

# IFC Release Specific Concept Description (IFC2x3)

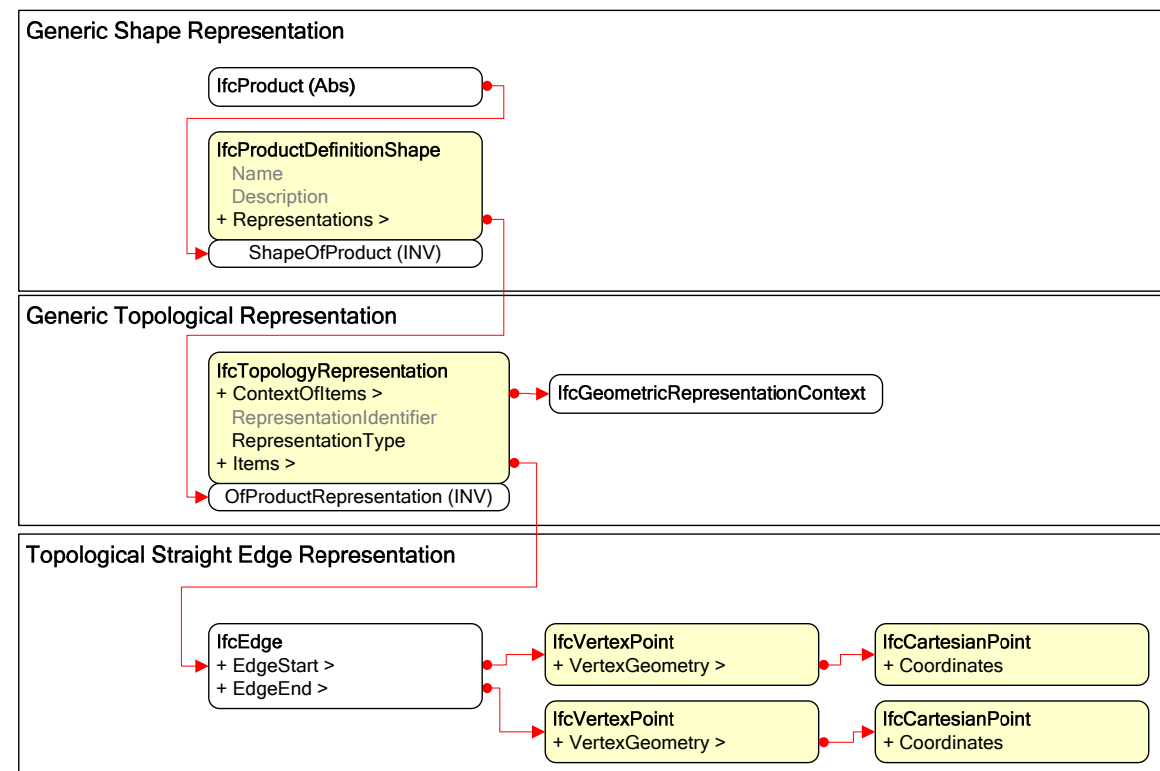
## Topological Straight Edge Representation

Reference	VBL-205	Version	2	Status	Proposal
Relationships	Implements general concept 'Straight Edge Representation'.				
History	Created 23.10.2006, documentation improved 26.9.2007				
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### Usage in view definition diagram



### Instantiation diagram



### Implementation agreements

#### IfcProductDefinitionShape

Attribute	Implementation agreements
Name	Reserved
Description	Reserved
Representations	Must be one IfcTopologyRepresentation

#### IfcTopologyRepresentation

Attribute	Implementation agreements
ContextOfItems	N/A
RepresentationIdentifier	Not used
RepresentationType	Must be 'Edge'
Items	Must be one IfcEdge

#### IfcVertexPoint

Attribute	Implementation agreements
VertexGeometry	Must be IfcCartesianPoint

#### IfcCartesianPoint

Attribute	Implementation agreements
Coordinates	Must be three dimensions
<b>Additional information</b>	
<b>P21 example</b>	
<pre> #9= IFCCARTESIANPOINT((0.,0.,0.)); #11= IFCDIRECTION((0.,0.,1.)); #13= IFCDIRECTION((1.,0.,0.)); #15= IFCAXIS2PLACEMENT3D(#9,#11,#13); #41= IFCDIRECTION((0.,0.,1.)); #43= IFCGEOMETRICREPRESENTATIONCONTEXT(\$,\$,3,\$,#15,#41);  #198= IFCSTRUCTURALCURVEMEMBER('0fhmaZzpr4TAZ0eyx039pR',#28,'1',\$,\$,#209,#226,.NOTDEFINED.); #207= IFCCARTESIANPOINT((7.7626830E-18,-2.5407477E-16,-3.0389222E-18)); #209= IFCLOCALPLACEMENT(\$,#215); #211= IFCDIRECTION((-8.5209382E-18,-1.,0.)); #213= IFCDIRECTION((1.,-8.5209382E-18,9.1856764E-18)); #215= IFCAXIS2PLACEMENT3D(#207,#211,#213); #216= IFCCARTESIANPOINT((7.7626830E-18,-2.5407477E-16,-3.0389222E-18)); #218= IFCVERTEXPOINT(#216); #219= IFCCARTESIANPOINT((10.,-3.3928416E-16,8.8817842E-17)); #221= IFCVERTEXPOINT(#219); #222= IFCEDGE(#218,#221); #223= IFCTOPOLOGYREPRESENTATION(#43,\$,'Edge',(#222)); #226= IFCPRODUCTDEFINITIONSHAPE(\$,\$,(#223)); </pre>	
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