



byggeri
informationsteknologi
produktivitet
samarbejde

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

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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**

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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”.



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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?

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From bips/cuneco survey on most urgent BIM needs (2)

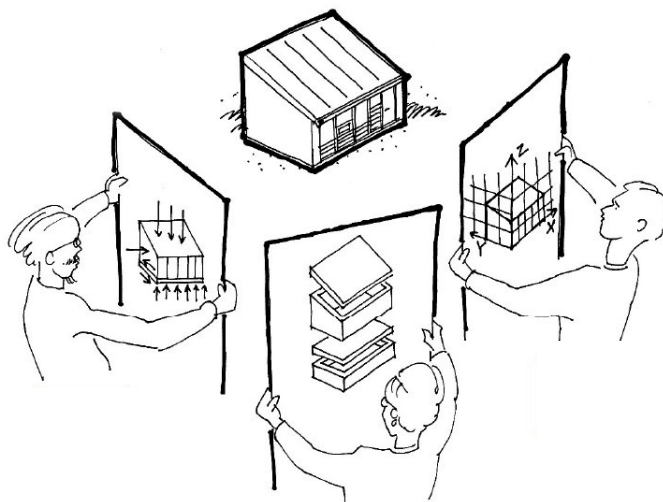


And furthermore...

- 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

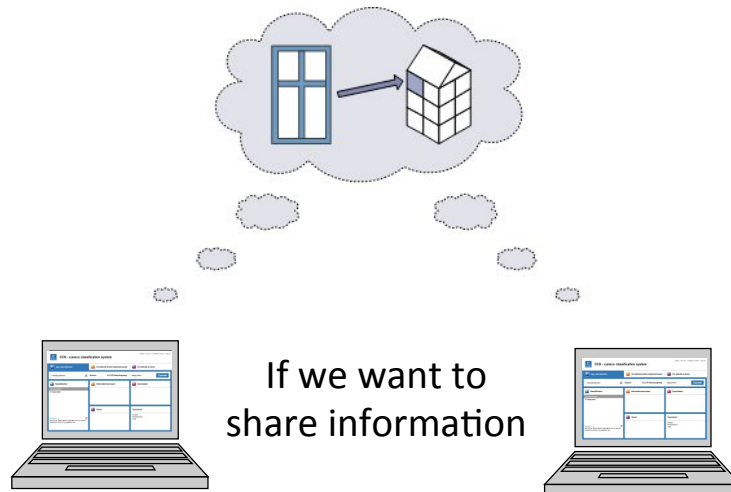
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Common language requires standardization



Our reality
is different

Digital information requires standardization



cuneco design principles



According to the users cuneco 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

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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?



Measurement rules

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



Properties

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



Level of information

Who needs what information when?



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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



cuneco – a part of bips

Structuring information with CCS Properties

bips



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

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



CCSClassCode: QQA
Width: 1188
Height: 1188
FireRating: EI 30
ThermalTransmittance: 1.2
...



cuneco – a part of bips

Structuring information with CCS Identification

bips



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

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



CCSClassCode: QQA
Width: 1188
Height: 1188
FireRating: EI 30
ThermalTransmittance: 1.2
CCSElementID: #QQA35 Window no. 35 in this project
CCSTypeID: %QQA04 Window type no. 4 in this project
...



cuneco – a part of bips

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
...

cuneco – a part of bips



Precise agreements with CCS Levels of Information

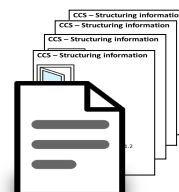


By using levels of information we can make agreements regarding the delivery of information from one actor to another

Information level 3

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

cuneco – a part of bips



CCS measurement rules

bips



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



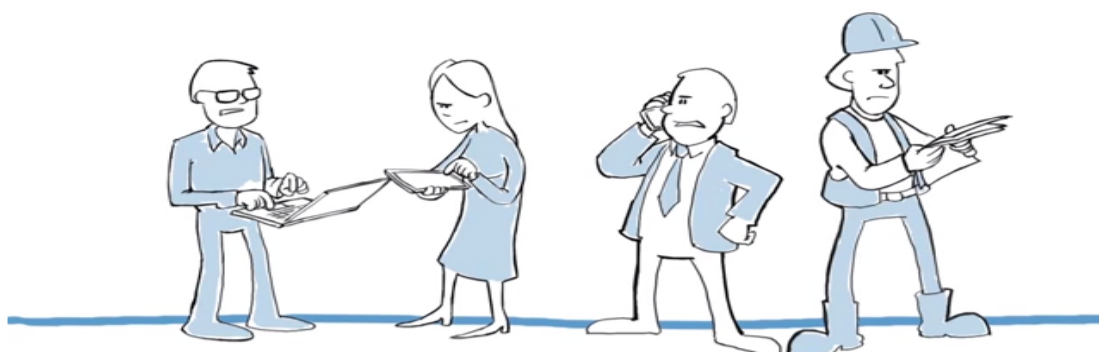
Window no. 35 in this project
Window type no. 4 in this project



