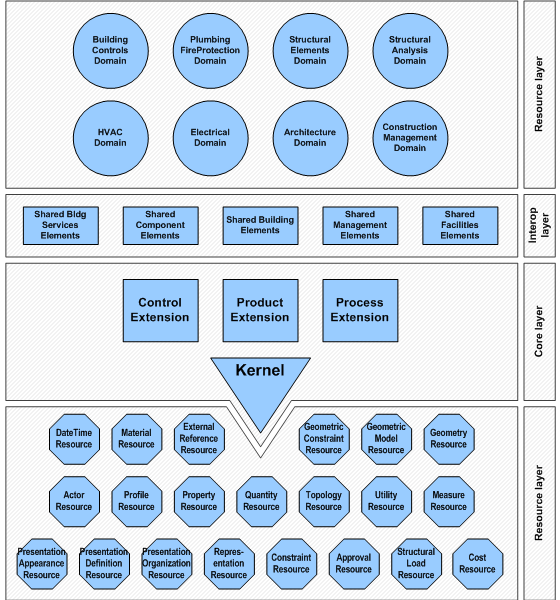
但所有demo都只能打开ifc2.0的模型。

本次发给您的文件主要为格式为 ifc 4.0 design transfer的文件

Ifc2.0的文件，我只放了2个。

4.0相关资料：<http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/>

文件结构见下图：



The Industry Foundation Classes specify a data schema and an exchange file format structure. The data schema is defined in

* EXPRESS data specification language, defined in [ISO 10303-11](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/chapter-2.htm#iso-10303-11),
* XML Schema definition language (XSD), defined in [XML Schema W3C Recommendation](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/chapter-2.htm#w3c-xml-schema-part-1),

