

Press Release

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FRAMENCE revolutionises the digitalisation of buildings and facilities

Software creates photorealistic digital models of buildings and facilities with panoramic pictures and supersedes 3D laser scanners

The newly founded software company FRAMENCE GmbH from Germany has developed an innovative and efficient method to digitalise buildings and facilities. Simple panoramic pictures can be used to build digital models without laser scanners in a cost-efficient and simple way. The so-called hybrid models, which can integrate existing 2D maps and 3D models, upgrade common graphic models with a picture component. The models can be used for documenting construction progresses or life cycles of sites and for building digital twins.

In order to create a digital model of a site, a cost-intensive 3D laser scanner is typically used to capture a surrounding and to visualise it as a point cloud, which is hard to process technically. The FRAMENCE software, however, uses panoramic pictures to create a so-called hybrid model. The panoramic images are taken with a standard digital camera with a fisheye-lens. Due to the picture component, the hybrid model can be depicted in a photorealistic way and since no special hardware or trained staff is required, costs are low and documentation cycles can be short.

Because of the intelligent software, the panoramic pictures act as real 3D models and offer all measures. Therefore, working with real 3D models is rarely necessary. The creation of 3D models with panoramic pictures is possible at any time and mostly automated in the software. Moreover, an easy integration into existing BIM models in order to depict the "as built" situation is possible as well.

The innovative method can be used for an economic and efficient creation of a digital twin. With the help of the integrated asset management system, 2D and 3D objects can be connected to technical data and structures of buildings and facilities as well as all necessary attributes can be saved and retrieved by means of the search function





in the integrated database. Additionally, the FRAMENCE model has more features available such as live image monitoring, sensor status and chart display, insertion of concealed objects and layers as well as cross-fading 2D maps with 3D models (BIM) and panoramic photos.

With the help of a time slider, past versions of buildings and facilities can be viewed as well as the current state. This is particularly helpful when documenting construction progresses or life cycles of buildings and facilities. Building plans can be checked against the actual construction and changes in the life cycle of an object can be documented. The long-term check on the "as built" state in the temporal structure of a construction offers crucial information during rebuilding or in warranty cases.

In contrast to common graphic models, FRAMENCE hybrid models can be build faster, are cost-efficient and easy to handle. Despite the variety of functions that are offered already, Framence is at the outset and offers much potential for further developments.

FRAMENCE GmbH was formed in January 2019 by Peter Merkel and Adrian Merkel. The company provides innovative technologies for the digitalisation of buildings and facilities. The FRAMENCE software creates hybrid models and digital twins with the help of simple panoramic pictures and in a cost-efficient way. The founders, who can rely on over 40 years of experience with graphic-based software solutions, push developments in the field of AI, machine learning and image recognition.

