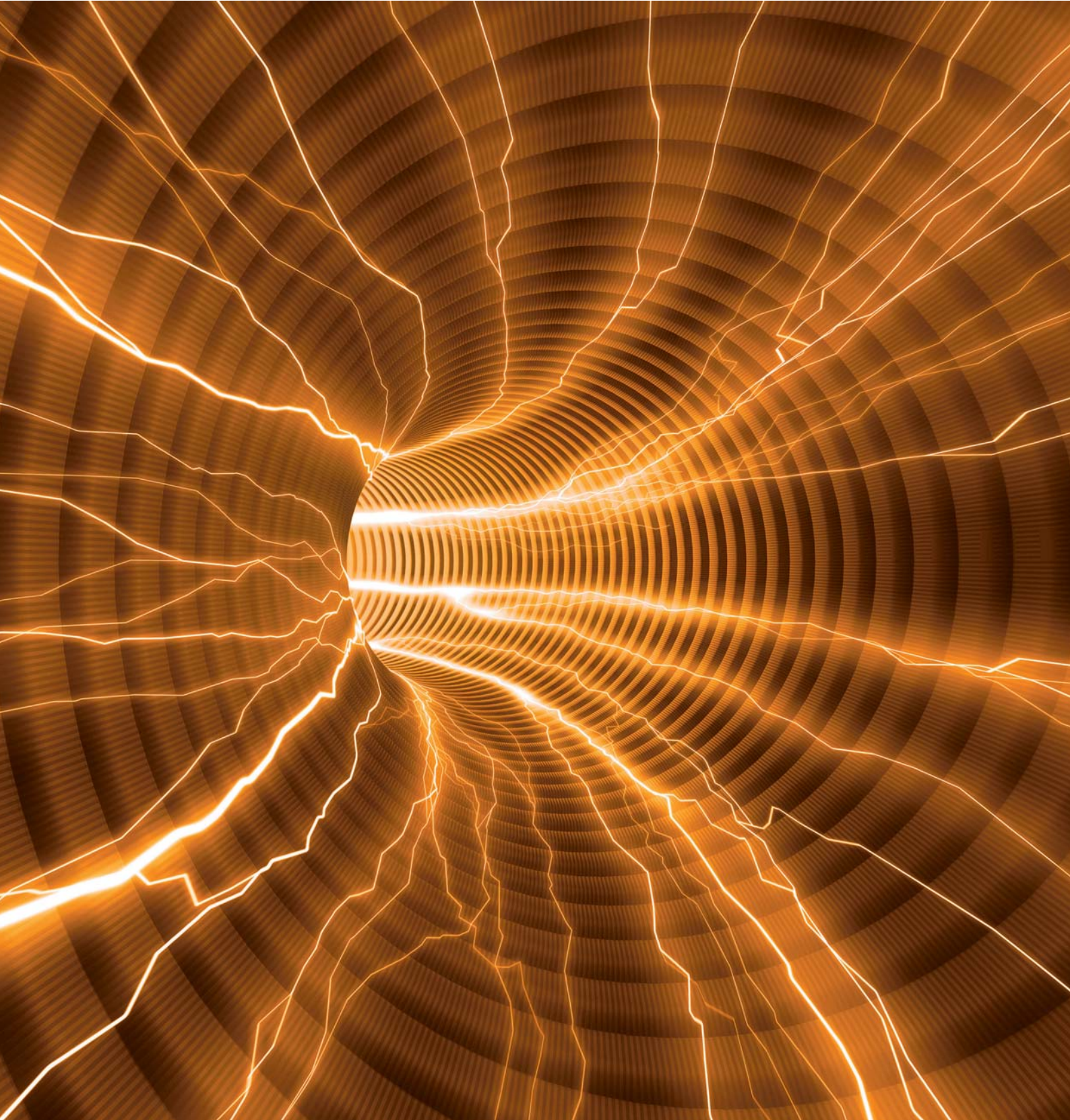


GBIS 1.0

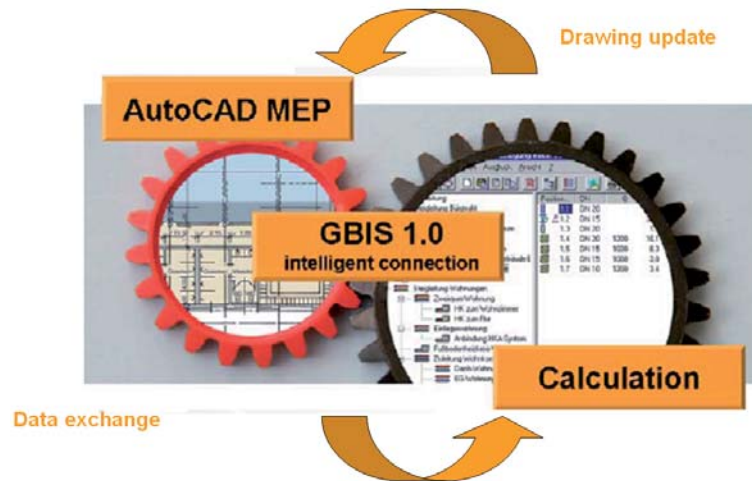
Software tool for the intelligent connection of AutoCAD MEP and building services calculations



GBIS 1.0 - More Than Just An Interface

GBIS connects AutoCAD MEP with SOLAR-COMPUTER calculation programs for buildings and systems in an intelligent way. GBIS creates SOLAR-COMPUTER toolboxes in the user interface of AutoCAD MEP, checks drawings for “incalculable drawing errors” and prepares drawing data for calculation purposes. The real advantage, however, is the integration of the calculation results in form of automated data updates, labels or dimensional adjustments in the drawings. Moreover, GBIS provides throughout all calculations, for the visualisation of rooms, radiators, pipe work, etc.