以下表格也很有参考意义：ifc 4.0有两种输出分支，文件后缀都为.ifc。

|  |  |  |
| --- | --- | --- |
| **Template** | **Reference View** | **Design Transfer View** |
| [Project Context](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/project-context.htm) | X | X |
| [Project Declaration](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/project-declaration.htm) | X | X |
| [Object Type Definitions](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/object-type-definitions.htm) | X | X |
| [Property Template Definitions](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/property-template-definitions.htm) |  | X |
| [Project Units](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/project-units.htm) | X | X |
| [Project Representation Context](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/project-representation-context.htm) | X | X |
| [Project Representation Context 3D](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/project-representation-context-3d.htm) | X | X |
| [Project Global Positioning](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/project-global-positioning.htm) | X | X |
| [Project Classification Information](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/project-classification-information.htm) | X | X |
| [Project Library Information](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/project-library-information.htm) |  | X |
| [Object Definition](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/object-definition.htm) | X | X |
| [Object Typing](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/object-typing.htm) | X | X |
| [Property Sets](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/property-sets.htm) | X | X |
| [Property Sets for Objects](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/property-sets-for-objects.htm) | X | X |
| [Property Sets for Types](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/property-sets-for-types.htm) | X | X |
| [Quantity Sets](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/quantity-sets.htm) | X | X |
| [Object Attributes](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/object-attributes.htm) | X | X |
| [Software Identity](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/software-identity.htm) | X | X |
| [Revision Control](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/revision-control.htm) |  | X |
| [User Identity](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/user-identity.htm) | X | X |
| [Object Occurrence Predefined Type](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/object-occurrence-predefined-type.htm) | X | X |
| [Object Occurrence Attributes](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/object-occurrence-attributes.htm) | X | X |
| [Spatial Element Occurrence Attributes](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/spatial-element-occurrence-attributes.htm) | X | X |
| [Site Attributes](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/site-attributes.htm) | X | X |
| [Building Attributes](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/building-attributes.htm) | X | X |
| [Storey Attributes](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/storey-attributes.htm) | X | X |
| [Space Attributes](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/space-attributes.htm) | X | X |
| [Element Occurrence Attributes](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/element-occurrence-attributes.htm) | X | X |
| [Door Attributes](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/door-attributes.htm) | X | X |
| [Window Attributes](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/window-attributes.htm) | X | X |
| [Tendon Attributes](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/tendon-attributes.htm) | X | X |
| [Grid Attributes](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/grid-attributes.htm) | X | X |
| [Object Type Predefined Type](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/object-type-predefined-type.htm) | X | X |
| [Element Type Predefined Type](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/element-type-predefined-type.htm) | X | X |
| [Spatial Element Type Predefined Type](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/spatial-element-type-predefined-type.htm) | X | X |
| [Object Type Attributes](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/object-type-attributes.htm) | X | X |
| [Door Type Attributes](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/door-type-attributes.htm) | X | X |
| [Window Type Attributes](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/window-type-attributes.htm) | X | X |
| [Mechanical Fastener Type Attributes](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/mechanical-fastener-type-attributes.htm) | X | X |
| [Reinforcing Bar Type Attributes](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/reinforcing-bar-type-attributes.htm) | X | X |
| [Reinforcing Mesh Type Attributes](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/reinforcing-mesh-type-attributes.htm) | X | X |
| [Tendon Type Attributes](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/tendon-type-attributes.htm) | X | X |
| [Object Association](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/object-association.htm) | X | X |
| [Classification Association](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/classification-association.htm) | X | X |
| [Document Association](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/document-association.htm) | X | X |
| [Library Association](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/library-association.htm) |  | X |
| [Material Association](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/material-association.htm) | X | X |
| [Material Single](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/material-single.htm) | X | X |
| [Material Layer Set](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/material-layer-set.htm) | X | X |
| [Material Layer Set Usage](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/material-layer-set-usage.htm) |  | X |
| [Material Profile Set](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/material-profile-set.htm) | X | X |
| [Material Profile Set Usage](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/material-profile-set-usage.htm) |  | X |
| [Material Constituents](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/material-constituents.htm) | X | X |
| [Object Composition](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/object-composition.htm) | X | X |
| [Aggregation](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/aggregation.htm) | X | X |
| [Element Composition](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/element-composition.htm) | X | X |
| [Element Decomposition](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/element-decomposition.htm) | X | X |
| [Spatial Composition](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/spatial-composition.htm) | X | X |
| [Spatial Decomposition](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/spatial-decomposition.htm) | X | X |
| [Nesting](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/nesting.htm) | X | X |
| [Port Nesting](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/port-nesting.htm) | X | X |
| [Type Port Nesting](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/type-port-nesting.htm) | X | X |
| [Type Element Aggregation](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/type-element-aggregation.htm) |  | X |
| [Element Voiding](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/element-voiding.htm) | X | X |
| [Element Projecting](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/element-projecting.htm) |  | X |
| [Object Assignment](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/object-assignment.htm) | X | X |