...
cuneco – a part of bips

cuneco classification system explained in 3 minutes

bips



<http://www.youtube.com/watch?v=bDkuxB-xxeQ>

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CCS* for SW and mobile solutions

Mobile solutions theme
ICIS DA 2014-06-03

A short report from the Danish bips and cuneco project

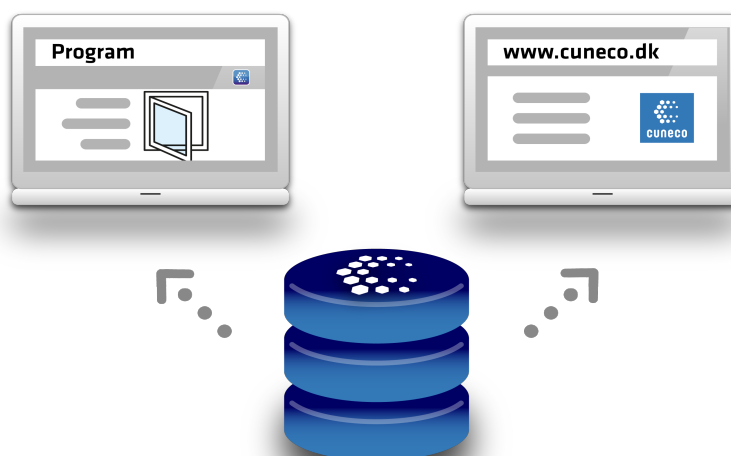
* CCS means Cuneco Classification System

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Two ways to reach the end user

CCS plug-ins in Industry software

Web based access



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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 ...



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Standard
Project
Information
Network
Exchange

spine

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.

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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*

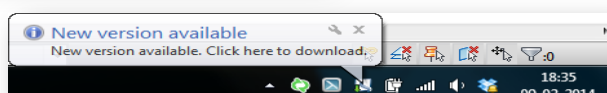
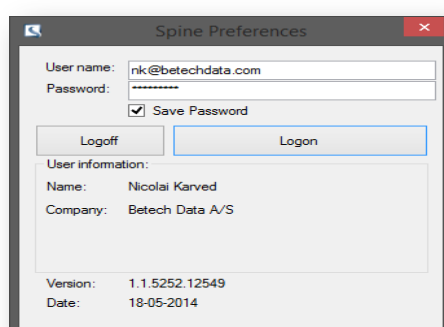
Integrated Viewer for easy access to migrated Property data*

*Work in progress

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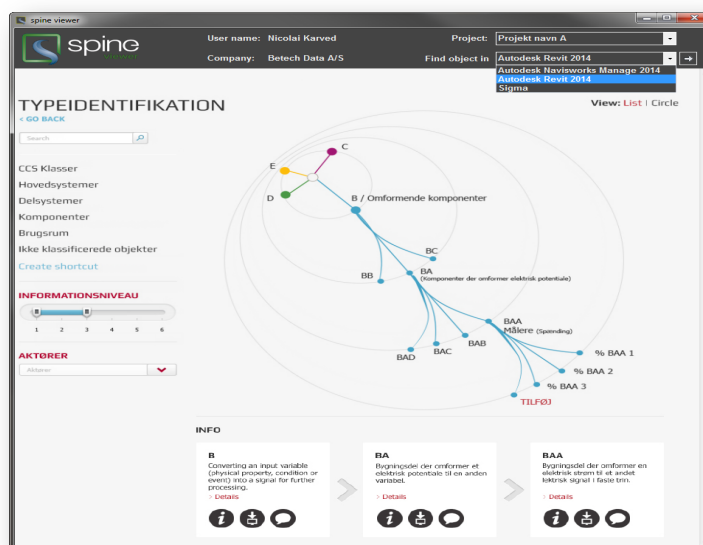
Local Client for
handling user login
and data caching.



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Integrated Viewer
for easy navigation
and access to
migrated Property
data.



