

hhpberlin's pioneering
HoloLens app HoloFire3D



The temperature of fire is the same everywhere in the world.

How to incorporate HoloLens into building planning and secure operations

fireframework enables complex fire simulation and flexible processing via different devices used by multiple project actors.

The web-based application offers complex fire simulation even without having a high performance computer at one's disposal.

Additionally, multiple simulations of varying levels of complexity can be started parallel to one another in no time. The required capacity and storage infrastructure is provided flexibly via Microsoft Azure.

All that is required to calculate a simulation with fireframework is a .fds file.

fireframework will check this file for errors in advance. Thus, faulty or non-supported files may be corrected prior to the start of the simulation process.

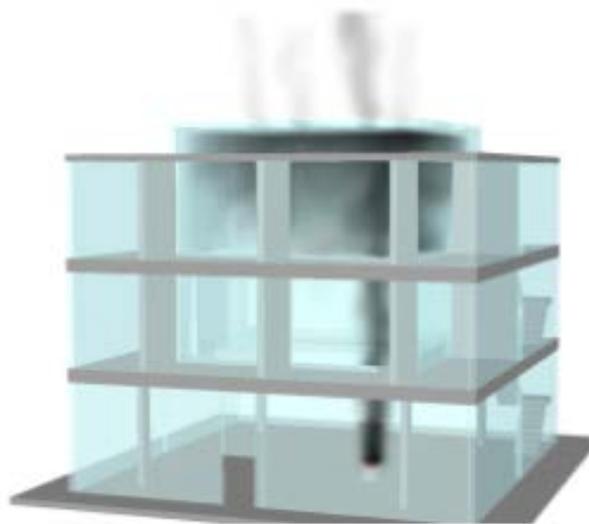
Changes can be made directly via the interface.

The screenshot shows the 'fireframework' web interface. At the top, there are navigation links for 'Tool Radar', 'Language', and 'Stefan Truthän'. The main heading is '< FDS Code Editor'. Below this, there are four input fields: 'Simulation name' (Demo Haus), 'File name' (demo-building.fds), 'FDS version' (FDS 6.5.2), and 'FDS code'. The FDS code is displayed in a text area with line numbers 1 through 28. The code includes simulation parameters, mesh definitions, and device settings.

```

1 S1_V1_M4.fds
2 Generated by PyroSim - Version 2014.1.0110
3 13.06.2014 16:11:57
4
5 /-----
6 /--- Name, Titel
7 /-----
8 $HEAD CHID='S1_V1_M4', TITLE='Demo_Haus_Brandherd1_Natuerliche_Zuluft_und_Natuerliche_Abluft - 4 Meshes/'
9
10
11 /-----
12 /--- Mesh-Definition fuer 4 Meshes
13 /-----
14 $MESH ID='Mesh1', IJK=36,36,72, XB=-10.8, 0.0,-10.8, 0.0,-0.3,21.3/
15 $MESH ID='Mesh2', IJK=36,36,72, XB=-10.8, 0.0, 0.0,10.8,-0.3,21.3/
16 $MESH ID='Mesh3', IJK=36,36,72, XB= 0.0,10.8,-10.8, 0.0,-0.3,21.3/
17 $MESH ID='Mesh4', IJK=36,36,72, XB= 0.0,10.8, 0.0,10.8,-0.3,21.3/
18
19
20 /-----
21 /--- V1-Fall: Natuerliche Zuluft und natuerliche Abluft
22 /-----
23 $DEVC ID='TIMER', QUANTITY='TIME', XYZ=-10.8,-10.8,0.3, SETPOINT=60.0, INITIAL_STATE=.FALSE., OUTPUT=.TRUE./
24
25
26 /--- Zuluft
27 $DEVC ID='Zuluft_1', QUANTITY='VOLUME FLOW', XB=-8.7,-8.7,-1.8,-0.3,0.0,2.1/
28 $DEVC ID='Zuluft_2', QUANTITY='VOLUME FLOW', XB= 8.7, 8.7,-1.8,-0.3,0.0,2.1/
  
```

The results may be used to generate 3D models of the buildings.