| [Group Assignment](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/group-assignment.htm) | X | X |
| [Building System Assignment](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/building-system-assignment.htm) | X | X |
| [Distribution System Assignment](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/distribution-system-assignment.htm) | X | X |
| [Zone Assignment](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/zone-assignment.htm) | X | X |
| [Object Connectivity](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/object-connectivity.htm) | X | X |
| [Spatial Structure](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/spatial-structure.htm) | X | X |
| [Spatial Container](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/spatial-container.htm) | X | X |
| [Spatial Containment](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/spatial-containment.htm) | X | X |
| [Element Connectivity](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/element-connectivity.htm) | X | X |
| [Path Connectivity](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/path-connectivity.htm) |  | X |
| [Port Connectivity](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/port-connectivity.htm) | X | X |
| [Element Filling](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/element-filling.htm) | X | X |
| [Element Covering](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/element-covering.htm) | X | X |
| [Element Interference](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/element-interference.htm) |  | X |
| [Control Flow](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/control-flow.htm) |  | X |
| [Structure Service Connectivity](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/structure-service-connectivity.htm) | X | X |
| [Product Shape](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/product-shape.htm) | X | X |
| [Product Placement](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/product-placement.htm) | X | X |
| [Product Local Placement](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/product-local-placement.htm) | X | X |
| [Product Grid Placement](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/product-grid-placement.htm) |  | X |
| [Product Geometric Representation](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/product-geometric-representation.htm) | X | X |
| [Axis Geometry](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/axis-geometry.htm) |  | X |
| [Axis 2D Geometry](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/axis-2d-geometry.htm) |  | X |
| [Axis 3D Geometry](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/axis-3d-geometry.htm) |  | X |
| [FootPrint Geometry](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/footprint-geometry.htm) | X | X |
| [FootPrint GeomSet Geometry](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/footprint-geomset-geometry.htm) | X | X |
| [Profile Geometry](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/profile-geometry.htm) |  | X |
| [Profile 3D Geometry](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/profile-3d-geometry.htm) |  | X |
| [Body Geometry](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/body-geometry.htm) | X | X |
| [Body SurfaceModel Geometry](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/body-surfacemodel-geometry.htm) |  | X |
| [Body Tessellation Geometry](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/body-tessellation-geometry.htm) | X | X |
| [Body SweptSolid Geometry](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/body-sweptsolid-geometry.htm) | X | X |
| [Body SweptSolid PolyCurve Geometry](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/body-sweptsolid-polycurve-geometry.htm) | X | X |
| [Body SweptSolid ParameterizedProfile Geometry](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/body-sweptsolid-parameterizedprofile-geometry.htm) |  | X |
| [Body SweptSolid Composite Geometry](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/body-sweptsolid-composite-geometry.htm) |  | X |
| [Body AdvancedSweptSolid Geometry](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/body-advancedsweptsolid-geometry.htm) | X | X |
| [Body AdvancedSwept DiskSolid Geometry](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/body-advancedswept-disksolid-geometry.htm) | X | X |
| [Body AdvancedSwept Directrix Geometry](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/body-advancedswept-directrix-geometry.htm) |  | X |
| [Body AdvancedSwept Tapered Geometry](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/body-advancedswept-tapered-geometry.htm) |  | X |
| [Body Brep Geometry](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/body-brep-geometry.htm) |  | X |
| [Body AdvancedBrep Geometry](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/body-advancedbrep-geometry.htm) |  | X |
| [Body CSG Geometry](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/body-csg-geometry.htm) |  | X |
| [Body Clipping Geometry](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/body-clipping-geometry.htm) |  | X |
| [Mesh Geometry](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/mesh-geometry.htm) | X | X |
| [Clearance Geometry](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/clearance-geometry.htm) | X | X |
| [Mapped Geometry](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/mapped-geometry.htm) | X | X |
| [Product Type Shape](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/product-type-shape.htm) | X | X |
| [Product Type Geometric Representation](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/product-type-geometric-representation.htm) | X | X |
| [Type Body Geometry](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/type-body-geometry.htm) | X | X |
| [Type Body CSG Geometry](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/type-body-csg-geometry.htm) |  | X |
| [Type Body Brep Geometry](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/type-body-brep-geometry.htm) |  | X |
| [Type Body AdvancedBrep Geometry](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/type-body-advancedbrep-geometry.htm) |  | X |
| [Type Clearance Geometry](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/type-clearance-geometry.htm) |  | X |
| [Partial Templates](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/partial-templates.htm) | X | X |
| [Layer](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/layer.htm) | X | X |
| [Values](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/values.htm) | X | X |
| [Single Value](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/single-value.htm) | X | X |
| [Bounded Value](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/bounded-value.htm) | X | X |
| [Enumerated Value](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/enumerated-value.htm) | X | X |
| [Profile Definition](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/profile-definition.htm) | X | X |
| [Arbitrary Profile Definition](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/arbitrary-profile-definition.htm) | X | X |
| [PolyCurve Profile Definition](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/polycurve-profile-definition.htm) | X | X |
| [Centerline Profile Definition](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/centerline-profile-definition.htm) | X | X |
| [Parameterized Profile Definition](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/parameterized-profile-definition.htm) |  | X |
| [Standardized Profile Definition](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/standardized-profile-definition.htm) |  | X |
| [C-Shape Profile Definition](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/c-shape-profile-definition.htm) |  | X |
