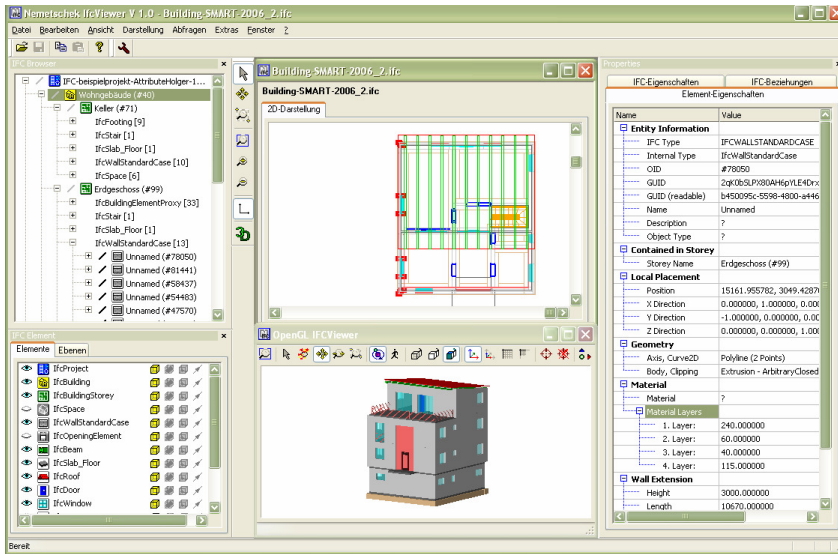


# Nemetschek IFC Viewer

## Scope of Features and Overview



The building structure, 2D plan, 3D model and geometric and alphanumeric properties of building sections or individual building elements can be viewed intuitively.

The model data can be presented in the following ways:

- 3D view of complete model and selected building parts
- Cross section of every story
- Hierarchy tree of 3D building structure
- List of building elements (wall, ceiling, window etc.) and rooms
- List of layers

### Introduction

As a pioneer, Nemetschek AG played a decisive role in the paradigm shift in the construction industry from 2D drafting to object-oriented 3D designing (BIM). These object-oriented building models are able to revolutionize the future of the construction industry by providing a seamless IT connection to downstream applications such as programs for tendering, ordering and billing or FM, which can access the intelligent, object-related data provided by building models.

The IFC – Industry Foundation Classes – have become established as a powerful standard for exchanging this intelligent, object-oriented model data in the construction industry.

Nemetschek AG therefore cooperates intensively with the Industry Alliance for Interoperability (IAI) in order to implement and improve the IFC model and optimize the mapping of construction-specific processes such as quantity takeoff operations based on graphics, engineering, facility management and building services. The aim is to cover the entire life cycle management of buildings.

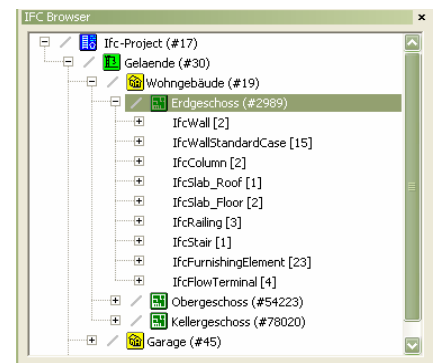
The Nemetschek IFC Viewer is an important element in Nemetschek’s IFC strategy. It enables IFC building models to be viewed – independently of CAD or other special software – and interactively explored in VR (Virtual Reality) mode. It is therefore an ideal tool for integrating all those involved in the planning process, including clients, in a simple and intuitive way.

As almost all CAD vendors now support IFC, the Nemetschek IFC Viewer is also an ideal tool for viewing and checking project partners' model data in detail, without having to own the software used by the partner or to use vendor-specific exchange formats.

With options for exporting to GoogleEarth, Nemetschek IFC Viewer is also an ideal way of transferring building models to the world of GIS (geographical information systems). Building models can be viewed clearly integrated in their real environment.

### Features

The Nemetschek IFC Viewer is software for viewing and interactively investigating IFC building models.



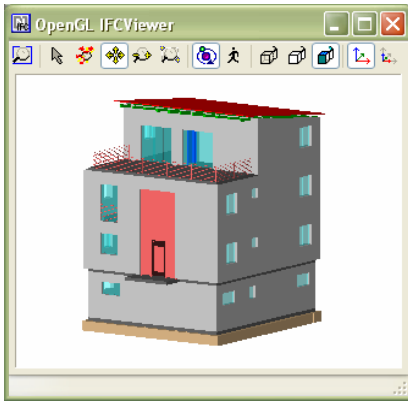
The integrated IFC browser maps the topological structure of the building. IFC offers the following structure levels here:

- Project (as top-level container for all information)
- Site
- Building
- Story

Depending on the structure of the building, the names and layout of the structure levels can be flexibly assigned during export of the IFC file to Allplan.

