

## Introduction COINS-program

### *Why COINS?*

In industries like shipbuilding, process industry and automotive, the application of 3D-objects in combination with Product Data Management is far penetrated. This method has led till spectacular improvements. The number of faults has been reduced, the flexibility has been raised and the competitive position has been strengthened.

Project partners in the building industry have experience that the manner on which now the communication and cooperation has been organized an important cause is of a large mistake sensitivity of the information flow. The building can learn of other industries. In 2003, a number of organizations from the building industry came up with a plan to develop agreements for the working with 3D-object information. This plan formed the beginning of what is now known as "COINS".

### *What does COINS stand for?*

COINS is the acronym for ‘Construction Objects and the INtegration of processes and Systems’ and has the following objectives:

- To provide agreements on working methods and information needed to support the building process;
- To provide a common basis for the use of object information and integration of the building process.

These agreements enable a better use of resources in information and communication technology (ICT).

### *Approach*

The COINS-program is carried out by the project group COINS with in this representatives of governments (clients), construction companies, engineering offices, network organisations and institutions (27 participants). Moreover IT-companies are participated (6 participants).

The COINS-program is developing the following products:

- Agreements on working methods - COINS Engineering Method (CEM)
- Agreements on information – COINS Building Information Model (CBIM)
- Implementation Strategy and methods

CEM – Working methods for the production of construction work. Do COINS consider then something whole news? No, we make use of recent developments which there are take over already in construction (for example systems engineering) and working methods of other industries. New is that we agreed sector-broad make concerning the application of those working methods, because that is an important first step to reach integration of the construction process.

CBIM – Building Information Model. For COINS it concerns in particular the terms which are relevant for integration of the construction process; hence that we speak of a Building Information Model. Also for this subject we use maximum of what already is available to standards. An example is the standard Ifc which is available for the engagements of 3D-model representation.

The agreement scheme CEM/CBIM for a typical application area is called a COINS framework.

Main points for the development of CEM/CBIM are:

- CEM/CBIM is a framework for process and information
- CEM/CBIM is a means to make virtual construction possible
- CEM/CBIM is a means to make process integration possible
- We strive to keep CEM/CBIM as small as possible and lay the emphasis on that which necessary is for process integration
- CEM/CBIM will digitally be fixed; the language OWL is used for that aim
- CEM/CBIM is flexible in the use; it can become used as a stencil key set and are tailored to specific needs
- CEM/CBIM is developed for application in the primary process in construction as from the first design until demolition, according to a life cycle approach.

The COINS-program is now in the developing and application phase. The development exists from theory shaping (CEM/CBIM) followed by reviews of the theory by practice tests. The following practice tests are carried out:

- RSS/Lunetten: functional specification/design of a railway station
- BAM: engineering, 3D-objects and quantity take-off
- IT-partners: engineering and interoperability
- IBU: functional specification/design of a waste water buffering facility
- Groningen: concurrent 3D-design of a small bridge

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