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Changes in the Nordic Data Model 2013

The changes apply to:
SQL-data model 2.2 −> 2.3
PX-file 2010 −> 2013
Paxiom data model 1.0 −> 1.1
Saved Query 1.0 (New model)

All tables and columns described below are included in the universal model. If a column is described as optional, this means it does not have to be filled with any values and can be NULL.

The list is broken down into the following sections:
   A. General
   B. Subject area - main table
   C. Contents, sub table, variable
   D. Value pool, value set, value, time, group
   E. Footnotes and links to further information
   F. Persons and organization

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A General

New naming convention

To comply with the most commonly used naming convention we use these names from now on:

Primary keys are named: PK_TableName
Foreign keys are named: FK_TableName_ReferencedTableName
Unique constraint: UQ_TableName_ColumnName

MetaId
In several tables a new field has been added to facilitate the linking of the information in the database to external systems (in some cases an existing field has been renamed to MetaId to make the design as uniform as possible). The field has always data type varchar(100). See section B, C, D and F for the tables that are affected.

Eurostat
I order to comply with the demands from Eurostat regarding information linked to data cells the model has been extended with two new tables: Attribute and Attribute_Eng (one new table for every secondary language is needed). For more information see enclosed document "Attributes in the Nordic Data Model".

Attribute

Column name	Data type	Optional	Primary key
MainTable	Varchar(20)		Yes
Attribute	Varchar(20)		Yes
AttributeColumn	Varchar(41)		
PresText	Varchar(250)	Yes	
SequenceNo	smallint		
Description	Varchar(200)	Yes	
ValueSet	Varchar(30)	Yes	
ColumnLenght	smallint		
UserId	Varchar(20)		
LogDate	Smalldatetime		

Attribute_Eng

Column name	Data type	Optional	Primary key
MainTable	Varchar(20)		Yes
Attribute	Varchar(20)		Yes
PresText	Varchar(250)	Yes	

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Description	Varchar(200)	Yes	
UserId	Varchar(20)		
LogDate	Smalldatetime		

Changes in the PC-Axis file format
Three new key words are added: ATTIBUTE-ID, ATTRIBUTE-TEXT and ATTRIBUTES.
ATTRIBUTE-ID lists the identities for the attributes that are present for the measurements. This key word is mandatory if the key word ATTRIBUTES is used. ATTRIBUTE-TEXT lists readable names for the attributes (not the attribute values) and can be translated to different languages. This key word is optional. ATTRIBUTES specifies the attributes for a certain measurement. Which measurement that is in question is set by the key that is attached to the value. If there is no key then the attribute is a default attribute i.e the attribute is used for all values which lacks explicitly stated. Default attributes must always be present if attributes are present.

Changes in the Paxiom data model
The model is extended with one class: Attributes. The class holds all information about which attributes that are present together with all the attributes for all data values. The class PXMeta is extended with the attribute Attributes which has the type Attributes.

Saved queries

A separate data model has been developed. See enclosed document "Saved Queries in the Nordic Data Model"

This data model can be placed in the same database as the other metadata or in a separate one.

Secondary Languages

The handling of secondary languages is changed in this version of the data model. All columns that where only present in secondary language tables has been removed.

Columns Status and Published in table Maintable_eng (or other secondary languages) are removed from the model. To hold the same information a new table has been added:
SecondaryLanguage

Column name	Data type	Optional	Primary key
MainTable	Varchar(20)		Yes

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Language	Varchar(20)		Yes
CompletelyTranslated	Char(1)		
Published	Char(1)		
UserId	Varchar(20)		
LogDate	Smalldatetime		

Status has now the name CompletelyTranslated.

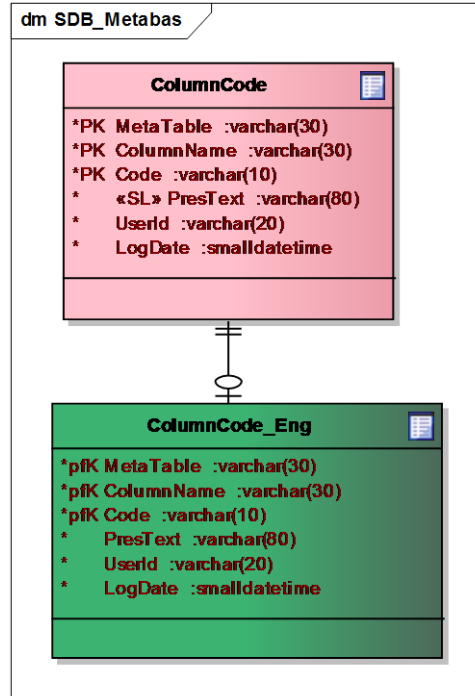Column ValuePoolAlias is added to table ValuePool

