

BACN2BIM

[TECHNOLOGY CENTRE] CARTIF

Training material

CARTIF Technology Centre





SHORT DESCRIPTION

BACN2BIM tool

This tool allows users to generate new monitoring projects for demo site buildings (to store dynamic data), and download these data from the BIM-SPEED platform

USE CASES

Application of BACN2BIM tool



Use case

Storage of dynamic data from buildings

Update of the .ifc file

Dynamic and “real” data from buildings thanks to BACN2BIM tool

Use of these data in building energy performance simulation and other uses

Who can use the tool?

This tool can be used by any professional who wants to get dynamic data from a building (after installing necessary equipment) following the IFC standard.

Who can use the tool?

The installed equipment must be compliant with the specifications of the tool

Based on ComfortEye and ENERGOMONITOR monitoring solutions as part of the BIM-SPEED project

Adaptable to other protocol / monitoring systems definitions

Who can use the tool?

Dynamic data are useful when users need real data to simulate the behaviour of the building so as to have accurate results

MAIN TOPICS

BACN2BIM tool



Installation, configuration and pre-requisites

Installation of equipment
on demos.

Generation of
configuration .csv file

Generation of the .ifc file
of the building

Use

Video tutorial:

- Set up of a new
monitoring project
- Download dynamic
data from the building

Results

Storage of dynamic data
on an IoT platform

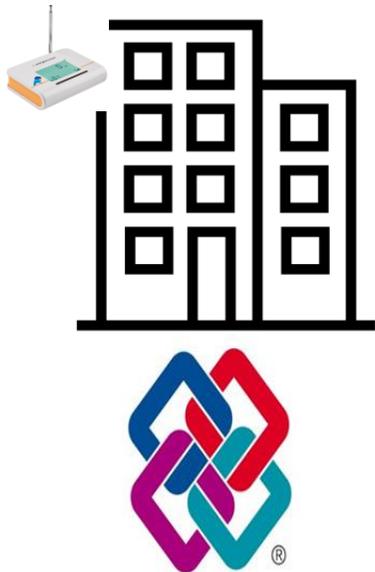
(ThingsBoard)

New .ifc file containing
information about
sensorization in the
building



Installation

Equipment installation and .csv generation



.ifc file of the Building the user is working with

Installation of monitoring devices on the building, then the .csv file must be generated

- Each device is installed on a building space, which is referenced in the .ifc file with an IfcSpace longname
- Device type, ip address and other parameters need to be included as part of the .csv file

Building (Name)	Sensor Location Location (Ifc lon lon name)	Sensor Type	DEVICE	User Name Name	Password	ADDRESS/IP	Sensor/Actuator/Contr /Controller
HAUS	Schlafzimmer	ENERGOMONITOR	ENERGOMONITOR	MGEP078	*****	https://app.energomonitor.cz/	SENSOR
	r	NITOR	NITOR	78		onitor.cz/	
HAUS	Buero	ENERGOMONITOR	ENERGOMONITOR	MGEP074	*****	https://app.energomonitor.cz/	SENSOR
		NITOR	NITOR			onitor.cz/	