“GBIS” stands for “Green Building Information System”. In the background, it saves any linked data for comfortable and efficient working throughout all consultation, planning and implementation phases.



The GBIS concept

- Working in a simple, quick and intuitive way
- Intelligent data network between AutoCAD MEP and building and system calculation
- Import and export of building data, in particular of room geometries
- Import and export of radiator data
- Import and export of pipe network data
- Verification of the function of drawing data
- Function for setting the SOLAR-COMPUTER room stamp
- Automatic addition of CAD room characteristics data with calculation results
- Visualising the position of the current calculation in the CAD drawing (e. g. zoom on the hit radiator)
- Highlighting of numerous room characteristics (heating load, temperatures, etc.) by colouring the room

GBIS 1.0 connects

- AutoCAD MEP 2010 and
- SOLAR COMPUTER software (heating load, radiator, heating pipe system and cooling load)

GBIS 1.0 performance feature



Building calculations

In a first step, GBIS links drawing and calculation data for different applications: EnEV / DIN V 18599, heating load EN 12831, cooling load VDI 2078, energy requirement / simulation VDI 2067-10+11: geometric data of storeys, zones, rooms, building elements, deductable surface areas, neighbour relations and building element allocations. In subsequent modification steps, GBIS will update the links.



Building drawing

During the calculations, GBIS visualizes areas currently edited in the drawing by colouring them, e.g. room heating loads or 18599 zones. Apart from that, GBIS updates the room features in AutoCAD MEP according to the completed calculations: room number, room temperature and name, heating load, cooling load.



Room stamp

In AutoCAD MEP, GBIS controls everything concerning the room stamp: plotting it where it has been placed before or in the centre of the room. Update with the latest calculation results.



Radiator calculation

GBIS will link radiators that have been placed in AutoCAD MEP with room allocation for the design, reverse projection or conversion on basis of BDH or VDI product data, thermally comfortable according to VDI 6030 as option.



Radiator drawing

During the calculation, GBIS visualises the radiators in AutoCAD MEP and adjusts the dimensions after completion of the calculation in the drawing and labels them. If the radiators are not defined in the drawing but in the calculation (e.g. by default by automatic generation from room and window dimensions), GBIS will place the designed radiators in the centre of the room for the subsequent manual moving in the drawing.



Heating pipe system – calculation

GBIS will link a heating pipe system that has been drawn in the whole building in AutoCAD MEP with the corresponding system components for the calculation. In this connection, there is an automatic plausibility check and an early recognition of “drawing errors” that cannot be calculated. Automatic recognition of symmetric 2-pipe routeing, Tichelmann pipe routeing, 1-pipe heaters, heating circuit distributors or mixed systems.



Heating pipe system – drawing

During the calculation, GBIS visualizes currently edited pipe system runs in AutoCAD MEP and adjusts the dimensions after completion of the calculation in the drawing and labels them with the calculated nominal widths, material and assortment designations.

About SOLAR-COMPUTER UK Ltd:

SOLAR-COMPUTER UK Ltd. was established in 2009 and is the branch for sales and distribution of SOLAR-COMPUTER calculation programmes in the UK and Ireland.



For 30 years, the German head office of SOLAR-COMPUTER GmbH has been developing high-quality software applications for building physics and its associated calculation of energy, heating, sanitary, climate, ventilation and cost effectiveness.

During this time, the company has continuously strengthened its position as a market leader providing high-quality service engineering software in Germany, Austria and Switzerland. Presently, more than 30 employees are working in development, marketing and sales for international customers.

The software particularly stands out due to its modular structure allowing for solutions which are tailored to the needs of the customer. Due to our vast experience with interface programming, SOLAR-COMPUTER has achieved major benefit for the user throughout the entire consulting and planning process.

The software sets the scale for user friendliness when calculating most complex tasks.

SOLAR-COMPUTER software - Overview

• Building Physics

- U value calculation EN ISO 6946
- Water vapour diffusion

• Heating

- Heating load calculation (BS EN 12831)
- Radiator calculation
- Floor and wall heating (BS EN1264)
- Pipe network calculation
- Pipe calculation in accordance with Tichelmann
- Single pipe calculation

• Climate

- Cooling load calculation VDI 2078
- Component cooling
- Cooling load for international Projects
- Room air temperature calculation

• Energy

- Energy requirement VDI 2067 part 10+11

• CAD

- Intelligent Interface GBIS for AutoCAD MEP

Please send your questions via internet, email or directly to

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