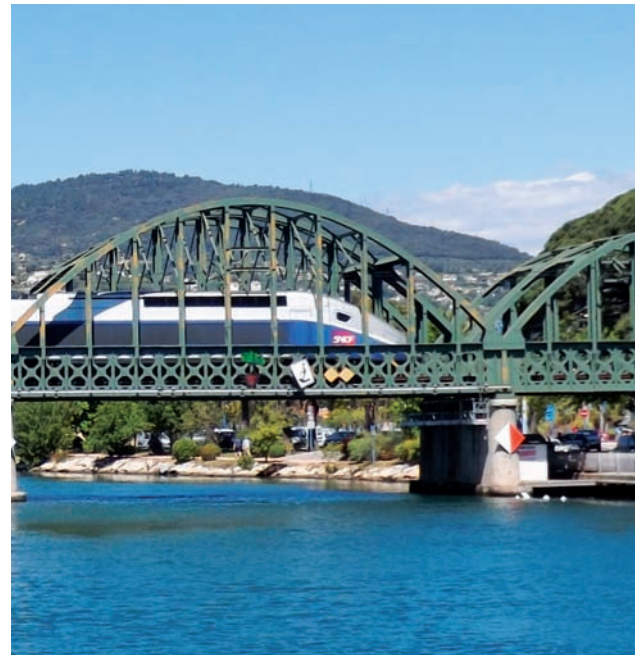




16
ULTIMATE



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MasterConcept for BIM – from project to Operation

During the autumn 2015 Ides is divided within business areas in order to provide better focus. One of those focus areas is Construction Industry for the past two years due to the demand of this industry has increased significantly. Advanced 3D BIM-tool is now a completely integrated part of MasterConcept. With MasterConcept you can now divide the project/3D-model in functional and structural element/object. You might say that we tear apart the entire model in to small pieces and identify each element as one object. With this you can get a transparency of the whole model and make calculation or searching independent of graphical model. The 3D-model usually has views in 2D to support the construction documentation or for detailed design is places where it's needed. The 2D views can be added in to a Sheet where a drawing frame is added to

become a Dynamic 2D drawing that is automatically updated in phase with the change of the 3D model. Users mostly want to export the 2D Sheet in to files in order to make the blue print for document distribution to different stakeholders during the project or in the construction phase. MasterConcept now takes over the revision control directly inside the 3D application and handles also the export as well as transformation from 3D model to a 2D document. The 2D-exported files become real documents with document number and Meta data completely automatic. It not only gives new opportunities to the project and revision control of exporter document files but also a platform for the operation management to work in.

What is BIM?

Building Information Modeling

(BIM) has become a concept for all who are involved in design within the construction industry. It became the equal sign between 3D models and BIM, but the development shows that the fact is not so. The Term “Modelling” is a generic term for the Abstract information about the total Digital model of the building or construction. Both 2D and 3D models are components within the Digital abstract model called BIM, but it is not just like that. If we add more dimensions such as time and cost, the construction Industry has declared what they call 4D and 5D but anyone realize that documentation such as warranty, control systems controlling the indoor climate are all a part of the total Model.

BIM and aspects

Ides has talked about aspects of object since 1994. 3D is just a three

dimensional aspect of one object. But there are more dimensions. Since 20 years the digital model in MasterConcept has supported to add many aspects of a building or bridge. It can be mechanical or electrical aspects. We can add aspects like technical properties or a picture. If we add more aspects, we talk about Multiple Aspects or multi Data that we call nD, nD BIM where the letter n = a random number.

IEC/ISO 81346-12 in MasterConcept for construction industry

The designation management in MasterConcept follows the standard Principles For Structure Handling in order to structure plant objects by different perspectives and functions in a smart and simple way. It was first implemented in 1993 and today the development has gone far away within this standard in MasterConcept. It is also used for buildings and all its building functions. The new standard is named as IEC/ISO 81346-12. The last digits -12 refers to BIM area. There is guidance for how you can structure the structural elements in model such as walls, windows, columns, ceilings. Meanwhile you can structure all functional element in system areas such as ventilation, fresh water and waste water. With the new version of MasterConcept we additionally revise designation management in order to get in sync with the new standard. With more than 400 different predefined object classes in MasterConcept the user will have support for automatic generation of unique designation letters now also for the new standard.

BIM-object connected with MasterConcept-object

BIM-industry has needs to be able to manage its 3D-modes in general document flow where models are complex data. Besides it is large work group where all are working towards

the same 3D-model. It's simple to pick up variety of list from these system but the needs is more than this. MasterConcept as a central object repository directly solves it from 3D-models with its virtual object. An object is created in MasterConcept whether it is a motor, door, column or a window. All properties the user choose to synchronize between MasterConcept and the 3D-model and updated from MasterConcept. If this information is located in other documents attached to MasterConcept these documents are updated as well. Engineers now can refine their data by telling for instance brands and prices to ultimately submit entire nD-BIM-models to the operator owner. Technical data, article data, 2D-CAD and exploded views - all in one and same system.

MasterConcept and Autodesk Revit

BIM-application Revit from Autodesk is a special tool for building construction where 3D-models are constructed. MasterConcept with version 16 has now full support for the work within work group in complex models where it is important to know who is working and what they are working with. The advantage that MasterConcept supports entire documentation process including 3D-models is the flow and control from the project are guided and everyone is working consistently.

It's important to control from 3D to 2D

To troubleshoot in properties or cars is similar. Diagnose doesn't appear in a 3D-model of your car, neither direct from 3D-models of self-built house. Models are converted to amount of 2D-drawings that are saved as separate files on disk. These files must be handled in an appropriate and safe way like document. This is also the moment that It's risky



MasterConcept supports entire documentation process including 3D-models.

to mix up same files and file naming as well as document revisions. The risk increases and information will be lost. With MasterConcept you'll have control on project. The drawings usually should be send out like RFP document in several revisions to different contractors who are participating in procurement. All drawings shall be later handled as built-documentation. MasterConcept has a direct connection with Revit model where 2D drawing is registered as document and when they are exported, MasterConcept will take care of them for users. A helper who speaks directly with MasterConcept document engine and take care of innovative or updating and revision management for users.

Real-estate management

Majority of equipment's are changed due to wear and tear or due to refurbishments after ten years. During those years you not only want to know that something is changed but also what has been changed and where those new equipment are located. MasterConcept tracks everything and all changes and updates drawing forms if it's necessary. Document revisions and document become searchable as document Metadata is stored in MasterConcept. □