The structure tree of the IFC browser provides intuitive navigation in the building model thanks to simple expand and collapse functions. The selected

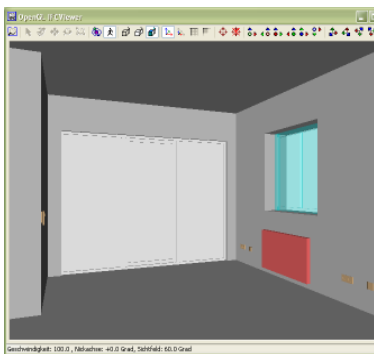
structure level is displayed in the Viewer in both 2D and 3D mode.



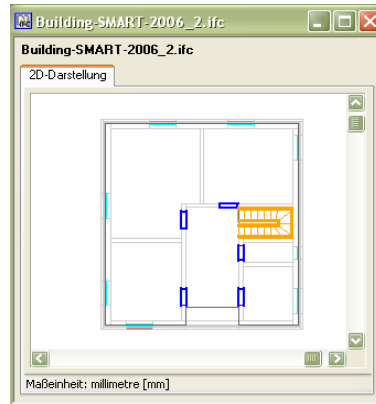
In "3D Orbit" mode, you can "fly around" the model. Here, the building model can be rotated, enlarged, and moved in any way you like.

Additional filter options by object type and layer simplify aspect-related viewing of the model. Different display options can also be selected (e.g. "wire frame" display or rendered animation model).

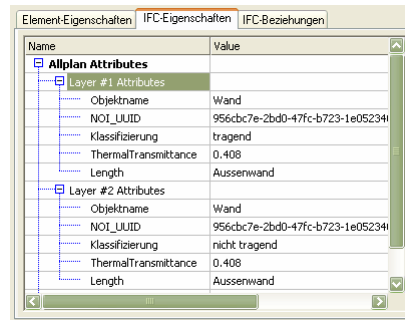
With the Nemetschek IFC Viewer you can also interactively explore and "enter" the IFC building model. For this, the 3D Viewer offers "walk-through" mode, which allows you to walk through the building interactively and intuitively, giving you a view of the interior.



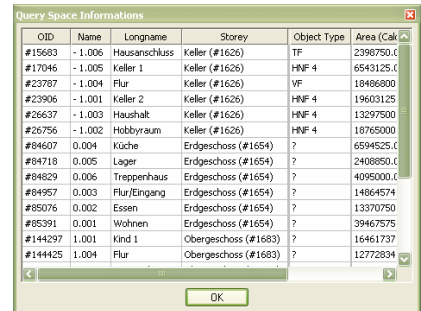
The 2D display generates plans for the various structure levels. Planners can therefore check the current planning situation in a visually reliable way.



For each selected object, all alphanumeric attributes are displayed along with the geometric representation. In addition to fixed element attributes such as the name or classifications, this can include additional information such as the u-value of a wall, for example. In the case of an IFC model exported from Allplan, these are all the free additional attributes assigned in the object manager.



The topological relationships to other objects, such as windows set in walls or the assignment of building elements to the 3D building structure, are displayed. The graphical selection of elements is possible both in the structure tree and in the 2D plan and 3D model. A special "advanced selection" function also lets you perform an attribute-related search for elements, which you can enhance further by specifying selection formulas. Various evaluations e.g. room schedule or window and door lists, are offered based on this.



OID	Name	Longname	Storey	Object Type	Area (Cak)
#15683	-1.006	Hausanschluss	Keller (#1626)	TF	2398750.0
#17046	-1.005	Keller 1	Keller (#1626)	HNF 4	6543125.0
#23787	-1.004	Flur	Keller (#1626)	VF	18486800
#23906	-1.001	Keller 2	Keller (#1626)	HNF 4	19603125
#26637	-1.003	Haushalt	Keller (#1626)	HNF 4	13297500
#26756	-1.002	Hobbyraum	Keller (#1626)	HNF 4	18765000
#84607	0.004	Küche	Erdgeschoss (#1654)	?	6594525.0
#84718	0.005	Lager	Erdgeschoss (#1654)	?	2408850.0
#84829	0.006	Treppenhaus	Erdgeschoss (#1654)	?	4095000.0
#84957	0.003	Flur/Eingang	Erdgeschoss (#1654)	?	14864574
#85076	0.002	Essen	Erdgeschoss (#1654)	?	13370750
#85391	0.001	Wohnen	Erdgeschoss (#1654)	?	39467575
#144297	1.001	Kind 1	Obergeschoss (#1683)	?	16461737
#144425	1.004	Flur	Obergeschoss (#1683)	?	12772834

## Overview of Functions

- Visualization of geometric models in 2D and 3D
- Structure-based navigation, element selection and filters
- Display of building topologies and element interaction
- Clear display of (alphanumeric) element attributes
- Generation of specific views of geometry and attributes
- Analyses of models (e.g. room schedules)
- "Real-time walk-throughs" (moving in and around the model)
- Export in VRML and Google Earth formats

*The Nemetschek IFCViewer is available to download and can be found on our website at [www.nemetschek.com/IFC](http://www.nemetschek.com/IFC).*