| [I-Shape Profile Definition](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/i-shape-profile-definition.htm) |  | X |
| [I-Shape Asymmetric Profile Definition](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/i-shape-asymmetric-profile-definition.htm) |  | X |
| [L-Shape Profile Definition](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/l-shape-profile-definition.htm) |  | X |
| [T-Shape Profile Definition](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/t-shape-profile-definition.htm) |  | X |
| [U-Shape Profile Definition](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/u-shape-profile-definition.htm) |  | X |
| [Z-Shape Profile Definition](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/z-shape-profile-definition.htm) |  | X |
| [Basic Profile Definition](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/basic-profile-definition.htm) |  | X |
| [Rectangle Profile Definition](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/rectangle-profile-definition.htm) |  | X |
| [Rectangle Hollow Profile Definition](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/rectangle-hollow-profile-definition.htm) |  | X |
| [Rectangle Rounded Profile Definition](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/rectangle-rounded-profile-definition.htm) |  | X |
| [Circle Profile Definition](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/circle-profile-definition.htm) |  | X |
| [Circle Hollow Profile Definition](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/circle-hollow-profile-definition.htm) |  | X |
| [Ellipse Profile Definition](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/ellipse-profile-definition.htm) |  | X |
| [Derived Profile Definiton](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/derived-profile-definiton.htm) |  | X |
| [Transformed Profile Definition](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/transformed-profile-definition.htm) |  | X |
| [Composite Profile Definition](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/composite-profile-definition.htm) |  | X |
| [Profile Properties](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/profile-properties.htm) | X | X |
| [Geometry](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/geometry.htm) | X | X |
| [Solid Model Geometry](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/solid-model-geometry.htm) | X | X |
| [Swept Solid Geometry](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/swept-solid-geometry.htm) | X | X |
| [Extruded Area Geometry](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/extruded-area-geometry.htm) | X | X |
| [Extruded Area PolyCurve Profile](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/extruded-area-polycurve-profile.htm) | X | X |
| [Extruded Area Standardized Profile](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/extruded-area-standardized-profile.htm) |  | X |
| [Extruded Area Basic Profile](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/extruded-area-basic-profile.htm) |  | X |
| [Extruded Area Composite Profile](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/extruded-area-composite-profile.htm) |  | X |
| [Extruded Area Tapered Geometry](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/extruded-area-tapered-geometry.htm) |  | X |
| [Extruded Area Tapered PolyCurve Profile](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/extruded-area-tapered-polycurve-profile.htm) |  | X |
| [Extruded Area Tapered Parameterized Profile](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/extruded-area-tapered-parameterized-profile.htm) |  | X |
| [Revolved Area Geometry](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/revolved-area-geometry.htm) | X | X |
| [Revolved Area PolyCurve Profile](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/revolved-area-polycurve-profile.htm) | X | X |
| [Revolved Area Standardized Profile](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/revolved-area-standardized-profile.htm) |  | X |
| [Revolved Area Basic Profile](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/revolved-area-basic-profile.htm) |  | X |
| [Revolved Area Tapered Geometry](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/revolved-area-tapered-geometry.htm) |  | X |
| [Revolved Area Tapered PolyCurve Profile](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/revolved-area-tapered-polycurve-profile.htm) |  | X |
| [Revolved Area Tapered Parameterized Profile](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/revolved-area-tapered-parameterized-profile.htm) |  | X |
| [SurfaceCurve SweptArea Geometry](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/surfacecurve-sweptarea-geometry.htm) |  | X |
| [SurfaceCurve SweptArea PolyCurve Profile](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/surfacecurve-sweptarea-polycurve-profile.htm) |  | X |
| [FixedReference SweptArea Geometry](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/fixedreference-sweptarea-geometry.htm) |  | X |
| [FixedReference SweptArea PolyCurve Profile](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/fixedreference-sweptarea-polycurve-profile.htm) |  | X |
| [Swept Disk Solid Geometry](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/swept-disk-solid-geometry.htm) | X | X |
| [Swept Disk Solid PolyCurve Directrix](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/swept-disk-solid-polycurve-directrix.htm) | X | X |
| [Surface Model Geometry](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/surface-model-geometry.htm) | X | X |
| [Tessellated Geometry](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/tessellated-geometry.htm) | X | X |
| [Triangulated Geometry](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/triangulated-geometry.htm) | X | X |
| [Triangulated Geometry With Textures](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/triangulated-geometry-with-textures.htm) | X | X |
| [ShellBased Surface Model](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/shellbased-surface-model.htm) |  | X |
| [FaceBased Surface Model](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/facebased-surface-model.htm) |  | X |
| [Geometry Styles](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/geometry-styles.htm) | X | X |
| [Geometry Curve Style](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/geometry-curve-style.htm) | X | X |
| [Geometry Fill Area Style](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/geometry-fill-area-style.htm) | X | X |
| [Geometry Surface Style](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/geometry-surface-style.htm) | X | X |
| [Surface Color Style](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/surface-color-style.htm) | X | X |
| [Surface Texture Style](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/surface-texture-style.htm) | X | X |
| [Material Styles](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/material-styles.htm) |  | X |
| [Material Surface Style](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/material-surface-style.htm) |  | X |
| [Material Surface Color Style](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/material-surface-color-style.htm) |  | X |
| [Material Properties](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/material-properties.htm) | X | X |
| [Texture](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/texture.htm) | X | X |
| [Image Texture](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/image-texture.htm) | X | X |
| [Texture Map](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/texture-map.htm) | X | X |
| [Indexed Texture Map](http://www.buildingsmart-tech.org/mvd/IFC4Add1/DTV/1.0/html/schema/templates/indexed-texture-map.htm) | X | X |