

IFC Release Specific Concept Description (IFC2x3)

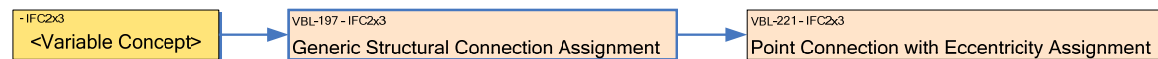
Point Connection with Eccentricity Assignment

Reference	VBL-221	Version	4	Status	Proposal
Relationships	Implements general concept 'Eccentric Point Connection'.				
History	<p>Created 23.10.2006</p> <p>Improved 28.9.2007</p> <p>PointOnRelatedElement has been changed to Not used,</p> <p>Condition coordination system added 17.1.2008</p>				
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General

In the IfcBoundaryCondition value (-1.) represents an infinitive large value – or a fixed connectivity with infinitive stiffness, value zero (0.) represents no stiffness or a free connectivity, value NIL (\$) represents an unknown connectivity condition, any other value represents a finitive stiffness or spring connectivity in that direction or rotation.

Usage in view definition diagram



Instantiation diagram

Generic Structural Connection Assignment

IfcRelConnectsWithEccentricity

- + GlobalId
- + OwnerHistory >
 - Name
 - Description
- + RelatingStructuralMember >
- + RelatedStructuralConnection >
 - AppliedCondition >
 - AdditionalConditions >
 - SupportedLength
 - ConditionCoordinateSystem >
- + ConnectionConstrains >

IfcStructuralMember (Abs)

ConnectedBy (INV)

IfcStructuralPointConnection

ConnectsStructuralMembers (INV)

IfcBoundaryNodeCondition

Name

LinearStiffnessX

LinearStiffnessY

LinearStiffnessZ

RotationalStiffnessX

RotationalStiffnessY

RotationalStiffnessZ

IfcAxis2Placement3D

+ Location >

Axis >

RefDirection >

IfcCartesianPoint

+ Coordinates

IfcDirection

+ DirectionRatios

IfcDirection

+ DirectionRatios

IfcConnectionPointGeometry

+ PointOnRelatingElement >

PointOnRelatedElement >

IfcVertexPoint

+ VertexGeometry >

IfcCartesianPoint

+ Coordinates

Point Connection with Eccentricity Assignment

Implementation agreements

IfcRelConnectsWithEccentricity

Attribute	Implementation agreements
GlobalId	Providing a GUID is mandatory, but the GUID is allowed to change.
OwnerHistory	Providing an OwnerHistory is mandatory, but it is allowed to use dummy data.
Name	Reserved.
Description	Reserved.
RelatingStructuralMember	N/A
RelatedStructuralConnection	Must be IfcStructuralPointConnection.
AppliedCondition	Must be IfcBoundaryNodeCondition.
AdditionalConditions	Not used.
SupportedLength	Not used.
ConditionCoordinateSystem	Not used.
ConnectionConstraint	Must be IfcConnectionPointGeometry.

IfcConnectionPointGeometry

Attribute	Implementation agreements
PointOnRelatingElement	Must be IfcVertexPoint.
PointOnRelatedElement	Not used.

IfcAxis2Placement3D

Attribute	Implementation agreements
Location	<i>Giving location is mandatory, but while in this case it doesn't have any special meaning (0,0,0) is used.</i>
Axis	N/A
RefDirection	N/A

IfcVertexPoint

Attribute	Implementation agreements
VertexGeometry	Must be IfcCartesianPoint. If the eccentricity point is the end node of the member, then the instance of the IfcVertexPoint, which is used by the member must be used.

Additional information

P21 example

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The content of this document has to be certified by the IAI before becoming part of an official IFC Model View Definition.