Use



Results

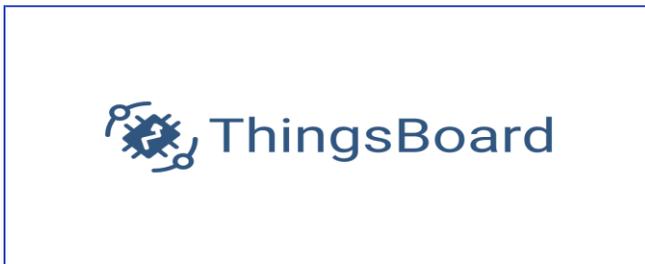
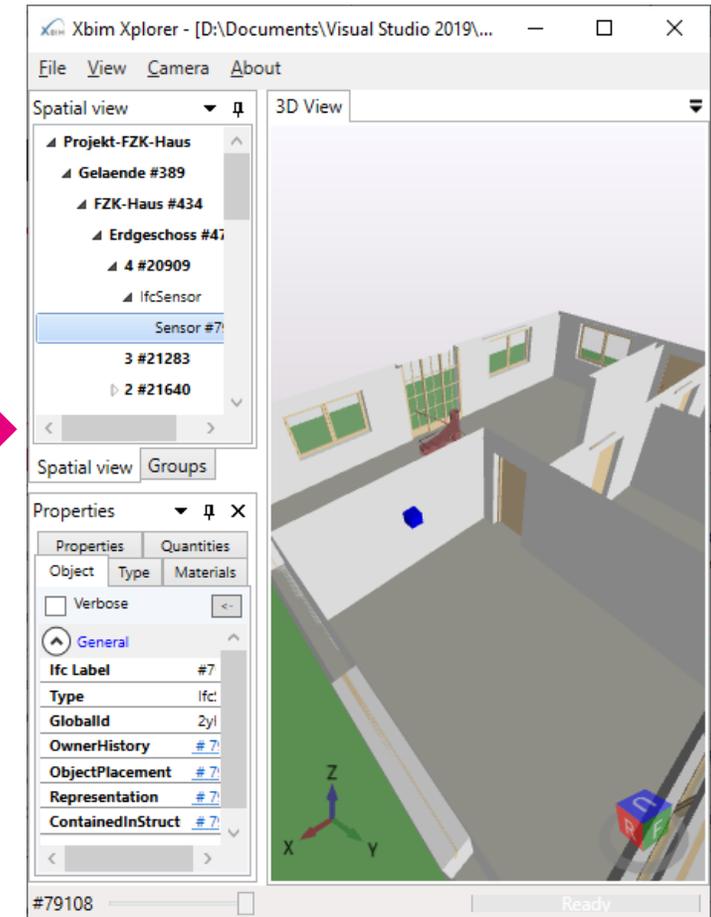
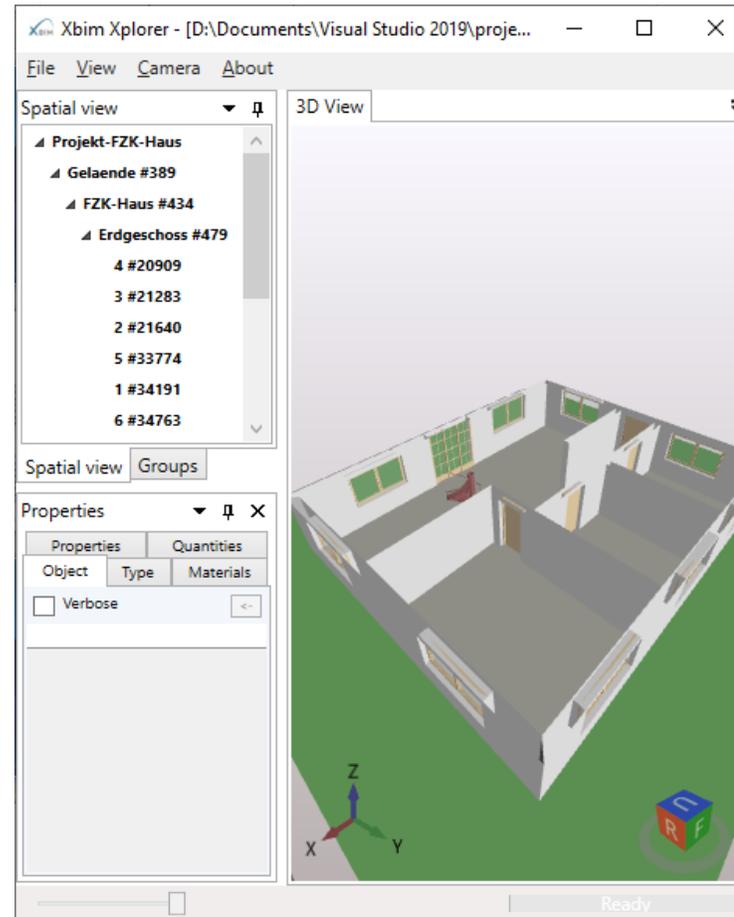
Results



Available data formats for download

New .ifc file

JSON	CSV
{ "ts":1595570280000, "value":0 }, "Temperature": [{ "ts":1595594880000, "value":23.3 }, { "ts":1595594820000, "value":23.28 }, { "ts":1595594760000, "value":23.28 }, { "ts":1595594700000, "value":23.3 }, { "ts":1595594640000, "value":23.27 }, { "ts":1595594580000, "value":23.3 }, { "ts":1595594520000, "value":23.27 }, { "ts":1595594460000, "value":23.28 }, { "ts":1595594400000, "value":23.28 }, { "ts":1595594340000, "value":23.28 }, { "ts":1595594280000, "value":23.29 }, { "ts":1595594220000, "value":23.29 }, { "ts":1595594160000, "value":23.27 }, { "ts":1595594100000, "value":23.27 }, { "ts":1595594040000, "value":23.23 }, { "ts":1595593980000, "value":23.21 }, { "ts":1595593920000, "value":23.22 }, { "ts":1595593860000, "value":23.22 }, { "ts":1595593800000, "value":23.22 }, { "ts":1595593740000, "value":23.22 }, { "ts":1595593680000, "value":23.22 }] }	1595570280000;0 Temperature; ts,value 1595594880000;23.3 1595594820000;23.28 1595594760000;23.28 1595594700000;23.3 1595594640000;23.27 1595594580000;23.3 1595594520000;23.27 1595594460000;23.28 1595594400000;23.28 1595594340000;23.28 1595594280000;23.29 1595594220000;23.29 1595594160000;23.27 1595594100000;23.27 1595594040000;23.23 1595593980000;23.21 1595593920000;23.22 1595593860000;23.22 1595593800000;23.22 1595593740000;23.22 1595593680000;23.22





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BACN2BIM tool
BIM-SPEED Project



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