Column name	Data type	Optional	Primary key
ValuePool	Varchar(20)		Yes
ValuePoolAlias	Varchar(20)	Yes	
PresText	Varchar(80)	Yes	
Description	Char(1)		
ValueTextExists	Varchar(20)		
ValuePres	Smalldatetime		
MetaId	Varchar(100)	Yes	
UserId	Varchar(20)		
LogDate	smalldatetime		

In order to make the documentation easier to read and less repetitious the secondary language tables are removed from the database diagram and other documentation. Instead columns that should be included in the secondary languages are marked with <<SL>>. All secondary language tables should have the same primary keys as the table they correspond to. Also the columns UserId and LogDate are compulsory. In the database diagram the tables that can have a secondary language table have green borders.
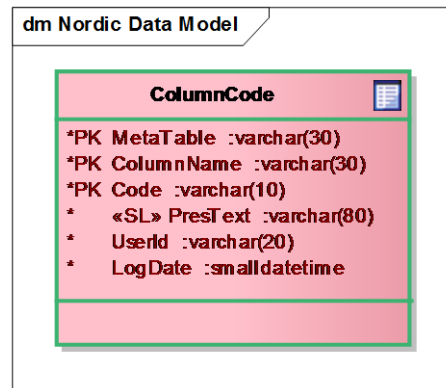
Example:
Old visualization:

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dm SDB_Metabas

ColumnCode

*PK MetaTable :varchar(30)
*PK ColumnName :varchar(30)
*PK Code :varchar(10)
*   «SL» PresText :varchar(80)
*   UserId :varchar(20)
*   LogDate :smalldatetime

ColumnCode_Eng

*pfK MetaTable :varchar(30)
*pfK ColumnName :varchar(30)
*pfK Code :varchar(10)
*   PresText :varchar(80)
*   UserId :varchar(20)
*   LogDate :smalldatetime

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New visualization:

```
dm Nordic Data Model

        ColumnCode            ▦

*PK  MetaTable  :varchar(30)
*PK  ColumnName  :varchar(30)
*PK  Code  :varchar(10)
*    «SL» PresText  :varchar(80)
*    UserId  :varchar(20)
*    LogDate  :smalldatetime
```

The column CodeEng in table ColumnCode_eng (and corresponding tables in other secondary languages) is removed from the model.

After these changes no secondary language table has a column that is not present in the main language table.

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B. Subject area - main table

New name for the field ProductId

The new name is ProductCode.
NB: The name is also changed in table DataStorage.

Table that is not updated
A new status has been added to show that a table is no longer updated.

Changes in the data model:
A new code has been added to MainTable.TableStatus: D = the table is not updated but is accessible to everybody. The meaning of code A is changed to The table is updated and it is accessible to everybody.

Changes in the PC-Axis file format
No changes.

Changes in the Paxiom data model
No changes.

First publishing date
Information is added to show when a table was published for the first time.

Changes in the data model:
A new column is added to table MainTable: it is named FirstPublished and is placed after PresCategory. Data type is Smalldatetime and it can hold NULL values.

FirstPublished	Smalldatetime	Optional

PC-Axis format is affected:
The key word FIRST-PUBLISHED is added. It holds the date when the PX-file was published for the first time.

Changes in the Paxiom data model
A new attribute is added to PXMeta: FirstPublished with data type Date.

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Linking a product to metadata external to the Nordic data model
A new field is added to enable the linking of product information that is external to the model.

Changes in the data model:

A new column is added to MainTable after column SubjectCode:

MetaId	Varchar(100)	Optional

Changes in the PC-Axis file format
Add a new keyword called META-ID.

Changes in the Paxiom data model
A new property MetaId will be added to the class PxMeta of the data type string.

MenuSelection

The field InternalId is changed to MetaId and the data type is changed to varchar (100).

MetaId	varchar(100)	Optional

C. Contents, sub table, variable

Linking a variable to metadata external to the Nordic data model

A new field is added to enable linking contents to external metadata.

Changes in the data model:
A new column is added to Contents after column StoreDecimals:

MetaId	varchar(100)	Optional

A new field is added to enable linking variables to external metadata.

Changes in the data model:
A new column is added to Variable after column VariableInfo:

MetaId	varchar(100)	Optional

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Changes in the PC-Axis file format
The new key word META-ID is added. The key will hold the name of the variable.