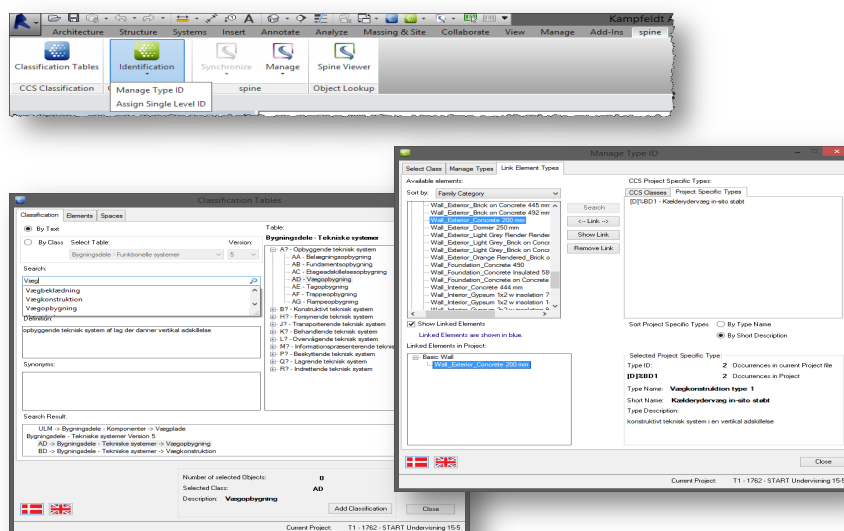
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Classification
according to CCS.

Central
administration and
ID-code generation.

Automatic handling
of multiple Revit
files across projects.

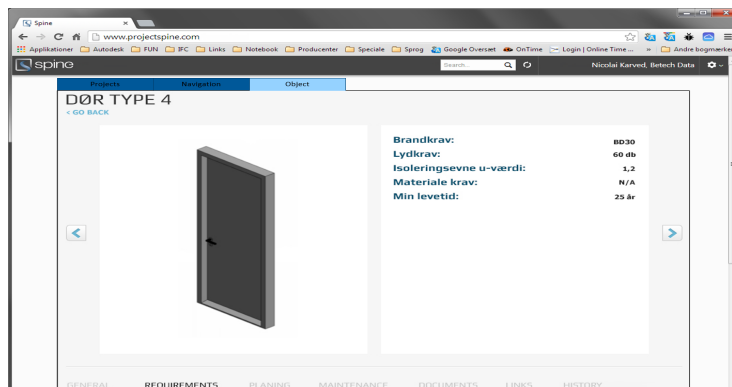


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requirements based on CCS / spine Properties



Property date
according to cuneco
classification system.

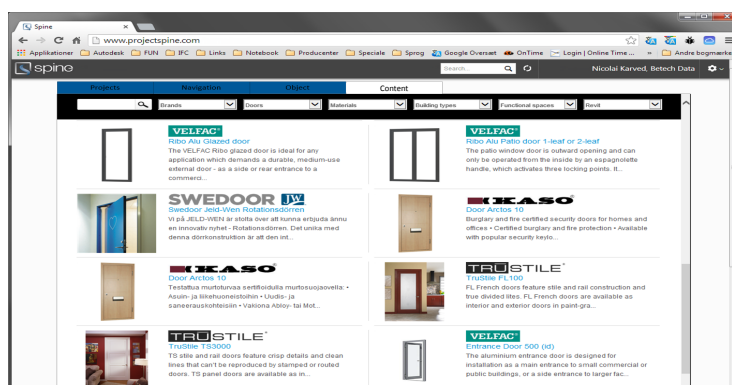


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Search via Unambiguous CCS / spine Properties



Property date
according to cuneco
classification system.



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From CCS to other classification standards



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



CCS Class:
Column

Material:
Concrete

Fabrication:
Precast

Size:
600 x 600mm



Uniformat:
B1010245 - Columns Precast

OmniClass:
03410.A6
600 x 600mm Precast
Rectangular Column

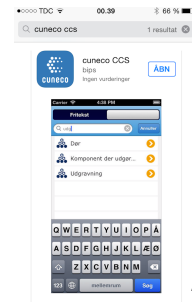
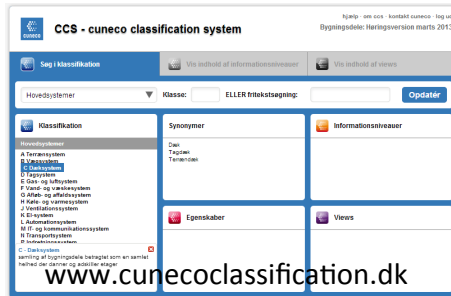
29



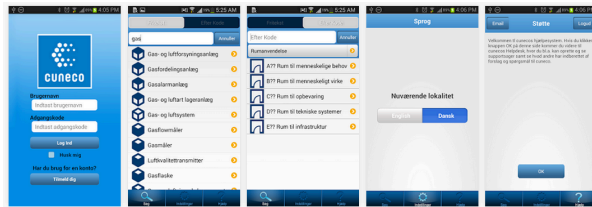
www.projectspine.com

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CCS – have a sneak preview



Available for IOS in App Store



Available for Android at Google Play

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