Digital Standardization and Requirements Management

Starting Point

In the planning of laboratory buildings, project-specific requirements and standards-based requirements management is one of the key building blocks of time and cost management as well as compliance management.
As known, there are always great problems with the legally compliant compilation of the internal and external normative specifications required and specifications to be used in the respective project and their updating along the planning progress.
- Systemically unresolved is an ongoing change monitoring of these internal and external specifications, which allows automatic detection of changes.
- The persons responsible for the change management of the project are not reliably informed automatically in relevant cases about relevant changes.
- In addition, the continuing digital transformation in construction is accompanied by an explosive growth in the data and information used, which in turn calls for completely new qualities both for the planning instruments used and for the organization of the planning process itself.
- The error propagation by outdated specification data in multidimensional BIM projects becomes so complex that a simple tracing and correction is no longer feasible with justifiable effort.
- All the more urgent here is a preventive avoidance of update errors.

Procedures outside the construction industry

A look beyond the horizon of the construction industry to mechanical and plant engineering proves to be useful and valuable.
- A frequently used software suite from the company IBF named Safexpert fulfills many of these requirements. Other interesting features are under development.
- The planned updating strategy for external normative specifications is based on a project-related digital analysis of the sources used in the projects for relevant standards and EU directives.
- The core competences of IBF are currently the provision of digital concepts and WEB services as well as the necessary infrastructure for the provision, updating and distribution of data as well as consulting for software manufacturers interested in developing specific data for the development of their own assistance systems.
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In addition, the continuing digital transformation in construction is accompanied by an explosive growth in data and information used, which in turn calls for completely new qualities both for the planning instruments used and for the organization of the planning process itself.
- The error propagation by outdated specification data in multidimensional BIM projects becomes so complex that a simple tracing and correction is no longer feasible with justifiable effort.
- All the more urgent here is a preventive avoidance of update errors.
- If sufficient resources are available, IBF, if necessary in cooperation with selected partners, also handles the processing of special data and the development of plug-ins in specific customer projects or in the form of joint ventures.

Outlook

In the spirit of Industry 4.0 and BIM further developed, software systems can be developed in the future, which can not only refer to errors, but also provide manuals for error correction or correct them even fully automatically (predictive and prescriptive analysis and services).
Current developments in the BIM world (standardization of information management and data exchange, XML format base, BIMserver technology), in standardization (pre-standards and standards in XML format) and e.g. Safexpert (autonomous standard manager for industry-independent use, standards content management, expert community (SECOM)) has meanwhile also made it easier to implement necessary BIM updating tools that take account of timely and legally compliant requirements management.

EGNATON is committed to the design of laboratory and research buildings for requirements management, always using the most recent normative sustainability specifications, tracing the track from using outdated specifications to identifying the primary source of error, triggering a possible change request.
EGNATON sees itself as a discussion platform on the subject of "assistance systems in requirements management".
The event on 13.3.2018, in an informal circle of shareholders responsible for research, aims to develop a mature requirements management system for both the classic way of designing and building and for the new way of planning and design characterized by the BIM concept Discuss building.
The declared goal of the event is the opening of a specialist discussion on the necessary handling of external normative specifications and the resulting constant need for updating. At the same time, solutions for comparable problems from other sectors (in this case, mechanical and plant engineering) should also be included.

EGNATON Workshop

„Digital Standardization and Request Management

- „Assistance systems for design of science buildings“

Schedule 13.3.2018

13:00 Welcome, Workshop-targets, schedule (E. Dittrich)

13:10 Introduction to the topic of the workshop (P. Neurieder)

13:30 Digital standardization and request management (H. Frick)

- The recent SCM-concept (Standards Content Management) for administration and update of digital standards – on the example of mechanical and plant engineering
- The all industry standard manager of IBF
- Concept for daily digital management of standards and valuable additional knowledge of standards → modern networking of experts in the „Standards Experts Community“
- New possibilities for developement of predictive und prescriptive digital assistance systems (digital models → „der digital twin“)
- Applicability of systems and concepts to the core areas of EGNATON members

14:30 Coffee break

15:00 Assessment of the starting point, discussion, main questions:

1. Is the view shared on the issues addressed?
   - If yes, further topics?
   - If no, what are the reasons?
2. Are advantages of the problem solving strategies accepted?
   - If yes, assessment of the solution potential?
   - If no, what are the reasons?
3. How is the chance of industry portability of problem solving assessed?
   - Technically?
   - Organizational?
   - Cultural?
4. What could fail a dynamic requirements system?
   - Lack of insight to the problem without dynamic requirement management?
   - Different professional cultures of the participants?
   - To expensive or immature software-tools?
   - Lack of user competence of all project participants?
   - High initial hurdles in the BIM project application?
   - Lack of benefit for the participants?

16:00 Define next steps

16:30 End of Workshop