Changes in the Paxiom data model
A new property MetaId will be added to the class Variable. It will have data type String.

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D. Value pool, value set, value, time, group

Tables Value and ValueExtra are combined

The former restriction of maximum 256 characters in the column ValueTextL do not apply anymore. The model is changed to reflect this.

Changes in the data model:
The column Value.ValueTextL is extended to varchar(1100). Column Unit is moved from ValueExtra to table Value and is placed after column SortCode. Table ValueExtra is removed from the table.

Column code X is no longer valid for ValuePool.ValueTextExists.

Changes in the PC-Axis file format
The new key word META-ID is added. The key will hold the name of the variable and the value.

Changes in the Paxiom data model
A new property MetaId will be added to the class Value. It will have data data type of String.

Linking a value, a value pool, a value set or a grouping to metadata external to the Nordic data model

In order to facilitate the linking of external metadata a new field are added to the model.

Changes in the data model:
The new column MetaId is added to table Value after column ValueTextL:

MetaId	varchar(100)	Optional

In tables ValuePool, ValueSet and Grouping the column KDBid is renamed to MetaId. The data type is changed to varchar(100).

The column KDBid in table Grouping is renamed to MetaId and the data type is changed to varchar (100).

MetaId	varchar(100)	Optional

Changes in the PC-Axis file format
No changes.

Changes in the Paxiom data model
No changes.

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Time in plain text
In order to present times in plain text the codes needs to be translated.

Changes in the data model:
The model will not be changed. The table ColumnCode will be used to give the presentation text for the codes.

Example:
ColumnCode
        MetaTable = ContentsTime
        ColumnName = TimePeriod
        Code = M01
        PresText = jan

The technical platform for PC-Axis will include functionality to translate time codes to a textual representation, although this functionality will not utilize the ColumnCode table to accomplish this. Instead it will use its own system based on language files.

Changes in the PC-Axis file format
No changes

Changes in the Paxiom data model
No changes

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E. Footnotes and links to more information

Special characters for footnotes

In order to give more possibilities to present footnotes the model is expanded to handle special characters for the footnotes.

Changes in the data model:
A new column is added to Table FootNote after column FootnoteText.

PresCharacter	varchar(20)	Optional

Changes in the PC-Axis file format

A new keyword DATANOTE is added. A datanote can be applied to the whole table, a variable or a specific value for a variable. The context for it is given by the key.

Changes in the Paxiom data model
A new property DataNote of the data type string is added to the classes PxMeta, Variable and Value.

Data quality notes for time

There is a need to be able to mark time or time periods with special characters in order to attach footnotes to them.

Changes in the data model:
A new table is added to the model:

FootnoteMaintTime

Column name	Data type	Optional	Primary key
MainTable	varchar(20)		Yes
TimePeriod	varchar(20)		Yes
FootnoteNo	numeric(6)		Yes
UserId	varchar(20)		
Date	smalldatetime		

N.B this table can only be used as long as all contents of the main table has the same connections in the ContentsTime table. Footnotes that are linked with the new table should have type = 9. This is the same type as is used for notes with FootnoteMaintValue. By using that type the footnote can be

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specified so that it is valid for the intersection of more than one column thereby assigning the footnote to a subset of the data.

Changes in the PC-Axis file format

See **Special characters for footnotes**

Changes in the Paxiom data model

See **Special characters for footnotes**

A new table for footnotes for valueset values

Changes in the data model:
A new table FotnoteValueSetValue is added to the model. The type of the footnot is V.

FootnoteValueSetValue

Column name	Data type	Optional	Primary key
Valuepool	Varchar(20)		Primary Key
ValueSet	Varchar(30)		Primary Key
ValueCode	Varchar(20)		Primary Key
FootnoteNo	numeric(6,0)		Primary Key
UserId	varchar(20)		
LogDate	smaldatetime		

PC-Axis format is affected:

See **Special characters for footnotes**

Changes in the Paxiom data model

See **Special characters for footnotes**

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F. Person and organisation

English web address

Decision:
Most organizations have a local and a global home page; the model is extended to hold that information.

Changes in the data model:
The column WebAddress is added after column Unit in table Organisation_eng (the same applies for all secondary languages that might be used)

PC-Axis format is affected: No.

Changes in the Paxiom data model
The new structure for the Contact data type must be able to have multilingual web addresses.

Organization

The field InternalId in the table Organization is renamed to MetaId with data type varchar(100).

MetaId	varchar(100)	Optional