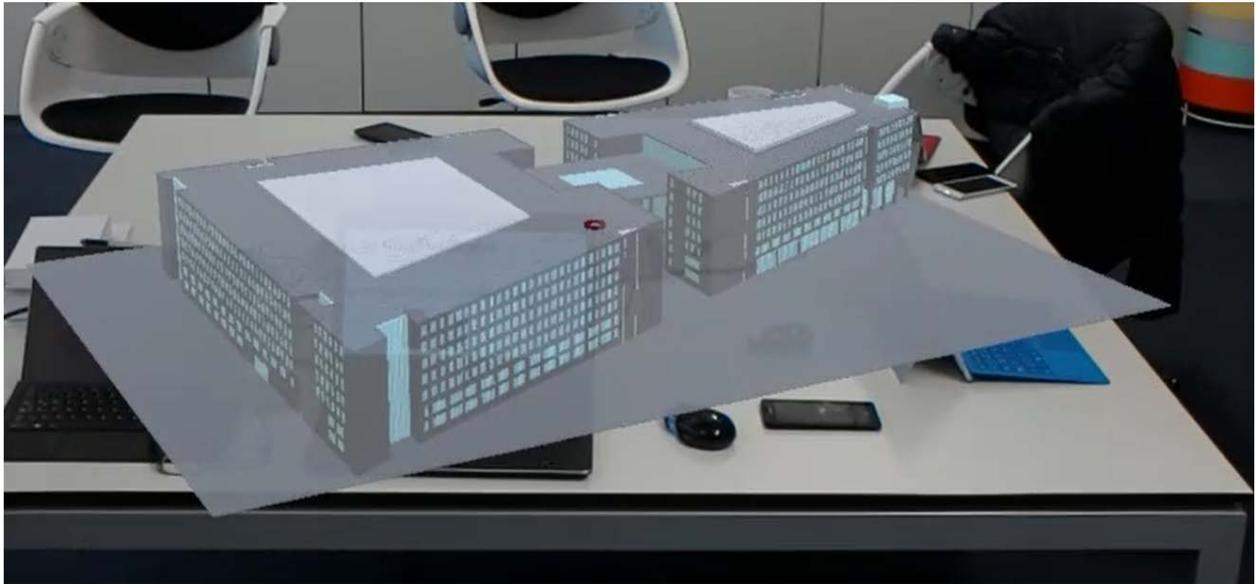


The application **HoloFire3D** was designed to combine physical and virtual reality to enable planners and architects to view buildings through HoloLens.

Holofire3D is employed to visualize buildings during the fire safety planning process, when changes are made to the building, as part of BIM (Building Information Modelling), and to assist first responders in exploring the situation.

The building is synchronized via the 'one structures' database and projected for the user as an interactive hologram.

The app allows users to work collaboratively on projects and to rate fire and smoke expansion models.



structures allows you to manage all security-related matters digitally, to share them with authorities and to provide access to the digital twin of the building via HoloFire3D.

All important matters concerning the property can be managed and organized. Whether it's buildings, industrial sites or traffic tunnels, this tool helps you keep track.

structures for BIM- Keep track of everything!

You've got a project, several people are involved and there are many different versions of data files and plans. **structures** connects all actors in real-time and notifies them of all changes and updates. And thus puts a stop to loss of information.

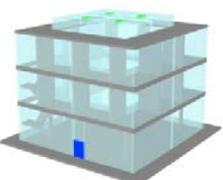
structures for preventive fire protection Safety first!

Infrastructures are safe only when maximum information about them is available. With **structures**, the latest information is available in one central place to all stakeholders, such as first-responders, authorities, architects or inhabitants.

me structures Tool Radar Language Stefan Truthän

Objekte

Objekt anlegen Sortierung



hhpberlin Demohaus
ID: 16B0001
Kategorie: Beherbergungsstätte
Ort: Berlin



ADAC Hauptverwaltung
ID:
Kategorie: Büro und Verwaltung
Ort: München



Adidas Laces
ID:
Kategorie: Büro und Verwaltung
Ort: Herzogenaurach



Airport City am Flughafen BER
ID:
Kategorie: Dienstleistungszentrum
Ort: Berlin



Alexa Shopping Center
ID:
Kategorie: Einkauf
Ort: Berlin



Allianz Arena
ID:
Kategorie: Sport und Freizeit
Ort: München

me structures Tool Radar Language Stefan Truthän

hhpberlin Demohaus

Beherbergungsstätte Objekt freigeben

Object ID: 16B0001

hhpberlin Demohaus
Musterstraße 4
12345 Berlin
Deutschland



hhpberlin GmbH
Rotherstraße 19
10245 Berlin
Deutschland

Tilman Holbe
Objektverantwortlicher

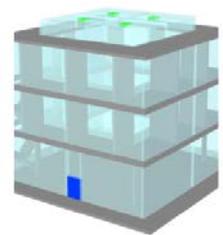
Timelne

- 12.01.2017
Begehung
Der Brandschutzbeauftragte hat eine Begehung durchgeführt
- 03.11.2016
Schulung - Brandschutz Helfer
Es wurde 4 Personen zu Brandschutz Helfern ausgebildet
- 03.10.2016
Schadensereignis - Feuer
Es kam zu einem Schweißbrand in einem Zimmer
- 15.09.2016
Begehung
Der Brandschutzbeauftragte hat eine Begehung durchgeführt. Es wurde einige Mängel festgestellt
- 12.03.2016
Erstellt

To Do

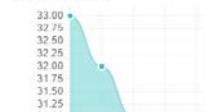
- BSO Teil B+C erstellen**
Sie haben für ihr Objekt bisher nur eine Brandschutzordnung Teil A erstellt. Sie müssen noch Teil B+C erstellen
Termin: 01.09.2016
- Revision Feuerwehrplan**
Der Feuerwehrplan muss auf seine Aktualität überprüft werden
Termin: 31.03.2017
- Wartung RWA**
Zur Erhalt der Funktion muss die Rauch- und Wärmeabzugsanlage gewartet werden
Termin: 01.03.2017

80 %
Vollständig



Risikobewertung

Aktueller Wert: 30



33.00
32.75
32.50
32.25
32.00
31.75
31.50
31.25
31.00

About hhpberlin

hhpberlin is Next Generation Fire Engineering. Fire safety is our passion as well as our future. Our customers in Germany and around the world associate hhpberlin with supreme fire safety. Our team is dedicated to developing the best preventive fire protection for our customers. We are always on the look-out for new and individually tailored solutions while keeping the vision and budget of builder-owners and architects in mind.

<http://www.hhpberlin.de/>

<https://one.hhpberlin.de/>