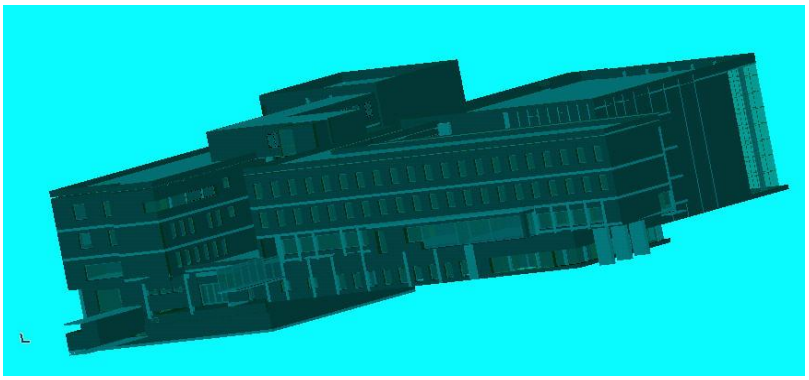
Integrated, intelligent building management at the Campus of Nyíregyháza

The Campus of Nyíregyháza is the most dynamically developing educational center in Eastern Hungary. There is an integrated, intelligent building-management system implemented by Graphisoft and Hewlett Packard Hungary. Graphisoft delivers its facility management solution, the whole ArchiFM product portfolio, while HP Hungary delivers its integrated intelligent building-management system called BuilDog, to the Campus of Nyíregyháza.

The integrated, intelligent BuilDog building-management system is modular based. Its task is to enable the integration of existing subsystems within the house. It has to ensure interface for standardized Man Machine connection (MMI), manage events (e.g. warnings) coming from subsystems, make correlation analysis of the events, forward the results of analysis or operator-interventions (commands, base mark adjustments etc.) towards the subsystems, furthermore subsystem-simulation to a certain extent.

The BuilDog system at the Campus of Nyíregyháza accomplishes the integration of the following subsystems:

- complete building-management/-surveillance system that includes both building-engineering (HVAC) and electrical systems (0,4kV and 10kV systems),
- Fire-alarm and extinguishing systems,
- Entry system,
- Permeation-security alarm system,
- Video monitoring system,
- Emergency loud-speaker system,
- Communication network,
- Data-communication with the **ArchiFM**-system.



The subsystems have individual, but generally standard communication interfaces where BuilDog can be attached to, realizing efficient bi-directional communication through the data transfer network, always considering the other subsystem's communication possibilities.

BuilDog's backbone- (inter building) network of data transfer relies on two technologies. The TDM-based Synchron Digital Hierarchy (SDH) is a telecommunication intended backbone network; it is flexible, stable and supports high speed data transfer in communication between BuilDog and subsystems. Parallel to this runs the 10/100/1000 Mbps simple Ethernet LAN. The inter building network of data transfer is physically an optical loop, with a dispatcher-central, where the supervision of the whole campus is done.

Graphisoft's **ArchiFM** System was also installed at the campus, integrated into BuilDog. ArchiFM – as the FM-module of the integrated intelligent building-management system – supports the export of FM-changes into BuilDog and also the representation of these changes in the graphics. By implementing the two-way data link between BuilDog and ArchiFM – following corresponding synchronizations – both systems can operate with up to date graphical and alphanumerical information. Important modules of **ArchiFM**'s CAFM side are e.g. area management, inventory management and tenant management, whereas its CMMS side covers maintenance, breakdown managements, etc.

Tenant Management

(Supporting cost allocation)
ArchiFM's tenant management module is based on the actual structure (physical structure) of buildings. This physical structure is a tree reflecting the complete real estate portfolio of the

Campus. Buildings can be divided into wings and these parts may include different number of floors. Rooms are available under floors in the tree.
By clicking on a particular room, its feature sheet appears, containing the below tenant management data:

- room-types: rentable, non-rentable or service area,
- availability periods,
- user units concerned,
- contractual interval,
- setting of partition and costs,
- data of rented space,
- data of different types of areas/spaces: net, used, calculated etc.
- room-category e.g. “classroom”, “office”, “depository”,
- room-data: name, ID, number of rooms etc.
- various other factors on rooms and rooms-category.

Maintenance Management

(ArchiFM Maintenance Software)
ArchiFM Maintenance fits well into the ArchiFM environment; it uses the data from ArchiFM DataBase. Its duty is to extend the basic maintenance function of ArchiFM. ArchiFM Maintenance is a modern, up to date maintenance software that meets all demands. It also contains a WEB based HelpDesk system. Maintenance reports can be viewed from anywhere through the WEB. With this HelpDesk other kinds of work requests can also be handled; worksheets, work orders or reports can be generated following their centralized approval. The software also supports subcontract-deals, managing parallel projects, planning inventory, material and human resources and also planning costs according to cost centers and cost allocations.
It is one of the best solutions to connect Graphisoft- and HP-technology for both global challenges in the world of intelligent-building-concept and for short-term and long term development.
Established by the previous management of Graphisoft’s ArchiFM business department as a spin-off company, vintoCON continues to develop the ArchiFM softwares of Graphisoft and makes all the related services available as well.