# bips and cuneco introduction

## bips
- ICT-contract specification tool
- bips Specifications system B1.000
- CAD/BIM-manuals, layers and symbols
- Document Management
- Standardised digital Snagging list
- Lists of mobile solutions and BIM viewers
- buildingSMART Denmark
- Distribution of design services and responsibility among parties

## cuneco project
- Classification
- Identification
- Property data
- Measurement rules
- Standardised digital Tendering list
- Information levels
- Education and implementation
- Future configurators for services and delivery
CCS* in BIM

BIM theme
ICIS DA 2014-06-03

A short report from the Danish bips and cuneco project – a center for productivity in construction

* CCS means Cuneco Classification System

The cuneco project

cuneco means common – and the scope is:

Creating effective information exchange flow across the value chain of the construction industry

...and the hypothesis is:

The effectiveness of BIM and collaboration during the construction process goes hand in hand with good standards
BIM as the driver of change, but ...

“Clearly, if BIM is to be the future of international projects, then common standards will need to be adopted”.}

From bips/cuneco survey on most urgent BIM needs (1)

It is generally accepted that BIM working methods can lead to increased productivity and quality – but it is also the common perception that this potential isn’t leveraged sufficiently because of (amongst others):

- Lack of cooperation - Unclear specifications for delivery of information
- Lack of standards and standardised tools and ID’s for exchanging and controlling data
  - Lack of standardised digital linkage between the geometry model, the elements and spaces, to other information
  - How do you get safely from the geometry model through detailed specifications to the tendering list with quantities?
From bips/cuneco survey on most urgent BIM needs (2)

And furthermore...
• Lack of common language and information structure
• Lack of standards for properties
  • Their naming and references (standards and regulations)
  • Controlling, searching and sorting them by use of metadata
• Missing more specific rules for measuring quantities
• Missing standards for tendering documents
• Missing standards for delivery of data for operation and maintenance
Digital information requires standardization

If we want to share information

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cuneo design principles

According to the users cuneo must develop standards and products which:

- Are simple and easy to use – and must work now (but also in 5 years time)
- Help the industry to take the small steps ahead
- Are relevant for and usable by the whole industry:
  - Large and small companies
  - Front runners and all the rest
  - Owners who use their own buildings and owners who let
  - For both public and private projects
- Are available on the Internet and for all types of devices
- Are integrated in the software used in the industry
- Works in an international context
CCS overview – 5 elements

**Classification**
What are we talking about?
Door, Window, Residential building, Office, Kitchen?

**Identification**
Which object – specifically – are we talking about?
Which type and where is it located?

**Properties**
Which specific properties describes the object?
U value, colour, etc.?

**Level of information**
Who needs what information when?

**Measurement rules**
What information do we need to find the products and set the price?

Structuring information – CCS Classification

A CCS classification code tells us which class the object belongs to, e.g. a window.

CCSClassCode: QQA

Using the standards:
ISO 12006-2
ISO/IEC 81346-2
ISO 704
- and to come: 81346-12
Structuring information with CCS Properties

With CCS we can add information about which properties are applicable for the object

- CCSClassCode: QQA
- Width: 1188
- Height: 1188
- FireRating: El 30
- ThermalTransmittance: 1.2

Using the standard: ISO/PAS 16739 (bS IFC)
- and a lot of other standards and regulations defining properties and their values

Structuring information with CCS Identification

With CCS ID’s we can identify which window in specific we are talking about – e.g. which type, number, function and where it is located

- CCSClassCode: QQA
- Width: 1188
- Height: 1188
- FireRating: El 30
- ThermalTransmittance: 1.2
- CCSElementID: #QQA35
- CCSTypeID: %QQA04

Using the standard: ISO/IEC 81346-1
- and to come: 81346-12

Window no. 35 in this project
Window type no. 4 in this project
**Structuring information with CCS Level of Information**

CCS Levels of Information tells us which properties should be specified for a specified class of objects at a given stage and time.

**Information level 3:**

- CCSClassCode: QQA
- Width: 1188
- Height: 1188
- FireRating: EI 30
- ThermalTransmittance: 1.2
- CCSElementID: #QQA35
- CCSTypeID: %QQA04

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**Precise agreements with CCS Levels of Information**

By using levels of information we can make agreements regarding the delivery of information from one actor to another.

**Information level 3**

- CCSClassCode: QQA
- Width: 1188
- Height: 1188
- FireRating: EI 30
- ThermalTransmittance: 1.2
- CCSElementID: #QQA35
- CCSTypeID: %QQA04
CCS measurement rules

A framework for specifying data for procurement documents and digital tendering in order to set the price.

- CCSClassCode: QQA
- Width: 1188
- Height: 1188
- FireRating: EI 30
- ThermalTransmittance: 1.2
- CCSElementID: #QQA35
- CCSTypeID: %QQA04

... cuneco – a part of bips

Window no. 35 in this project
Window type no. 4 in this project

Cuneco classification system explained in 3 minutes

http://www.youtube.com/watch?v=bDkuxB-xxeQ
CCS* for SW and mobile solutions

Mobile solutions theme
ICIS DA 2014-06-03

A short report from the Danish bips and cuneco project

* CCS means Cuneco Classification System

Two ways to reach the end user

CCS plug-ins in Industry software

Web based access

Program

www.cuneco.dk
CCS implementation 2014-2015

In projects ... (START)

Building types
Health
Education
Offices

Clients
State owned
Municipality
Private clients

Phases
Client IT specs.
Design
Tendering
FM

In software ...

spine, is a cloud service for the building industry, based on CCS standards.
spine ensures correct coding and consistent information flow between the various partners and applications throughout the entire project life cycle.
Main functionality in spine & spine plugin for Revit

Classification according to cuneco classification system
Property date according to cuneco classification system*
Central administration and ID-code generation
Automatic handling of multiple Revit files across projects
Mapping to multiple international classifications*
Integrated Viewer for easy access to migrated Property data*

*Work in progress

Local Client for handling user login and data caching.
Integrated Viewer for easy navigation and access to migrated Property data.

Classification according to CCS.

Central administration and ID-code generation.

Automatic handling of multiple Revit files across projects.
requirements based on CCS / spine Properties

Property date according to cuneo classification system.

Search via Unambiguous CCS / spine Properties

Property date according to cuneo classification system.
From CCS to other classification standards

Rule based mapping by combining standardized CCS classes and Property date.

CCS Class: Column
Material: Concrete
Fabrication: Precast
Size: 600 x 600mm

Uniformat: B1010245 - Columns Precast
OmniClass: 03410.A6
600 x 600mm Precast
Rectangular Column

www.projectspine.com
CCS – have a sneak preview

www.curecoclassification.dk

Available for IOS in App Store

Available for Android at Google Play